

**Table S1. MAGMA gene enrichment: significantly enriched genes associated with COPD and cardiovascular diseases**

Trait_pair	GENE	CHR	NSNPS	NPARAM	N	P	SYMBOL	Pfdr	Pbon
COPD-HF	ENSG00000007129	19	47	7	5E+05	0.049955	CEACAM21	0.535473852515905	1
COPD-HF	ENSG00000113851	3	92	14	5E+05	0.049818	CRBN	0.534825389633081	1
COPD-HF	ENSG00000221914	8	166	24	5E+05	0.049767	PPP2R2A	0.534589225524476	1
COPD-HF	ENSG00000100325	22	126	14	5E+05	0.049748	ASCC2	0.534589225524476	1
COPD-HF	ENSG00000135972	2	206	7	5E+05	0.049686	MRPS9	0.534341912485414	1
COPD-HF	ENSG00000100523	14	154	10	5E+05	0.049576	DDHD1	0.533470173963806	1
COPD-HF	ENSG00000156282	21	1	1	5E+05	0.049569	CLDN17	0.533470173963806	1
COPD-HF	ENSG00000115556	2	42	5	5E+05	0.049508	PLCD4	0.533361171244886	1
COPD-HF	ENSG00000205531	11	150	15	5E+05	0.049427	NAP1L4	0.53279993625731	1
COPD-HF	ENSG00000250067	19	35	3	5E+05	0.049426	YJEFN3	0.53279993625731	1
COPD-HF	ENSG00000080823	14	188	16	5E+05	0.049414	MOK	0.53279993625731	1
COPD-HF	ENSG00000120318	5	74	16	5E+05	0.049376	ARAP3	0.53279993625731	1
COPD-HF	ENSG00000169855	3	2245	84	5E+05	0.049365	ROBO1	0.53279993625731	1
COPD-HF	ENSG00000110321	11	23	5	5E+05	0.049334	EIF4G2	0.53279993625731	1
COPD-HF	ENSG00000187323	18	4020	98	5E+05	0.049304	DCC	0.53279993625731	1
COPD-HF	ENSG00000186453	2	72	11	5E+05	0.049266	FAM228A	0.53279993625731	1
COPD-HF	ENSG00000091129	7	985	46	5E+05	0.049204	NRCAM	0.53279993625731	1
COPD-HF	ENSG00000231880	11	1	1	5E+05	0.049195	KBTBD4	0.53279993625731	1
COPD-HF	ENSG00000243232	5	49	11	5E+05	0.049188	PCDHAC2	0.53279993625731	1
COPD-HF	ENSG00000184497	13	150	14	5E+05	0.049184	TMEM255B	0.53279993625731	1
COPD-HF	ENSG00000176444	1	15	3	5E+05	0.049157	CLK2	0.53279993625731	1
COPD-HF	ENSG00000153563	2	67	6	5E+05	0.04915	CD8A	0.53279993625731	1
COPD-HF	ENSG00000181656	1	8	3	5E+05	0.049145	GPR88	0.53279993625731	1
COPD-HF	ENSG00000064607	19	75	8	5E+05	0.049118	SUGP2	0.53279993625731	1
COPD-HF	ENSG00000162039	16	318	6	5E+05	0.049096	MEIOB	0.53279993625731	1
COPD-HF	ENSG00000170185	4	75	6	5E+05	0.049086	USP38	0.53279993625731	1
COPD-HF	ENSG00000161016	8	4	2	5E+05	0.049035	RPL8	0.53279993625731	1
COPD-HF	ENSG00000111885	6	616	25	5E+05	0.048953	MAN1A1	0.53279993625731	1
COPD-HF	ENSG00000172375	11	41	8	5E+05	0.048945	C2CD2L	0.53279993625731	1
COPD-HF	ENSG00000016082	5	18	7	5E+05	0.048925	ISL1	0.53279993625731	1
COPD-HF	ENSG00000174442	15	129	15	5E+05	0.048911	ZWILCH	0.53279993625731	1

COPD-HF	ENSG00000140263	15	50	10	5E+05	0.04889	SORD	0.53279993625731	1
COPD-HF	ENSG00000035681	8	130	11	5E+05	0.048869	NSMAF	0.53279993625731	1
COPD-HF	ENSG00000072134	17	63	9	5E+05	0.048795	EPN2	0.53279993625731	1
COPD-HF	ENSG00000173421	3	67	8	5E+05	0.048757	CCDC36	0.53279993625731	1
COPD-HF	ENSG00000138777	4	360	17	5E+05	0.048674	PPA2	0.53279993625731	1
COPD-HF	ENSG00000139970	14	451	22	5E+05	0.048642	RTN1	0.53279993625731	1
COPD-HF	ENSG00000003756	3	28	6	5E+05	0.04859	RBM5	0.53279993625731	1
COPD-HF	ENSG00000068784	2	608	26	5E+05	0.048551	SRBD1	0.53270272797619	1
COPD-HF	ENSG00000114302	3	64	9	5E+05	0.048457	PRKAR2A	0.531988017272186	1
COPD-HF	ENSG00000162413	1	42	9	5E+05	0.048445	KLHL21	0.531988017272186	1
COPD-HF	ENSG00000183765	22	118	17	5E+05	0.048441	CHEK2	0.531988017272186	1
COPD-HF	ENSG00000198398	3	66	14	5E+05	0.048435	TMEM207	0.531988017272186	1
COPD-HF	ENSG00000125538	2	14	4	5E+05	0.048221	IL1B	0.530661309253731	1
COPD-HF	ENSG00000109680	4	162	8	5E+05	0.048216	TBC1D19	0.530661309253731	1
COPD-HF	ENSG00000257767	12	23	3	5E+05	0.048136	RP11-162P23	0.530359167961745	1
COPD-HF	ENSG00000182326	12	124	11	5E+05	0.048012	C1S	0.529309327751196	1
COPD-HF	ENSG00000205436	14	25	5	5E+05	0.047916	EXOC3L4	0.528567102333932	1
COPD-HF	ENSG00000159761	16	1	1	5E+05	0.04791	C16orf86	0.528567102333932	1
COPD-HF	ENSG00000197016	19	62	6	5E+05	0.047905	ZNF470	0.528567102333932	1
COPD-HF	ENSG00000146374	6	130	10	5E+05	0.047866	RSPO3	0.528567102333932	1
COPD-HF	ENSG00000143994	2	8	2	5E+05	0.047856	ABHD1	0.528567102333932	1
COPD-HF	ENSG00000255582	14	2	1	5E+05	0.047815	OR10G2	0.528567102333932	1
COPD-HF	ENSG00000180113	6	11	5	5E+05	0.047793	TDRD6	0.528567102333932	1
COPD-HF	ENSG00000189079	12	122	16	5E+05	0.047779	ARID2	0.528567102333932	1
COPD-HF	ENSG00000078304	14	394	38	5E+05	0.047761	PPP2R5C	0.528567102333932	1
COPD-HF	ENSG00000138399	2	109	17	5E+05	0.047755	FASTKD1	0.528567102333932	1
COPD-HF	ENSG00000259164	14	370	37	5E+05	0.047732	RP11-463C8.2	0.528567102333932	1
COPD-HF	ENSG00000244537	17	5	2	5E+05	0.047698	KRTAP4-2	0.528567102333932	1
COPD-HF	ENSG00000136816	9	15	3	5E+05	0.047663	TOR1B	0.528567102333932	1
COPD-HF	ENSG00000123178	13	40	6	5E+05	0.047608	SPRYD7	0.528567102333932	1
COPD-HF	ENSG00000188580	6	2555	186	5E+05	0.047591	NKAIN2	0.528567102333932	1
COPD-HF	ENSG00000168116	6	6	2	5E+05	0.04752	KIAA1586	0.528567102333932	1
COPD-HF	ENSG00000135913	2	184	9	5E+05	0.047518	USP37	0.528567102333932	1

COPD-HF	ENSG00000081818	5	10	3	5E+05	0.047517	PCDHB4	0.528567102333932	1
COPD-HF	ENSG00000196683	7	61	8	5E+05	0.04745	TOMM7	0.528567102333932	1
COPD-HF	ENSG00000196381	19	53	9	5E+05	0.047395	ZNF781	0.528567102333932	1
COPD-HF	ENSG00000248487	3	10	6	5E+05	0.047378	ABHD14A	0.528567102333932	1
COPD-HF	ENSG00000070540	17	93	16	5E+05	0.04727	WIPI1	0.528077521212121	1
COPD-HF	ENSG00000072571	5	69	9	5E+05	0.04726	HMMR	0.528077521212121	1
COPD-HF	ENSG00000198556	7	36	10	5E+05	0.047226	ZNF789	0.528077521212121	1
COPD-HF	ENSG00000060642	1	12	4	5E+05	0.047168	PIGV	0.52789784092289	1
COPD-HF	ENSG00000000971	1	208	14	5E+05	0.047152	CFH	0.52789784092289	1
COPD-HF	ENSG00000116521	1	6	1	5E+05	0.047034	SCAMP3	0.52703812887538	1
COPD-HF	ENSG00000139718	12	34	5	5E+05	0.047008	SETD1B	0.52703812887538	1
COPD-HF	ENSG00000102901	16	18	3	5E+05	0.047008	CENPT	0.52703812887538	1
COPD-HF	ENSG00000006788	17	238	29	5E+05	0.046891	MYH13	0.526395738733252	1
COPD-HF	ENSG00000106799	9	82	9	5E+05	0.046881	TGFBR1	0.526395738733252	1
COPD-HF	ENSG00000184076	22	5	2	5E+05	0.046748	UQCR10	0.525430417073171	1
COPD-HF	ENSG00000128250	22	11	2	5E+05	0.046716	RFPL1	0.525391109212935	1
COPD-HF	ENSG00000157741	7	107	12	5E+05	0.046704	UBN2	0.525391109212935	1
COPD-HF	ENSG00000188321	19	55	5	5E+05	0.046585	ZNF559	0.52455791386683	1
COPD-HF	ENSG00000166188	16	12	4	5E+05	0.046543	ZNF319	0.524405329462103	1
COPD-HF	ENSG00000188322	16	35	11	5E+05	0.046518	SBK1	0.524405329462103	1
COPD-HF	ENSG00000181371	11	1	1	5E+05	0.046472	OR5M8	0.524246252141983	1
COPD-HF	ENSG00000196345	3	59	6	5E+05	0.046412	ZKSCAN7	0.523890015921617	1
COPD-HF	ENSG00000162241	11	10	4	5E+05	0.046292	SLC25A45	0.522855659313725	1
COPD-HF	ENSG00000139410	12	21	3	5E+05	0.046231	SDSL	0.522486832004905	1
COPD-HF	ENSG00000129347	19	50	8	5E+05	0.046215	KRI1	0.522486832004905	1
COPD-HF	ENSG00000179965	16	19	6	5E+05	0.046179	ZNF771	0.522486832004905	1
COPD-HF	ENSG00000108582	17	94	8	5E+05	0.046152	CPD	0.522486832004905	1
COPD-HF	ENSG00000174173	3	12	5	5E+05	0.046026	TRMT10C	0.52144883712354	1
COPD-HF	ENSG00000143476	1	216	23	5E+05	0.046025	DTL	0.52144883712354	1
COPD-HF	ENSG00000206181	18	9	3	5E+05	0.045941	TCEB3B	0.521126432615385	1
COPD-HF	ENSG00000245680	19	49	10	5E+05	0.04593	ZNF585B	0.521126432615385	1
COPD-HF	ENSG00000105879	7	28	4	5E+05	0.045916	CBLL1	0.521126432615385	1
COPD-HF	ENSG00000176208	17	120	6	5E+05	0.045803	ATAD5	0.520522009247842	1

COPD-HF	ENSG00000273303	3	49	5	5E+05	0.045799	RP11-944L7.50.520522009247842	1
COPD-HF	ENSG00000103769	15	295	20	5E+05	0.045777	RAB11A 0.520522009247842	1
COPD-HF	ENSG00000262601	16	58	14	5E+05	0.045708	CTC-786C10.0.520404919085856	1
COPD-HF	ENSG00000148600	10	79	12	5E+05	0.045683	CDHR1 0.520404919085856	1
COPD-HF	ENSG00000172489	11	1	1	5E+05	0.045683	OR5T3 0.520404919085856	1
COPD-HF	ENSG00000101546	18	40	5	5E+05	0.045627	RBFA 0.520404919085856	1
COPD-HF	ENSG00000181785	11	5	1	5E+05	0.045622	OR5AS1 0.520404919085856	1
COPD-HF	ENSG00000162148	11	13	4	5E+05	0.045603	PPP1R32 0.520404919085856	1
COPD-HF	ENSG00000135973	2	1	1	5E+05	0.045506	GPR45 0.520032298822071	1
COPD-HF	ENSG00000130589	20	65	14	5E+05	0.04547	HELZ2 0.519943244416874	1
COPD-HF	ENSG00000112667	6	5	3	5E+05	0.045346	DNPH1 0.518847186840472	1
COPD-HF	ENSG00000064933	2	169	17	5E+05	0.045344	PMS1 0.518847186840472	1
COPD-HF	ENSG00000255394	8	11	4	5E+05	0.045272	C8orf49 0.518644360472343	1
COPD-HF	ENSG00000164694	6	345	14	5E+05	0.045247	FNDC1 0.518644360472343	1
COPD-HF	ENSG00000154856	18	115	16	5E+05	0.045219	APCDD1 0.518644360472343	1
COPD-HF	ENSG00000228259	5	2	1	5E+05	0.045177	AC136604.1 0.518522815068493	1
COPD-HF	ENSG00000100170	22	166	9	5E+05	0.045176	SLC5A1 0.518522815068493	1
COPD-HF	ENSG00000073861	17	39	8	5E+05	0.045102	TBX21 0.518307460099751	1
COPD-HF	ENSG00000162676	1	20	5	5E+05	0.044966	GFI1 0.517066923268871	1
COPD-HF	ENSG00000137812	15	125	11	5E+05	0.044957	CASC5 0.517066923268871	1
COPD-HF	ENSG00000174939	16	20	5	5E+05	0.044926	ASPHD1 0.517066923268871	1
COPD-HF	ENSG00000151838	14	227	17	5E+05	0.044857	CCDC175 0.516780676	1
COPD-HF	ENSG00000064886	1	134	18	5E+05	0.044806	CHI3L2 0.516515946216385	1
COPD-HF	ENSG00000116209	1	29	6	5E+05	0.044803	TMEM59 0.516515946216385	1
COPD-HF	ENSG00000170946	11	81	9	5E+05	0.044779	DNAJC24 0.516515946216385	1
COPD-HF	ENSG00000204021	10	146	8	5E+05	0.044705	LIPK 0.516320341478697	1
COPD-HF	ENSG00000157330	1	32	7	5E+05	0.044573	C1orf158 0.515118563636364	1
COPD-HF	ENSG00000023572	1	12	4	5E+05	0.044552	GLRX2 0.515118563636364	1
COPD-HF	ENSG00000157119	3	8	3	5E+05	0.044538	KLHL40 0.515118563636364	1
COPD-HF	ENSG00000144560	3	535	39	5E+05	0.04452	VGLL4 0.515118563636364	1
COPD-HF	ENSG00000115042	2	6	3	5E+05	0.044511	FAHD2A 0.515118563636364	1
COPD-HF	ENSG00000102871	16	3	1	5E+05	0.044504	TRADD 0.515118563636364	1
COPD-HF	ENSG00000180340	17	1	1	5E+05	0.0444	FZD2 0.515056765261171	1

COPD-HF	ENSG00000254440	6	10	2	5E+05	0.044262	PBOV1	0.513779248110831	1
COPD-HF	ENSG00000113525	5	12	2	5E+05	0.044254	IL5	0.513779248110831	1
COPD-HF	ENSG00000151148	12	145	17	5E+05	0.044217	UBE3B	0.513779248110831	1
COPD-HF	ENSG00000129235	17	16	4	5E+05	0.044184	TXNDC17	0.513779248110831	1
COPD-HF	ENSG00000174444	15	79	12	5E+05	0.04418	RPL4	0.513779248110831	1
COPD-HF	ENSG00000137494	11	119	13	5E+05	0.043936	ANKRD42	0.511605993682881	1
COPD-HF	ENSG00000112658	6	11	3	5E+05	0.043926	SRF	0.511605993682881	1
COPD-HF	ENSG00000236609	7	22	5	5E+05	0.043864	ZNF853	0.511413733080329	1
COPD-HF	ENSG00000140374	15	178	12	5E+05	0.043673	ETFA	0.509509119620253	1
COPD-HF	ENSG00000112659	6	79	10	5E+05	0.043621	CUL9	0.509224758074731	1
COPD-HF	ENSG00000183090	4	207	18	5E+05	0.043611	FREM3	0.509224758074731	1
COPD-HF	ENSG00000125459	1	99	13	5E+05	0.043455	MSTO1	0.507930256816741	1
COPD-HF	ENSG00000144580	2	46	4	5E+05	0.043451	RQCD1	0.507930256816741	1
COPD-HF	ENSG00000110906	12	119	10	5E+05	0.043379	KCTD10	0.507685782222222	1
COPD-HF	ENSG00000270011	19	117	6	5E+05	0.043319	ZNF559-ZNF1	0.507305671537484	1
COPD-HF	ENSG00000109519	4	23	3	5E+05	0.043247	GRPEL1	0.506784457088366	1
COPD-HF	ENSG00000184056	15	69	10	5E+05	0.043234	VPS33B	0.506784457088366	1
COPD-HF	ENSG00000181761	11	13	3	5E+05	0.043182	OR8H3	0.506666967536601	1
COPD-HF	ENSG00000170848	19	55	8	5E+05	0.043173	PSG6	0.506666967536601	1
COPD-HF	ENSG00000188629	19	115	6	5E+05	0.043165	ZNF177	0.506666967536601	1
COPD-HF	ENSG00000105329	19	91	12	5E+05	0.043125	TGFB1	0.506666967536601	1
COPD-HF	ENSG00000105676	19	53	8	5E+05	0.043065	ARMC6	0.506584010848756	1
COPD-HF	ENSG00000156671	10	150	15	5E+05	0.04306	SAMD8	0.506584010848756	1
COPD-HF	ENSG00000109458	4	221	26	5E+05	0.042999	GAB1	0.506454036421725	1
COPD-HF	ENSG00000143167	1	106	17	5E+05	0.042985	GPA33	0.506454036421725	1
COPD-HF	ENSG00000108244	17	52	7	5E+05	0.042949	KRT23	0.506454036421725	1
COPD-HF	ENSG00000075213	7	1503	65	5E+05	0.042906	SEMA3A	0.506329256081946	1
COPD-HF	ENSG00000130307	19	100	16	5E+05	0.042864	USHBP1	0.506157663036515	1
COPD-HF	ENSG00000214367	4	32	4	5E+05	0.042818	HAUS3	0.505938585897436	1
COPD-HF	ENSG00000253293	7	9	3	5E+05	0.042817	HOXA10	0.505938585897436	1
COPD-HF	ENSG00000079435	19	11	4	5E+05	0.042813	LIPE	0.505938585897436	1
COPD-HF	ENSG00000178966	9	32	5	5E+05	0.042726	RMII	0.505824250481696	1
COPD-HF	ENSG00000124467	19	265	14	5E+05	0.04271	PSG8	0.505824250481696	1

COPD-HF	ENSG00000136738	10	292	15	5E+05	0.042705	STAM	0.505824250481696	1
COPD-HF	ENSG00000131504	5	154	23	5E+05	0.04262	DIAPH1	0.505543410553411	1
COPD-HF	ENSG00000179761	17	165	32	5E+05	0.042512	PIPOX	0.504587054732775	1
COPD-HF	ENSG00000180479	19	77	10	5E+05	0.042436	ZNF571	0.504009528350515	1
COPD-HF	ENSG00000198169	8	37	10	5E+05	0.042386	ZNF251	0.50374025660864	1
COPD-HF	ENSG00000132801	20	66	7	5E+05	0.042369	ZSWIM3	0.50374025660864	1
COPD-HF	ENSG00000075884	2	1387	80	5E+05	0.042357	ARHGAP15	0.50374025660864	1
COPD-HF	ENSG00000241058	10	344	16	5E+05	0.04231	NSUN6	0.50374025660864	1
COPD-HF	ENSG00000076513	12	69	12	5E+05	0.04226	ANKRD13A	0.503541422107305	1
COPD-HF	ENSG00000189320	7	50	9	5E+05	0.042232	FAM180A	0.503533283311772	1
COPD-HF	ENSG00000051825	12	213	9	5E+05	0.04218	MPHOSPH9	0.503238796116505	1
COPD-HF	ENSG00000181752	11	1	1	5E+05	0.042117	OR8K5	0.502812604274611	1
COPD-HF	ENSG00000134987	5	100	11	5E+05	0.042116	WDR36	0.502812604274611	1
COPD-HF	ENSG00000172171	17	19	2	5E+05	0.042075	TEFM	0.502812604274611	1
COPD-HF	ENSG00000160917	7	37	6	5E+05	0.041996	CPSF4	0.5023441064244	1
COPD-HF	ENSG00000149925	16	10	4	5E+05	0.041935	ALDOA	0.501940165584416	1
COPD-HF	ENSG00000180185	16	116	3	5E+05	0.041876	FAHD1	0.501559654320988	1
COPD-HF	ENSG00000131951	14	237	12	5E+05	0.041865	LRRC9	0.501559654320988	1
COPD-HF	ENSG00000197714	19	39	7	5E+05	0.041853	ZNF460	0.501559654320988	1
COPD-HF	ENSG00000225828	1	1	1	5E+05	0.041829	FAM229A	0.501559654320988	1
COPD-HF	ENSG00000126602	16	177	27	5E+05	0.041819	TRAP1	0.501559654320988	1
COPD-HF	ENSG00000169504	1	80	8	5E+05	0.041818	CLIC4	0.501559654320988	1
COPD-HF	ENSG00000038274	5	34	7	5E+05	0.041761	MAT2B	0.501559654320988	1
COPD-HF	ENSG00000186866	21	52	5	5E+05	0.041742	POFUT2	0.501559654320988	1
COPD-HF	ENSG00000099377	16	7	2	5E+05	0.041709	HSD3B7	0.501559654320988	1
COPD-HF	ENSG00000147955	9	6	3	5E+05	0.0417	SIGMAR1	0.501559654320988	1
COPD-HF	ENSG00000149654	20	269	33	5E+05	0.04166	CDH22	0.501559654320988	1
COPD-HF	ENSG00000132911	5	143	6	5E+05	0.041657	NMUR2	0.501559654320988	1
COPD-HF	ENSG00000100151	22	32	7	5E+05	0.041631	PICK1	0.501559654320988	1
COPD-HF	ENSG00000153561	2	60	7	5E+05	0.041579	RMND5A	0.501559654320988	1
COPD-HF	ENSG00000122194	6	118	11	5E+05	0.041548	PLG	0.501559654320988	1
COPD-HF	ENSG00000160307	21	27	6	5E+05	0.041548	S100B	0.501559654320988	1
COPD-HF	ENSG00000179292	11	6	3	5E+05	0.041419	TMEM151A	0.501297719632305	1

COPD-HF	ENSG00000100197	22	10	5	5E+05	0.041399	CYP2D6	0.501297719632305	1
COPD-HF	ENSG00000165699	9	94	12	5E+05	0.041388	TSC1	0.501297719632305	1
COPD-HF	ENSG00000126773	14	174	6	5E+05	0.041376	PCNXL4	0.501297719632305	1
COPD-HF	ENSG00000130775	1	46	9	5E+05	0.04137	THEMIS2	0.501297719632305	1
COPD-HF	ENSG00000170266	3	306	26	5E+05	0.041365	GLB1	0.501297719632305	1
COPD-HF	ENSG00000141696	17	24	4	5E+05	0.041186	LEPREL4	0.500449266974291	1
COPD-HF	ENSG00000177875	12	4	2	5E+05	0.041168	C12orf68	0.500449266974291	1
COPD-HF	ENSG00000103740	15	227	41	5E+05	0.041113	ACSBG1	0.500221735313531	1
COPD-HF	ENSG00000177125	9	25	7	5E+05	0.041077	ZBTB34	0.500113831571995	1
COPD-HF	ENSG00000134884	13	25	7	5E+05	0.041017	ARGLU1	0.499713391275611	1
COPD-HF	ENSG00000061918	4	114	21	5E+05	0.041005	GUCY1B3	0.499713391275611	1
COPD-HF	ENSG00000120616	10	242	17	5E+05	0.040983	EPC1	0.499713391275611	1
COPD-HF	ENSG00000186174	11	44	13	5E+05	0.040974	BCL9L	0.499713391275611	1
COPD-HF	ENSG00000149923	16	10	3	5E+05	0.040941	PPP4C	0.499713391275611	1
COPD-HF	ENSG00000152133	2	32	5	5E+05	0.040883	GPATCH11	0.499713391275611	1
COPD-HF	ENSG00000144452	2	354	39	5E+05	0.040706	ABCA12	0.497898936960849	1
COPD-HF	ENSG00000137817	15	39	5	5E+05	0.040698	PARP6	0.497898936960849	1
COPD-HF	ENSG00000175294	11	21	4	5E+05	0.040618	CATSPER1	0.497482786710964	1
COPD-HF	ENSG00000163909	1	36	13	5E+05	0.040545	HEYL	0.496918873005319	1
COPD-HF	ENSG00000143153	1	89	16	5E+05	0.040522	ATP1B1	0.496918873005319	1
COPD-HF	ENSG00000196233	10	157	10	5E+05	0.040518	LCOR	0.496918873005319	1
COPD-HF	ENSG00000136688	2	16	4	5E+05	0.040467	IL36G	0.496918873005319	1
COPD-HF	ENSG00000176697	11	85	10	5E+05	0.040428	BDNF	0.496806216	1
COPD-HF	ENSG00000111077	12	40	10	5E+05	0.040425	TENC1	0.496806216	1
COPD-HF	ENSG00000159556	15	14	4	5E+05	0.040381	ISL2	0.496806216	1
COPD-HF	ENSG00000078804	20	8	2	5E+05	0.040371	TP53INP2	0.496806216	1
COPD-HF	ENSG00000160113	19	32	11	5E+05	0.040362	NR2F6	0.496806216	1
COPD-HF	ENSG00000255150	12	2	1	5E+05	0.040341	EID3	0.496806216	1
COPD-HF	ENSG00000138085	2	11	3	5E+05	0.040302	ATRAID	0.496806216	1
COPD-HF	ENSG00000010244	17	47	9	5E+05	0.040266	ZNF207	0.496806216	1
COPD-HF	ENSG00000162545	1	3	2	5E+05	0.040254	CAMK2N1	0.496806216	1
COPD-HF	ENSG00000143469	1	313	15	5E+05	0.040247	SYT14	0.496806216	1
COPD-HF	ENSG00000132170	3	315	22	5E+05	0.040245	PPARG	0.496806216	1

COPD-HF	ENSG00000182257	22	12	3	5E+05	0.040193	C22orf26	0.496806216	1
COPD-HF	ENSG00000157613	11	70	13	5E+05	0.040134	CREB3L1	0.496806216	1
COPD-HF	ENSG00000125901	20	4	2	5E+05	0.040077	MRPS26	0.496798480833894	1
COPD-HF	ENSG00000169220	5	17	4	5E+05	0.039919	RGS14	0.495172898384926	1
COPD-HF	ENSG00000138448	2	117	15	5E+05	0.039906	ITGAV	0.495172898384926	1
COPD-HF	ENSG00000174851	11	6	2	5E+05	0.039898	YIF1A	0.495172898384926	1
COPD-HF	ENSG00000119318	9	154	17	5E+05	0.039895	RAD23B	0.495172898384926	1
COPD-HF	ENSG00000071991	18	203	23	5E+05	0.039893	CDH19	0.495172898384926	1
COPD-HF	ENSG00000168038	3	1955	38	5E+05	0.039889	ULK4	0.495172898384926	1
COPD-HF	ENSG00000163581	3	73	6	5E+05	0.039889	SLC2A2	0.495172898384926	1
COPD-HF	ENSG00000267318	17	42	7	5E+05	0.039876	RP11-178C3.10	0.495172898384926	1
COPD-HF	ENSG00000090273	1	61	9	5E+05	0.039821	NUDC	0.495172898384926	1
COPD-HF	ENSG00000142039	19	26	3	5E+05	0.039784	CCDC97	0.495172898384926	1
COPD-HF	ENSG00000143627	1	12	2	5E+05	0.039777	PKLR	0.495172898384926	1
COPD-HF	ENSG00000141639	18	373	46	5E+05	0.039687	MAPK4	0.495172898384926	1
COPD-HF	ENSG00000173511	11	2	1	5E+05	0.039573	VEGFB	0.494877278833107	1
COPD-HF	ENSG00000135094	12	70	4	5E+05	0.039417	SDS	0.493261073319756	1
COPD-HF	ENSG00000198054	21	119	13	5E+05	0.039376	DSCR8	0.49308275	1
COPD-HF	ENSG00000160791	3	16	3	5E+05	0.039344	CCR5	0.493016962610469	1
COPD-HF	ENSG00000116539	1	136	15	5E+05	0.039252	ASH1L	0.492198718367347	1
COPD-HF	ENSG00000181619	14	105	12	5E+05	0.039188	GPR135	0.491730703880191	1
COPD-HF	ENSG00000162302	11	22	3	5E+05	0.039151	RPS6KA4	0.491601078337875	1
COPD-HF	ENSG00000136754	10	326	17	5E+05	0.03915	ABI1	0.491601078337875	1
COPD-HF	ENSG00000139218	12	74	11	5E+05	0.039148	SCAF11	0.491601078337875	1
COPD-HF	ENSG00000127831	2	37	4	5E+05	0.039096	VIL1	0.491601078337875	1
COPD-HF	ENSG00000104320	8	144	7	5E+05	0.039091	NBN	0.491601078337875	1
COPD-HF	ENSG00000204913	17	8	3	5E+05	0.03894	LRRC3C	0.490622706766917	1
COPD-HF	ENSG00000100413	22	28	3	5E+05	0.038921	POLR3H	0.490622706766917	1
COPD-HF	ENSG00000085721	16	52	11	5E+05	0.038846	RRN3	0.490108362765229	1
COPD-HF	ENSG00000177181	1	125	8	5E+05	0.038844	RIMKLA	0.490108362765229	1
COPD-HF	ENSG00000145246	4	345	31	5E+05	0.038837	ATP10D	0.490108362765229	1
COPD-HF	ENSG00000203910	1	17	4	5E+05	0.038811	C1orf146	0.490108362765229	1
COPD-HF	ENSG00000089876	10	58	10	5E+05	0.038798	DHX32	0.490108362765229	1

COPD-HF	ENSG00000108375	17	103	14	5E+05	0.038764	RNF43	0.490108362765229	1
COPD-HF	ENSG00000214944	5	858	60	5E+05	0.038652	ARHGEF28	0.489671694845361	1
COPD-HF	ENSG00000185009	10	51	6	5E+05	0.038625	AP3M1	0.489666179504814	1
COPD-HF	ENSG00000171703	20	59	13	5E+05	0.038596	TCEA2	0.489635284239505	1
COPD-HF	ENSG00000173557	2	40	7	5E+05	0.038571	C2orf70	0.489635284239505	1
COPD-HF	ENSG00000163633	4	114	13	5E+05	0.038568	C4orf36	0.489635284239505	1
COPD-HF	ENSG00000174970	11	11	1	5E+05	0.038531	OR10AG1	0.489635284239505	1
COPD-HF	ENSG00000153820	2	621	25	5E+05	0.038455	SPHKAP	0.489193247066943	1
COPD-HF	ENSG00000159640	17	92	9	5E+05	0.038406	ACE	0.488907319060774	1
COPD-HF	ENSG00000012223	3	158	19	5E+05	0.038367	LTF	0.488748383552177	1
COPD-HF	ENSG00000168159	1	23	7	5E+05	0.038235	RNF187	0.487403703319502	1
COPD-HF	ENSG00000144161	2	44	7	5E+05	0.038212	ZC3H8	0.487403703319502	1
COPD-HF	ENSG00000144048	2	11	3	5E+05	0.038204	DUSP11	0.487403703319502	1
COPD-HF	ENSG00000101444	20	31	2	5E+05	0.038198	AHCY	0.487403703319502	1
COPD-HF	ENSG00000188921	9	123	14	5E+05	0.038161	PTPLAD2	0.487403703319502	1
COPD-HF	ENSG00000161203	3	21	6	5E+05	0.038077	AP2M1	0.48707379666898	1
COPD-HF	ENSG00000116161	1	16	5	5E+05	0.038058	CACYBP	0.48707379666898	1
COPD-HF	ENSG00000137500	11	60	6	5E+05	0.037985	CCDC90B	0.486572275886032	1
COPD-HF	ENSG00000069812	1	37	7	5E+05	0.037971	HES2	0.486572275886032	1
COPD-HF	ENSG00000148019	9	88	14	5E+05	0.037858	CEP78	0.485620399443285	1
COPD-HF	ENSG00000167578	19	61	12	5E+05	0.037845	RAB4B	0.485620399443285	1
COPD-HF	ENSG00000196141	2	365	38	5E+05	0.037823	SPATS2L	0.485620399443285	1
COPD-HF	ENSG00000168795	9	42	12	5E+05	0.037818	ZBTB5	0.485620399443285	1
COPD-HF	ENSG00000103599	15	372	19	5E+05	0.03775	IQCH	0.485586706210747	1
COPD-HF	ENSG00000125779	20	78	9	5E+05	0.037703	PANK2	0.485320809357542	1
COPD-HF	ENSG00000128713	2	10	3	5E+05	0.037692	HOXD11	0.485320809357542	1
COPD-HF	ENSG00000211450	11	3	1	5E+05	0.037682	C11orf31	0.485320809357542	1
COPD-HF	ENSG00000186432	3	86	9	5E+05	0.037662	KPNA4	0.485320809357542	1
COPD-HF	ENSG00000150051	10	150	16	5E+05	0.037655	MKX	0.485320809357542	1
COPD-HF	ENSG00000169826	10	103	12	5E+05	0.037646	CSGALNACT1	0.485320809357542	1
COPD-HF	ENSG00000164008	1	41	8	5E+05	0.037632	C1orf50	0.485320809357542	1
COPD-HF	ENSG00000165637	10	37	8	5E+05	0.037601	VDAC2	0.485320809357542	1
COPD-HF	ENSG00000111912	6	242	25	5E+05	0.037534	NCOA7	0.485320809357542	1

COPD-HF	ENSG00000113758	5	32	5	5E+05	0.037511	DBN1	0.485320809357542	1
COPD-HF	ENSG00000157500	3	59	9	5E+05	0.037219	APPL1	0.48245979395218	1
COPD-HF	ENSG00000134253	1	38	7	5E+05	0.037174	TRIM45	0.482215581984518	1
COPD-HF	ENSG00000103047	16	458	26	5E+05	0.037166	TANGO6	0.482215581984518	1
COPD-HF	ENSG00000255046	8	28	8	5E+05	0.037133	RP11-297N6	0.482215581984518	1
COPD-HF	ENSG00000104228	8	39	6	5E+05	0.037085	TRIM35	0.48207884696756	1
COPD-HF	ENSG00000117305	1	41	4	5E+05	0.037042	HMGCL	0.481859693719125	1
COPD-HF	ENSG00000139644	12	150	11	5E+05	0.036934	TMBIM6	0.480794083333333	1
COPD-HF	ENSG00000028528	15	85	10	5E+05	0.036893	SNX1	0.480599766077739	1
COPD-HF	ENSG00000196378	8	27	2	5E+05	0.036831	ZNF34	0.480131416548798	1
COPD-HF	ENSG00000175920	4	245	31	5E+05	0.036829	DOK7	0.480131416548798	1
COPD-HF	ENSG00000170423	12	20	5	5E+05	0.036816	KRT78	0.480131416548798	1
COPD-HF	ENSG00000141431	18	344	23	5E+05	0.036806	ASXL3	0.480131416548798	1
COPD-HF	ENSG00000129465	14	16	2	5E+05	0.036801	RIPK3	0.480131416548798	1
COPD-HF	ENSG00000084112	12	97	17	5E+05	0.036797	SSH1	0.480131416548798	1
COPD-HF	ENSG00000151687	2	135	15	5E+05	0.036743	ANKAR	0.480131416548798	1
COPD-HF	ENSG00000120885	8	37	6	5E+05	0.036703	CLU	0.480131416548798	1
COPD-HF	ENSG00000134909	11	582	21	5E+05	0.036547	ARHGAP32	0.479140007823613	1
COPD-HF	ENSG00000131188	5	11	3	5E+05	0.036533	PRR7	0.479140007823613	1
COPD-HF	ENSG00000179295	12	79	12	5E+05	0.036524	PTPN11	0.479140007823613	1
COPD-HF	ENSG00000168872	16	22	7	5E+05	0.036507	DDX19A	0.479140007823613	1
COPD-HF	ENSG00000144369	2	107	14	5E+05	0.036491	FAM171B	0.479140007823613	1
COPD-HF	ENSG00000152404	11	402	23	5E+05	0.03645	CWF19L2	0.479140007823613	1
COPD-HF	ENSG00000130299	19	26	5	5E+05	0.036372	GTPBP3	0.47888934	1
COPD-HF	ENSG00000181291	17	121	25	5E+05	0.036362	TMEM132E	0.47888934	1
COPD-HF	ENSG00000067225	15	35	7	5E+05	0.036181	PKM	0.477056060801144	1
COPD-HF	ENSG00000102904	16	27	6	5E+05	0.036165	TSNAXIP1	0.477056060801144	1
COPD-HF	ENSG00000138109	10	159	15	5E+05	0.036156	CYP2C9	0.477056060801144	1
COPD-HF	ENSG00000170677	18	121	18	5E+05	0.036114	SOCS6	0.477056060801144	1
COPD-HF	ENSG00000148700	10	163	16	5E+05	0.036063	ADD3	0.476864619081779	1
COPD-HF	ENSG00000103657	15	519	17	5E+05	0.036029	HERC1	0.476757040201005	1
COPD-HF	ENSG00000198625	1	113	9	5E+05	0.035983	MDM4	0.47649040158046	1
COPD-HF	ENSG00000116205	1	104	11	5E+05	0.035969	TCEANC2	0.47649040158046	1

COPD-HF	ENSG00000197457	20	28	6	5E+05	0.035938	STMN3	0.47649040158046	1
COPD-HF	ENSG00000171136	19	9	3	5E+05	0.03591	RLN3	0.47649040158046	1
COPD-HF	ENSG00000162927	2	120	20	5E+05	0.035907	PUS10	0.47649040158046	1
COPD-HF	ENSG00000253304	1	9	3	5E+05	0.035906	TMEM200B	0.47649040158046	1
COPD-HF	ENSG00000052723	1	3	1	5E+05	0.035793	SIKE1	0.47602624025974	1
COPD-HF	ENSG00000139405	12	10	2	5E+05	0.035739	RITA1	0.475651254151625	1
COPD-HF	ENSG00000110148	11	51	8	5E+05	0.035734	CCKBR	0.475651254151625	1
COPD-HF	ENSG00000105088	19	191	21	5E+05	0.035685	OLFM2	0.475619381778742	1
COPD-HF	ENSG00000077380	2	103	14	5E+05	0.035575	DYNC1I2	0.474496363965268	1
COPD-HF	ENSG00000166260	17	61	6	5E+05	0.035484	COX11	0.473625323678494	1
COPD-HF	ENSG00000213494	17	76	10	5E+05	0.035479	CCL14	0.473625323678494	1
COPD-HF	ENSG00000123064	12	43	4	5E+05	0.035423	DDX54	0.473496852066715	1
COPD-HF	ENSG00000100625	14	11	3	5E+05	0.03542	SIX4	0.473496852066715	1
COPD-HF	ENSG00000149743	11	4	2	5E+05	0.035334	TRPT1	0.472993189542484	1
COPD-HF	ENSG00000009830	14	143	24	5E+05	0.035283	POMT2	0.472653734738372	1
COPD-HF	ENSG00000163374	1	20	5	5E+05	0.035223	YY1AP1	0.472193133818182	1
COPD-HF	ENSG00000231924	19	56	6	5E+05	0.035185	PSG1	0.472027005094614	1
COPD-HF	ENSG00000154310	3	919	92	5E+05	0.035097	TNIK	0.471189367079388	1
COPD-HF	ENSG00000240771	12	18	6	5E+05	0.035074	ARHGEF25	0.471189367079388	1
COPD-HF	ENSG00000147535	8	7	3	5E+05	0.03504	PPAPDC1B	0.471110371991247	1
COPD-HF	ENSG00000175318	15	38	7	5E+05	0.034839	GRAMD2	0.468749844525548	1
COPD-HF	ENSG00000198844	17	39	10	5E+05	0.03482	ARHGEF15	0.468749844525548	1
COPD-HF	ENSG00000123473	1	139	8	5E+05	0.034766	STIL	0.468451519005848	1
COPD-HF	ENSG00000180346	4	4	1	5E+05	0.034731	TIGD2	0.468322255303584	1
COPD-HF	ENSG00000013275	19	24	5	5E+05	0.034697	PSMC4	0.468206296486091	1
COPD-HF	ENSG00000100319	22	103	9	5E+05	0.034658	ZMAT5	0.468022647619048	1
COPD-HF	ENSG00000147697	8	100	16	5E+05	0.034657	GSDMC	0.468022647619048	1
COPD-HF	ENSG00000101166	20	13	4	5E+05	0.034652	SLMO2	0.468022647619048	1
COPD-HF	ENSG00000119801	2	26	9	5E+05	0.034624	YPEL5	0.468022647619048	1
COPD-HF	ENSG00000186446	3	15	4	5E+05	0.034604	ZNF501	0.468022647619048	1
COPD-HF	ENSG00000161574	17	72	9	5E+05	0.034567	CCL15-CCL1	0.468022647619048	1
COPD-HF	ENSG00000107949	10	41	7	5E+05	0.034477	BCCIP	0.467633952170714	1
COPD-HF	ENSG00000163666	3	37	7	5E+05	0.034435	HESX1	0.467408214285714	1

COPD-HF	ENSG00000120729	5	11	3	5E+05	0.034425	MYOT	0.467408214285714	1
COPD-HF	ENSG00000089169	12	537	47	5E+05	0.03435	RPH3A	0.466942146017699	1
COPD-HF	ENSG00000126500	11	46	9	5E+05	0.03433	FLRT1	0.466942146017699	1
COPD-HF	ENSG00000158092	3	168	6	5E+05	0.034293	NCK1	0.466855885524372	1
COPD-HF	ENSG00000163875	1	64	11	5E+05	0.034256	MEAF6	0.466696857354028	1
COPD-HF	ENSG00000165841	10	402	15	5E+05	0.034252	CYP2C19	0.466696857354028	1
COPD-HF	ENSG00000119326	9	193	20	5E+05	0.034208	CTNNAL1	0.466696857354028	1
COPD-HF	ENSG00000135148	12	22	5	5E+05	0.034176	TRAFD1	0.466641635555556	1
COPD-HF	ENSG00000111684	12	41	5	5E+05	0.034173	LPCAT3	0.466641635555556	1
COPD-HF	ENSG00000173068	9	1327	74	5E+05	0.034152	BNC2	0.466641635555556	1
COPD-HF	ENSG00000137831	15	147	12	5E+05	0.03413	UACA	0.466641635555556	1
COPD-HF	ENSG00000010282	3	18	4	5E+05	0.034044	HHATL	0.466220692421991	1
COPD-HF	ENSG00000172057	17	10	4	5E+05	0.034019	ORMDL3	0.466220692421991	1
COPD-HF	ENSG00000221909	7	9	3	5E+05	0.033998	FAM200A	0.466220692421991	1
COPD-HF	ENSG00000010319	3	14	6	5E+05	0.033945	SEMA3G	0.465903339538347	1
COPD-HF	ENSG00000105982	7	79	9	5E+05	0.033939	RNF32	0.465903339538347	1
COPD-HF	ENSG00000165644	10	1	1	5E+05	0.033908	COMTD1	0.465903339538347	1
COPD-HF	ENSG00000173598	12	57	8	5E+05	0.033863	NUDT4	0.465818417164179	1
COPD-HF	ENSG00000186583	8	17	5	5E+05	0.033858	SPATC1	0.465818417164179	1
COPD-HF	ENSG00000091009	5	222	14	5E+05	0.033765	RBM27	0.465164607623318	1
COPD-HF	ENSG00000058091	7	1915	65	5E+05	0.033711	CDK14	0.464768035153328	1
COPD-HF	ENSG00000111271	12	55	5	5E+05	0.033699	ACAD10	0.464768035153328	1
COPD-HF	ENSG00000168917	3	87	4	5E+05	0.033684	SLC35G2	0.464768035153328	1
COPD-HF	ENSG00000177096	22	11	3	5E+05	0.033673	FAM109B	0.464768035153328	1
COPD-HF	ENSG00000186566	17	140	10	5E+05	0.033549	GPATCH8	0.463922518379595	1
COPD-HF	ENSG00000213930	9	18	5	5E+05	0.033506	GALT	0.463675749249249	1
COPD-HF	ENSG00000108671	17	36	8	5E+05	0.033482	PSMD11	0.463675749249249	1
COPD-HF	ENSG00000128487	17	653	18	5E+05	0.033409	SPECC1	0.463028644360902	1
COPD-HF	ENSG00000124767	6	63	11	5E+05	0.033347	GLO1	0.462517118886381	1
COPD-HF	ENSG00000113396	5	1781	42	5E+05	0.033315	SLC27A6	0.462421231174699	1
COPD-HF	ENSG00000182896	17	3	1	5E+05	0.033172	TMEM95	0.460783327807084	1
COPD-HF	ENSG00000111300	12	72	11	5E+05	0.03313	NAA25	0.46054697586727	1
COPD-HF	ENSG00000110536	11	5	2	5E+05	0.033124	PTPMT1	0.46054697586727	1

COPD-HF	ENSG00000183888	1	16	5	5E+05	0.033106	C1orf64	0.46054697586727	1
COPD-HF	ENSG00000186710	12	14	1	5E+05	0.033097	CCDC42B	0.46054697586727	1
COPD-HF	ENSG00000020633	1	119	24	5E+05	0.03306	RUNX3	0.46054697586727	1
COPD-HF	ENSG00000105229	19	92	9	5E+05	0.032995	PIAS4	0.460406385314156	1
COPD-HF	ENSG00000081014	15	213	15	5E+05	0.032977	AP4E1	0.460406385314156	1
COPD-HF	ENSG00000113742	5	173	17	5E+05	0.03296	CPEB4	0.460406385314156	1
COPD-HF	ENSG00000123119	8	308	11	5E+05	0.032946	NECAB1	0.460406385314156	1
COPD-HF	ENSG00000160570	19	18	2	5E+05	0.032915	DEDD2	0.460406385314156	1
COPD-HF	ENSG00000137571	8	396	36	5E+05	0.0329	SLCO5A1	0.460406385314156	1
COPD-HF	ENSG00000164347	5	81	9	5E+05	0.032885	GFM2	0.460406385314156	1
COPD-HF	ENSG00000126749	12	36	6	5E+05	0.032867	EMG1	0.460406385314156	1
COPD-HF	ENSG00000174776	3	253	26	5E+05	0.032864	WDR49	0.460406385314156	1
COPD-HF	ENSG00000119401	9	25	6	5E+05	0.032854	TRIM32	0.460406385314156	1
COPD-HF	ENSG00000167104	20	36	6	5E+05	0.032769	BPIFB6	0.460406385314156	1
COPD-HF	ENSG00000108439	17	16	6	5E+05	0.032676	PNPO	0.459783746564885	1
COPD-HF	ENSG00000160161	19	16	2	5E+05	0.032632	CILP2	0.459515398013751	1
COPD-HF	ENSG0000006047	17	8	2	5E+05	0.032591	YBX2	0.459288916666667	1
COPD-HF	ENSG00000109189	4	77	6	5E+05	0.032581	USP46	0.459288916666667	1
COPD-HF	ENSG00000105251	19	26	5	5E+05	0.032576	SHD	0.459288916666667	1
COPD-HF	ENSG00000162642	1	23	8	5E+05	0.032552	C1orf52	0.459288916666667	1
COPD-HF	ENSG00000082497	1	13	5	5E+05	0.03251	SERTAD4	0.459288916666667	1
COPD-HF	ENSG00000114861	3	1172	104	5E+05	0.032476	FOXP1	0.459288916666667	1
COPD-HF	ENSG00000109618	4	67	12	5E+05	0.032465	SEPSECS	0.459288916666667	1
COPD-HF	ENSG00000165120	7	16	4	5E+05	0.032452	SSMEM1	0.459288916666667	1
COPD-HF	ENSG00000112208	6	18	4	5E+05	0.032413	BAG2	0.459288916666667	1
COPD-HF	ENSG00000181754	1	9	4	5E+05	0.03238	AMIGO1	0.459288916666667	1
COPD-HF	ENSG00000074266	11	72	9	5E+05	0.032269	EED	0.458254604776579	1
COPD-HF	ENSG00000119328	9	41	8	5E+05	0.032237	FAM206A	0.458153138781804	1
COPD-HF	ENSG00000023191	11	54	8	5E+05	0.032076	RNH1	0.45621675	1
COPD-HF	ENSG00000243943	2	98	10	5E+05	0.03202	ZNF512	0.455771938223938	1
COPD-HF	ENSG00000117500	1	54	9	5E+05	0.032019	TMED5	0.455771938223938	1
COPD-HF	ENSG00000203859	1	15	2	5E+05	0.031995	HSD3B2	0.455771938223938	1
COPD-HF	ENSG00000122483	1	202	15	5E+05	0.031943	CCDC18	0.455731671052632	1

COPD-HF	ENSG00000121621	11	96	12	5E+05	0.031915	KIF18A	0.455684891556933	1
COPD-HF	ENSG00000197562	16	103	7	5E+05	0.031845	RAB40C	0.455037895348837	1
COPD-HF	ENSG00000135213	7	71	12	5E+05	0.031828	POM121C	0.455037895348837	1
COPD-HF	ENSG00000164932	8	36	7	5E+05	0.031827	CTHRC1	0.455037895348837	1
COPD-HF	ENSG00000114383	3	3	2	5E+05	0.03179	TUSC2	0.455037895348837	1
COPD-HF	ENSG00000147432	8	176	6	5E+05	0.03176	CHRN3	0.455037895348837	1
COPD-HF	ENSG00000131981	14	37	4	5E+05	0.031734	LGALS3	0.455037895348837	1
COPD-HF	ENSG00000112183	6	18	5	5E+05	0.031659	RBM24	0.454494039719626	1
COPD-HF	ENSG00000047365	4	728	52	5E+05	0.031604	ARAP2	0.454058091971941	1
COPD-HF	ENSG00000173486	11	3	2	5E+05	0.031577	FKBP2	0.454024056942278	1
COPD-HF	ENSG00000198276	20	30	10	5E+05	0.031526	UCKL1	0.453644619828259	1
COPD-HF	ENSG00000108423	17	56	8	5E+05	0.031462	TUBD1	0.4530773796875	1
COPD-HF	ENSG00000149043	11	35	8	5E+05	0.031415	SYT8	0.452754257232213	1
COPD-HF	ENSG00000076382	17	13	8	5E+05	0.031376	SPAG5	0.452546015649452	1
COPD-HF	ENSG00000145075	3	546	32	5E+05	0.031315	CCDC39	0.452019886452623	1
COPD-HF	ENSG00000043514	1	107	12	5E+05	0.031293	TRIT1	0.452019886452623	1
COPD-HF	ENSG00000166323	11	222	12	5E+05	0.031249	C11orf65	0.451774758431373	1
COPD-HF	ENSG00000181649	11	2	1	5E+05	0.031148	PHLDA2	0.450668040816327	1
COPD-HF	ENSG00000215114	8	69	10	5E+05	0.031134	UBXN2B	0.450668040816327	1
COPD-HF	ENSG00000106125	7	394	26	5E+05	0.031114	FAM188B	0.450668040816327	1
COPD-HF	ENSG00000144736	3	147	9	5E+05	0.03108	SHQ1	0.450668040816327	1
COPD-HF	ENSG00000089639	19	21	6	5E+05	0.031065	GMIP	0.450668040816327	1
COPD-HF	ENSG00000268412	2	1	1	5E+05	0.030816	AC013449.1	0.447621219858156	1
COPD-HF	ENSG00000101337	20	98	8	5E+05	0.030686	TM9SF4	0.446084414826499	1
COPD-HF	ENSG00000187871	6	364	23	5E+05	0.030682	GFRAL	0.446084414826499	1
COPD-HF	ENSG00000164221	5	51	9	5E+05	0.030677	CCDC112	0.446084414826499	1
COPD-HF	ENSG00000137936	1	826	29	5E+05	0.030671	BCAR3	0.446084414826499	1
COPD-HF	ENSG00000185666	22	1535	102	5E+05	0.030637	SYN3	0.446084414826499	1
COPD-HF	ENSG00000043143	5	134	22	5E+05	0.030613	JADE2	0.446084414826499	1
COPD-HF	ENSG00000196526	4	845	36	5E+05	0.03061	AFAP1	0.446084414826499	1
COPD-HF	ENSG00000103044	16	22	8	5E+05	0.030606	HAS3	0.446084414826499	1
COPD-HF	ENSG00000205147	19	9	4	5E+05	0.0306	AC016586.1	0.446084414826499	1
COPD-HF	ENSG00000179094	17	31	8	5E+05	0.030545	PER1	0.446084414826499	1

COPD-HF	ENSG00000255223	11	6	2	5E+05	0.03045	OR5M11	0.446084414826499	1
COPD-HF	ENSG00000075043	20	248	30	5E+05	0.030345	KCNQ2	0.444987577565632	1
COPD-HF	ENSG00000176920	19	35	4	5E+05	0.030327	FUT2	0.444987577565632	1
COPD-HF	ENSG00000168924	4	21	12	5E+05	0.030299	LETM1	0.444987577565632	1
COPD-HF	ENSG00000109182	4	114	9	5E+05	0.030285	CWH43	0.444987577565632	1
COPD-HF	ENSG00000146232	6	15	6	5E+05	0.030193	NFKBIE	0.444172042298484	1
COPD-HF	ENSG00000164093	4	37	7	5E+05	0.030168	PITX2	0.444158741214058	1
COPD-HF	ENSG00000139445	12	57	10	5E+05	0.030067	FOXN4	0.443025588329337	1
COPD-HF	ENSG00000099381	16	27	3	5E+05	0.030031	SETD1A	0.442849138	1
COPD-HF	ENSG00000183196	16	28	12	5E+05	0.030023	CHST6	0.442849138	1
COPD-HF	ENSG00000169964	3	2	1	5E+05	0.030021	TMEM42	0.442849138	1
COPD-HF	ENSG00000165702	9	160	37	5E+05	0.030001	GFI1B	0.442849138	1
COPD-HF	ENSG00000185129	5	3	2	5E+05	0.029969	PURA	0.442849138	1
COPD-HF	ENSG00000181322	3	49	15	5E+05	0.029964	NME9	0.442849138	1
COPD-HF	ENSG00000204020	10	67	12	5E+05	0.029907	LIPN	0.442849138	1
COPD-HF	ENSG00000114166	3	443	28	5E+05	0.029905	KAT2B	0.442849138	1
COPD-HF	ENSG00000269795	1	11	4	5E+05	0.029865	AC092782.1	0.442849138	1
COPD-HF	ENSG00000111530	12	153	13	5E+05	0.029858	CAND1	0.442849138	1
COPD-HF	ENSG00000151465	10	127	15	5E+05	0.029812	CDC123	0.442849138	1
COPD-HF	ENSG00000197851	7	42	9	5E+05	0.029809	C7orf76	0.442849138	1
COPD-HF	ENSG00000067208	1	508	10	5E+05	0.029766	EVI5	0.442849138	1
COPD-HF	ENSG00000120696	13	4	1	5E+05	0.029722	KBTBD7	0.442849138	1
COPD-HF	ENSG00000084733	2	169	7	5E+05	0.029655	RAB10	0.442257779126214	1
COPD-HF	ENSG00000171492	1	156	32	5E+05	0.029642	LRRRC8D	0.442257779126214	1
COPD-HF	ENSG00000106526	7	144	15	5E+05	0.029595	ACTR3C	0.442078310372771	1
COPD-HF	ENSG00000159176	1	91	12	5E+05	0.029591	CSRP1	0.442078310372771	1
COPD-HF	ENSG00000167258	17	171	10	5E+05	0.029561	CDK12	0.442078310372771	1
COPD-HF	ENSG00000253426	8	21	3	5E+05	0.029521	RP11-10A14.4	0.442047597887896	1
COPD-HF	ENSG00000170915	6	157	31	5E+05	0.029455	PAQR8	0.441417898373984	1
COPD-HF	ENSG00000106460	7	182	9	5E+05	0.02944	TMEM106B	0.441417898373984	1
COPD-HF	ENSG00000118971	12	59	15	5E+05	0.029425	CCND2	0.441417898373984	1
COPD-HF	ENSG00000206260	3	3	2	5E+05	0.029402	PRR23A	0.441417898373984	1
COPD-HF	ENSG00000139428	12	88	13	5E+05	0.029358	MMAB	0.441399685154976	1

COPD-HF	ENSG00000134242	1	89	13	5E+05	0.029247	PTPN22	0.440089755918367	1
COPD-HF	ENSG00000125686	17	68	6	5E+05	0.029246	MED1	0.440089755918367	1
COPD-HF	ENSG00000050130	14	70	8	5E+05	0.029234	JKAMP	0.440089755918367	1
COPD-HF	ENSG00000178053	3	102	12	5E+05	0.029227	MLF1	0.440089755918367	1
COPD-HF	ENSG00000106113	7	105	18	5E+05	0.029144	CRHR2	0.439976537264537	1
COPD-HF	ENSG00000071082	2	49	7	5E+05	0.02905	RPL31	0.438916926229508	1
COPD-HF	ENSG00000164744	7	76	6	5E+05	0.02902	SUN3	0.438823347005742	1
COPD-HF	ENSG00000104129	15	49	6	5E+05	0.028972	DNAJC17	0.438457205254516	1
COPD-HF	ENSG00000164967	9	2	1	5E+05	0.028916	RPP25L	0.437969291700904	1
COPD-HF	ENSG00000254959	7	459	31	5E+05	0.028849	INMT-FAM113	0.437313829769737	1
COPD-HF	ENSG00000149781	11	29	7	5E+05	0.028823	FERMT3	0.43727930781893	1
COPD-HF	ENSG00000196263	19	69	9	5E+05	0.028748	ZNF471	0.436500728171334	1
COPD-HF	ENSG00000079462	19	4	1	5E+05	0.02872	PAFAH1B3	0.436435086562242	1
COPD-HF	ENSG00000084764	2	55	4	5E+05	0.0287	MAPRE3	0.436435086562242	1
COPD-HF	ENSG00000157150	3	16	5	5E+05	0.028687	TIMP4	0.436435086562242	1
COPD-HF	ENSG00000133789	11	265	10	5E+05	0.028604	SWAP70	0.435750026446281	1
COPD-HF	ENSG00000139437	12	164	16	5E+05	0.028519	TCHP	0.434814497105045	1
COPD-HF	ENSG00000249590	22	44	11	5E+05	0.028486	RP4-539M6.1	0.434670892384106	1
COPD-HF	ENSG00000138795	4	191	17	5E+05	0.028455	LEF1	0.434557593206297	1
COPD-HF	ENSG00000226887	4	37	3	5E+05	0.028413	ERVMER34-10	0.43427597761194	1
COPD-HF	ENSG00000110921	12	63	11	5E+05	0.028354	MVK	0.433733843983403	1
COPD-HF	ENSG00000008130	1	65	8	5E+05	0.028353	NADK	0.433733843983403	1
COPD-HF	ENSG00000113248	5	5	3	5E+05	0.028329	PCDHB15	0.433733843983403	1
COPD-HF	ENSG00000163935	3	251	18	5E+05	0.028325	SFMBT1	0.433733843983403	1
COPD-HF	ENSG00000110955	12	7	1	5E+05	0.028266	ATP5B	0.433733843983403	1
COPD-HF	ENSG00000021776	15	233	18	5E+05	0.028244	AQR	0.433733843983403	1
COPD-HF	ENSG00000204991	16	142	14	5E+05	0.028199	SPIRE2	0.433521407005838	1
COPD-HF	ENSG00000100285	22	27	6	5E+05	0.028139	NEFH	0.432960089315526	1
COPD-HF	ENSG00000168374	3	68	9	5E+05	0.028135	ARF4	0.432960089315526	1
COPD-HF	ENSG00000205212	17	78	15	5E+05	0.02808	CCDC144NL	0.432774782608696	1
COPD-HF	ENSG00000203993	9	1	1	5E+05	0.028072	C9orf37	0.432774782608696	1
COPD-HF	ENSG00000099849	11	11	5	5E+05	0.028047	RASSF7	0.432774782608696	1
COPD-HF	ENSG00000156603	11	7	3	5E+05	0.028	MED19	0.432626990779547	1

COPD-HF	ENSG00000159023	1	347	19	5E+05	0.027986	EPB41	0.432626990779547	1
COPD-HF	ENSG00000163629	4	535	12	5E+05	0.027875	PTPN13	0.431418870696893	1
COPD-HF	ENSG00000132698	1	5	3	5E+05	0.027867	RAB25	0.431418870696893	1
COPD-HF	ENSG00000130758	19	31	8	5E+05	0.027812	MAP3K10	0.431167868797309	1
COPD-HF	ENSG00000126464	19	77	9	5E+05	0.027789	PRR12	0.431167868797309	1
COPD-HF	ENSG00000125447	17	39	5	5E+05	0.027711	GGA3	0.430325916596462	1
COPD-HF	ENSG00000153832	2	116	17	5E+05	0.027703	FBXO36	0.430325916596462	1
COPD-HF	ENSG00000064999	6	152	17	5E+05	0.027647	ANKS1A	0.430056667510549	1
COPD-HF	ENSG00000115318	2	16	4	5E+05	0.027602	LOXL3	0.429719313	1
COPD-HF	ENSG00000128928	15	78	8	5E+05	0.027562	IVD	0.42945929501268	1
COPD-HF	ENSG00000125378	14	15	3	5E+05	0.027559	BMP4	0.42945929501268	1
COPD-HF	ENSG00000117479	1	31	9	5E+05	0.027542	SLC19A2	0.42945929501268	1
COPD-HF	ENSG00000129245	17	33	8	5E+05	0.027513	FXR2	0.42945929501268	1
COPD-HF	ENSG00000148180	9	225	20	5E+05	0.027512	GSN	0.42945929501268	1
COPD-HF	ENSG00000118402	6	105	10	5E+05	0.027464	ELOVL4	0.42945929501268	1
COPD-HF	ENSG00000242852	19	153	10	5E+05	0.027426	ZNF709	0.42945929501268	1
COPD-HF	ENSG00000118849	3	104	12	5E+05	0.027392	RARRES1	0.429350965986395	1
COPD-HF	ENSG00000165806	10	144	16	5E+05	0.027335	CASP7	0.428822174468085	1
COPD-HF	ENSG00000136731	2	230	16	5E+05	0.027295	UGGT1	0.428559399488927	1
COPD-HF	ENSG00000139977	14	19	4	5E+05	0.027295	NAA30	0.428559399488927	1
COPD-HF	ENSG00000141720	17	59	11	5E+05	0.027275	PIP4K2B	0.428559399488927	1
COPD-HF	ENSG00000161791	12	95	9	5E+05	0.027271	FMNL3	0.428559399488927	1
COPD-HF	ENSG00000205517	19	78	8	5E+05	0.027251	RGL3	0.428559399488927	1
COPD-HF	ENSG00000181718	11	12	4	5E+05	0.027226	OR5T2	0.428559399488927	1
COPD-HF	ENSG00000115602	2	146	13	5E+05	0.027222	IL1RL1	0.428559399488927	1
COPD-HF	ENSG00000130703	20	147	15	5E+05	0.027211	OSBPL2	0.428559399488927	1
COPD-HF	ENSG00000166529	7	16	3	5E+05	0.027208	ZSCAN21	0.428559399488927	1
COPD-HF	ENSG00000166813	15	89	10	5E+05	0.027201	KIF7	0.428559399488927	1
COPD-HF	ENSG00000147874	9	209	17	5E+05	0.02715	HAUS6	0.428559399488927	1
COPD-HF	ENSG00000143217	1	36	9	5E+05	0.026979	PVRL4	0.427604391229579	1
COPD-HF	ENSG00000116809	1	49	10	5E+05	0.026952	ZBTB17	0.427544075731498	1
COPD-HF	ENSG00000047849	3	188	11	5E+05	0.026952	MAP4	0.427544075731498	1
COPD-HF	ENSG00000128510	7	86	12	5E+05	0.026942	CPA4	0.427544075731498	1

COPD-HF	ENSG00000107438	10	169	23	5E+05	0.026865	PDLIM1	0.427267079378775	1
COPD-HF	ENSG00000163872	3	182	13	5E+05	0.026857	YEATS2	0.427267079378775	1
COPD-HF	ENSG00000169760	3	2213	125	5E+05	0.026809	NLGN1	0.427113480553155	1
COPD-HF	ENSG00000205189	8	71	11	5E+05	0.0268	ZBTB10	0.427113480553155	1
COPD-HF	ENSG00000106246	7	91	11	5E+05	0.026741	PTCD1	0.426767838095238	1
COPD-HF	ENSG00000110367	11	71	9	5E+05	0.026706	DDX6	0.426578594454073	1
COPD-HF	ENSG00000140391	15	26	5	5E+05	0.026676	TSPAN3	0.426468957502168	1
COPD-HF	ENSG00000136444	17	11	3	5E+05	0.026646	RSAD1	0.426359130208333	1
COPD-HF	ENSG00000122779	7	167	18	5E+05	0.026525	TRIM24	0.424791768027802	1
COPD-HF	ENSG00000166143	15	17	4	5E+05	0.026471	PPP1R14D	0.424295602608696	1
COPD-HF	ENSG00000173039	11	11	4	5E+05	0.026424	RELA	0.423910872062663	1
COPD-HF	ENSG00000198646	20	173	12	5E+05	0.026418	NCOA6	0.423910872062663	1
COPD-HF	ENSG00000091592	17	469	18	5E+05	0.026395	NLRP1	0.423910872062663	1
COPD-HF	ENSG00000139436	12	115	15	5E+05	0.026345	GIT2	0.42374989965096	1
COPD-HF	ENSG00000165124	9	741	59	5E+05	0.026336	SVEP1	0.42374989965096	1
COPD-HF	ENSG00000108829	17	42	7	5E+05	0.026319	LRRC59	0.42374989965096	1
COPD-HF	ENSG00000126790	14	71	9	5E+05	0.026306	L3HYPDH	0.42374989965096	1
COPD-HF	ENSG00000165868	10	241	21	5E+05	0.02625	HSPA12A	0.423700744308231	1
COPD-HF	ENSG00000133805	11	721	66	5E+05	0.026227	AMPD3	0.423700517966696	1
COPD-HF	ENSG00000113389	5	261	25	5E+05	0.026188	NPR3	0.42344158245614	1
COPD-HF	ENSG00000163618	3	1683	98	5E+05	0.026156	CADPS	0.423295476733977	1
COPD-HF	ENSG00000115607	2	133	12	5E+05	0.026144	IL18RAP	0.423295476733977	1
COPD-HF	ENSG00000091138	7	88	20	5E+05	0.026143	SLC26A3	0.423295476733977	1
COPD-HF	ENSG00000178295	2	71	12	5E+05	0.026135	GEN1	0.423295476733977	1
COPD-HF	ENSG00000142867	1	33	10	5E+05	0.026126	BCL10	0.423295476733977	1
COPD-HF	ENSG00000117475	1	68	9	5E+05	0.026114	BLZF1	0.423295476733977	1
COPD-HF	ENSG00000105427	19	3	1	5E+05	0.026079	CNFN	0.423295476733977	1
COPD-HF	ENSG00000132510	17	18	5	5E+05	0.026063	KDM6B	0.423295476733977	1
COPD-HF	ENSG00000171700	20	11	4	5E+05	0.026033	RGS19	0.423295476733977	1
COPD-HF	ENSG00000180116	12	583	24	5E+05	0.026003	C12orf40	0.423295476733977	1
COPD-HF	ENSG00000129965	11	74	16	5E+05	0.025996	INS-IGF2	0.423295476733977	1
COPD-HF	ENSG00000035403	10	172	21	5E+05	0.025955	VCL	0.423295476733977	1
COPD-HF	ENSG00000174943	16	34	5	5E+05	0.025938	KCTD13	0.423295476733977	1

COPD-HF	ENSG00000196653	3	11	4	5E+05	0.025859	ZNF502	0.423295476733977	1
COPD-HF	ENSG00000255073	11	70	11	5E+05	0.025802	ZFP91-CNTF	0.422762903111111	1
COPD-HF	ENSG00000173264	11	21	8	5E+05	0.025782	GPR137	0.422762903111111	1
COPD-HF	ENSG00000139514	13	213	19	5E+05	0.025769	SLC7A1	0.422762903111111	1
COPD-HF	ENSG00000117748	1	48	4	5E+05	0.025765	RPA2	0.422762903111111	1
COPD-HF	ENSG00000197343	7	29	8	5E+05	0.025745	ZNF655	0.422762903111111	1
COPD-HF	ENSG00000119559	19	27	5	5E+05	0.025687	C19orf25	0.422757563392857	1
COPD-HF	ENSG00000101440	20	94	5	5E+05	0.025565	ASIP	0.421125688114388	1
COPD-HF	ENSG00000160472	19	1	1	5E+05	0.025452	TMEM190	0.419639280858676	1
COPD-HF	ENSG00000196586	6	271	16	5E+05	0.025423	MYO6	0.419536400179051	1
COPD-HF	ENSG00000203883	20	1	1	5E+05	0.025394	SOX18	0.419433335125448	1
COPD-HF	ENSG00000170927	6	1380	51	5E+05	0.025376	PKHD1	0.419433335125448	1
COPD-HF	ENSG00000019995	10	74	7	5E+05	0.025331	ZRANB1	0.419143916517056	1
COPD-HF	ENSG00000181333	11	166	14	5E+05	0.02528	HEPHL1	0.418675867026056	1
COPD-HF	ENSG00000064601	20	16	3	5E+05	0.025229	CTSA	0.418206975719424	1
COPD-HF	ENSG00000080709	5	281	31	5E+05	0.025161	KCNN2	0.417455187218722	1
COPD-HF	ENSG00000179751	19	1	1	5E+05	0.025143	SYCN	0.417455187218722	1
COPD-HF	ENSG00000149260	11	151	28	5E+05	0.025114	CAPN5	0.417426836789901	1
COPD-HF	ENSG00000049449	11	652	59	5E+05	0.025093	RCN1	0.417426836789901	1
COPD-HF	ENSG00000166140	15	14	2	5E+05	0.025092	ZFYVE19	0.417426836789901	1
COPD-HF	ENSG00000161956	17	20	7	5E+05	0.025072	SEN3	0.417426836789901	1
COPD-HF	ENSG00000214954	8	262	11	5E+05	0.025061	LRRRC69	0.417426836789901	1
COPD-HF	ENSG00000160752	1	11	2	5E+05	0.025052	FDPS	0.417426836789901	1
COPD-HF	ENSG00000259030	1	601	45	5E+05	0.024995	FPGT-TNNI3	0.417426836789901	1
COPD-HF	ENSG00000116783	1	601	45	5E+05	0.024995	TNNI3K	0.417426836789901	1
COPD-HF	ENSG00000268656	2	8	3	5E+05	0.024952	AC110084.1	0.417426836789901	1
COPD-HF	ENSG00000118557	16	136	14	5E+05	0.024906	PMFBP1	0.417356634545455	1
COPD-HF	ENSG00000167531	12	3	2	5E+05	0.024902	LALBA	0.417356634545455	1
COPD-HF	ENSG00000217236	2	14	5	5E+05	0.024887	SP9	0.417356634545455	1
COPD-HF	ENSG00000165997	10	57	10	5E+05	0.024822	ARL5B	0.417086532360985	1
COPD-HF	ENSG00000161328	11	83	14	5E+05	0.024815	LRRRC56	0.417086532360985	1
COPD-HF	ENSG00000178971	17	50	9	5E+05	0.024804	CTC1	0.417086532360985	1
COPD-HF	ENSG00000163508	3	7	3	5E+05	0.024764	EOMES	0.417086532360985	1

COPD-HF	ENSG00000169519	11	274	14	5E+05	0.024709	METTL15	0.416707225068619	1
COPD-HF	ENSG00000139370	12	117	9	5E+05	0.024655	SLC15A4	0.416177303113553	1
COPD-HF	ENSG00000160767	1	16	1	5E+05	0.02464	FAM189B	0.416177303113553	1
COPD-HF	ENSG00000213445	11	20	7	5E+05	0.024605	SIPA1	0.416095380733945	1
COPD-HF	ENSG00000136828	9	447	17	5E+05	0.024557	RALGPS1	0.415664996326905	1
COPD-HF	ENSG00000248919	7	80	9	5E+05	0.024527	ATP5J2-PTCI	0.415538778492647	1
COPD-HF	ENSG00000100884	14	11	5	5E+05	0.024525	CPNE6	0.415538778492647	1
COPD-HF	ENSG00000266118	2	205	22	5E+05	0.024386	RP11-507M3	0.413910808471455	1
COPD-HF	ENSG00000183657	3	57	7	5E+05	0.024374	PP13439	0.413910808471455	1
COPD-HF	ENSG00000168490	8	36	12	5E+05	0.024254	PHYHIP	0.412429872693727	1
COPD-HF	ENSG00000197361	15	10	4	5E+05	0.024191	FBXL22	0.411738414589104	1
COPD-HF	ENSG00000134571	11	41	11	5E+05	0.02417	MYBPC3	0.411738414589104	1
COPD-HF	ENSG00000136694	2	6	2	5E+05	0.024037	IL36A	0.409874209990749	1
COPD-HF	ENSG00000117676	1	89	11	5E+05	0.02402	RPS6KA1	0.409874209990749	1
COPD-HF	ENSG00000253729	8	131	17	5E+05	0.023975	PRKDC	0.409574768303985	1
COPD-HF	ENSG00000171017	19	35	6	5E+05	0.023965	LRRRC8E	0.409574768303985	1
COPD-HF	ENSG00000167658	19	25	7	5E+05	0.023937	EEF2	0.409574768303985	1
COPD-HF	ENSG00000244694	6	500	39	5E+05	0.023896	PTCHD4	0.409363353159851	1
COPD-HF	ENSG00000268863	16	2	1	5E+05	0.02381	AC135048.1	0.40826951627907	1
COPD-HF	ENSG00000156284	21	4	2	5E+05	0.023734	CLDN8	0.407345271880819	1
COPD-HF	ENSG00000092439	15	379	15	5E+05	0.023596	TRPM7	0.405354210624418	1
COPD-HF	ENSG00000109180	4	45	6	5E+05	0.023546	OCIAD1	0.40487259141791	1
COPD-HF	ENSG00000142655	1	339	23	5E+05	0.023509	PEX14	0.404613816059757	1
COPD-HF	ENSG00000169992	17	34	14	5E+05	0.023505	NLGN2	0.404613816059757	1
COPD-HF	ENSG00000108094	10	168	8	5E+05	0.023464	CUL2	0.404594866230122	1
COPD-HF	ENSG00000120656	1	54	8	5E+05	0.023435	TAF12	0.404473178838951	1
COPD-HF	ENSG00000164626	6	129	23	5E+05	0.023358	KCNK5	0.403522037488285	1
COPD-HF	ENSG00000178718	15	1	1	5E+05	0.023347	RPP25	0.403522037488285	1
COPD-HF	ENSG00000168779	3	26	4	5E+05	0.023272	SHOX2	0.402791338967136	1
COPD-HF	ENSG00000165102	8	65	14	5E+05	0.023157	HGSNAT	0.401177613721805	1
COPD-HF	ENSG00000164346	5	20	4	5E+05	0.023067	NSA2	0.399994365945437	1
COPD-HF	ENSG00000268821	2	8	3	5E+05	0.022999	AC068039.1	0.399190741054614	1
COPD-HF	ENSG00000108306	17	261	9	5E+05	0.022975	FBXL20	0.399150023562677	1

COPD-HF	ENSG0000001617	3	57	8	5E+05	0.022943	SEMA3F	0.398970112264151	1
COPD-HF	ENSG00000119979	10	71	3	5E+05	0.022908	FAM45A	0.39873764305949	1
COPD-HF	ENSG00000233438	2	43	6	5E+05	0.022879	AC109829.1	0.398609269376181	1
COPD-HF	ENSG00000063046	12	95	6	5E+05	0.022818	EIF4B	0.397922605487228	1
COPD-HF	ENSG00000075131	15	116	18	5E+05	0.022812	TIPIN	0.397922605487228	1
COPD-HF	ENSG00000169951	16	4	2	5E+05	0.022786	ZNF764	0.397922605487228	1
COPD-HF	ENSG00000138073	2	8	3	5E+05	0.022758	PREB	0.397922605487228	1
COPD-HF	ENSG00000116396	1	190	20	5E+05	0.022691	KCNC4	0.397211018993352	1
COPD-HF	ENSG00000117834	1	42	9	5E+05	0.022674	SLC5A9	0.397211018993352	1
COPD-HF	ENSG00000212670	1	3	1	5E+05	0.022657	AL161915.1	0.397211018993352	1
COPD-HF	ENSG00000145700	5	393	13	5E+05	0.022622	ANKRD31	0.397134596190476	1
COPD-HF	ENSG00000095794	10	167	7	5E+05	0.02261	CREM	0.397134596190476	1
COPD-HF	ENSG00000196826	19	226	21	5E+05	0.022593	ZNF709	0.397134596190476	1
COPD-HF	ENSG00000123352	12	301	18	5E+05	0.02258	SPATS2	0.397134596190476	1
COPD-HF	ENSG00000127995	7	80	9	5E+05	0.022568	CASD1	0.397134596190476	1
COPD-HF	ENSG00000189050	17	21	5	5E+05	0.022549	RNFT1	0.397134596190476	1
COPD-HF	ENSG00000174236	12	2	1	5E+05	0.022536	REP15	0.397134596190476	1
COPD-HF	ENSG00000241468	7	36	6	5E+05	0.022498	ATP5J2	0.397134596190476	1
COPD-HF	ENSG00000131061	20	78	11	5E+05	0.022496	ZNF341	0.397134596190476	1
COPD-HF	ENSG00000213516	1	12	6	5E+05	0.022467	RBMXL1	0.397134596190476	1
COPD-HF	ENSG00000064932	19	206	27	5E+05	0.022278	SBNO2	0.394856128846154	1
COPD-HF	ENSG00000171695	20	3	1	5E+05	0.022145	C20orf201	0.392876597690087	1
COPD-HF	ENSG00000081019	1	60	11	5E+05	0.022089	RSBN1	0.392260632947977	1
COPD-HF	ENSG00000204876	7	7	2	5E+05	0.022065	AC021218.2	0.392212290260366	1
COPD-HF	ENSG00000079432	19	22	3	5E+05	0.022051	CIC	0.392212290260366	1
COPD-HF	ENSG00000253250	8	40	6	5E+05	0.022023	C8orf88	0.392212290260366	1
COPD-HF	ENSG00000173641	1	46	5	5E+05	0.021971	HSPB7	0.39167450967118	1
COPD-HF	ENSG00000187187	19	54	4	5E+05	0.02197	ZNF546	0.39167450967118	1
COPD-HF	ENSG00000066382	11	471	34	5E+05	0.021913	MPPED2	0.391397605620155	1
COPD-HF	ENSG00000137154	9	10	3	5E+05	0.021907	RPS6	0.391397605620155	1
COPD-HF	ENSG00000148204	9	68	12	5E+05	0.021862	CRB2	0.391244899029126	1
COPD-HF	ENSG00000186094	1	1933	51	5E+05	0.021846	AGBL4	0.391244899029126	1
COPD-HF	ENSG00000250038	4	103	11	5E+05	0.021831	RP11-180C1.10	0.391244899029126	1

COPD-HF	ENSG00000166106	11	59	12	5E+05	0.021806	ADAMTS15	0.391244899029126	1
COPD-HF	ENSG00000143207	1	448	21	5E+05	0.021795	RFWD2	0.391244899029126	1
COPD-HF	ENSG00000100249	22	7	4	5E+05	0.021794	C22orf31	0.391244899029126	1
COPD-HF	ENSG00000115977	2	228	19	5E+05	0.021687	AAK1	0.390387178710938	1
COPD-HF	ENSG00000151422	5	1453	45	5E+05	0.021658	FER	0.390246250244379	1
COPD-HF	ENSG00000153165	2	8	4	5E+05	0.021657	RGPD3	0.390246250244379	1
COPD-HF	ENSG00000111642	12	70	8	5E+05	0.021604	CHD4	0.390035780607248	1
COPD-HF	ENSG00000115252	2	901	40	5E+05	0.021565	PDE1A	0.38971337745098	1
COPD-HF	ENSG00000179909	19	31	7	5E+05	0.021532	ZNF154	0.389498877330716	1
COPD-HF	ENSG00000257138	7	3	1	5E+05	0.021518	TAS2R38	0.389498877330716	1
COPD-HF	ENSG00000186193	9	22	4	5E+05	0.021482	SAPCD2	0.389358609636185	1
COPD-HF	ENSG00000130734	19	22	6	5E+05	0.021476	ATG4D	0.389358609636185	1
COPD-HF	ENSG00000154127	11	475	68	5E+05	0.02145	UBASH3B	0.389358609636185	1
COPD-HF	ENSG00000137575	8	43	3	5E+05	0.021398	SDCBP	0.388983564102564	1
COPD-HF	ENSG00000180347	7	404	29	5E+05	0.021357	CCDC129	0.38862150148075	1
COPD-HF	ENSG00000136381	15	57	9	5E+05	0.021357	IREB2	0.38862150148075	1
COPD-HF	ENSG00000116871	1	27	5	5E+05	0.021341	MAP7D1	0.38862150148075	1
COPD-HF	ENSG00000061794	12	83	11	5E+05	0.021314	MRPS35	0.38862150148075	1
COPD-HF	ENSG00000124203	20	141	25	5E+05	0.021297	ZNF831	0.38862150148075	1
COPD-HF	ENSG00000212734	17	4	1	5E+05	0.021245	C17orf100	0.388501076388889	1
COPD-HF	ENSG00000272647	7	75	11	5E+05	0.021195	GS1-259H13.1	0.387971633565045	1
COPD-HF	ENSG00000186660	11	66	11	5E+05	0.021168	ZFP91	0.387862568588469	1
COPD-HF	ENSG00000222022	2	2	1	5E+05	0.021142	AC112721.1	0.387771627860697	1
COPD-HF	ENSG00000174279	2	8	3	5E+05	0.021127	EVX2	0.387771627860697	1
COPD-HF	ENSG00000088305	20	122	9	5E+05	0.021122	DNMT3B	0.387771627860697	1
COPD-HF	ENSG00000147684	8	118	18	5E+05	0.02106	NDUFB9	0.387424131736527	1
COPD-HF	ENSG00000135547	6	22	3	5E+05	0.021047	HEY2	0.387424131736527	1
COPD-HF	ENSG00000180929	3	3	2	5E+05	0.021042	GPR62	0.387424131736527	1
COPD-HF	ENSG00000023892	6	40	7	5E+05	0.021036	DEF6	0.387424131736527	1
COPD-HF	ENSG00000157404	4	174	23	5E+05	0.02101	KIT	0.387424131736527	1
COPD-HF	ENSG00000187017	1	100	11	5E+05	0.021004	ESPN	0.387424131736527	1
COPD-HF	ENSG00000065308	6	302	26	5E+05	0.020988	TRAM2	0.387424131736527	1
COPD-HF	ENSG00000100461	14	43	5	5E+05	0.020962	RBM23	0.387424131736527	1

COPD-HF	ENSG00000164933	8	53	7	5E+05	0.020925	SLC25A32	0.387424131736527	1
COPD-HF	ENSG00000136944	9	229	34	5E+05	0.020918	LMX1B	0.387424131736527	1
COPD-HF	ENSG00000165553	14	8	4	5E+05	0.020878	NGB	0.387424131736527	1
COPD-HF	ENSG00000108786	17	12	2	5E+05	0.020839	HSD17B1	0.387424131736527	1
COPD-HF	ENSG00000103479	16	97	6	5E+05	0.020819	RBL2	0.387424131736527	1
COPD-HF	ENSG00000110075	11	211	11	5E+05	0.020798	PPP6R3	0.387424131736527	1
COPD-HF	ENSG00000119689	14	49	7	5E+05	0.02074	DLST	0.386943744939271	1
COPD-HF	ENSG00000183379	14	52	7	5E+05	0.020719	SYNDIGIL	0.386943593718338	1
COPD-HF	ENSG00000164934	8	68	8	5E+05	0.020682	DCAF13	0.386644326572008	1
COPD-HF	ENSG00000127616	19	266	19	5E+05	0.02066	SMARCA4	0.386625157360406	1
COPD-HF	ENSG00000101470	20	26	5	5E+05	0.020635	TNNC2	0.38654975101626	1
COPD-HF	ENSG00000111252	12	34	4	5E+05	0.020633	SH2B3	0.38654975101626	1
COPD-HF	ENSG00000166797	15	49	6	5E+05	0.020603	FAM96A	0.38654975101626	1
COPD-HF	ENSG00000204764	5	754	16	5E+05	0.020593	RANBP17	0.38654975101626	1
COPD-HF	ENSG00000172992	17	89	12	5E+05	0.020589	DKAKD	0.38654975101626	1
COPD-HF	ENSG00000140534	15	119	10	5E+05	0.020355	TICRR	0.383252007150153	1
COPD-HF	ENSG00000114554	3	135	16	5E+05	0.020342	PLXNA1	0.383252007150153	1
COPD-HF	ENSG00000084234	11	214	14	5E+05	0.020302	APLP2	0.383036607983623	1
COPD-HF	ENSG00000198522	2	40	6	5E+05	0.020269	GPN1	0.382805816598361	1
COPD-HF	ENSG00000178209	8	142	7	5E+05	0.020046	PLEC	0.37898248	1
COPD-HF	ENSG00000173064	12	202	15	5E+05	0.019991	HECTD4	0.378330701232033	1
COPD-HF	ENSG00000160145	3	1754	87	5E+05	0.019959	KALRN	0.37811330626927	1
COPD-HF	ENSG00000257184	7	23	7	5E+05	0.019907	RP1-170O19.2	0.377516184156379	1
COPD-HF	ENSG00000084676	2	574	24	5E+05	0.019797	NCOA1	0.37581678784758	1
COPD-HF	ENSG00000188368	19	5	1	5E+05	0.019786	PRR19	0.37581678784758	1
COPD-HF	ENSG00000158792	16	15	4	5E+05	0.019757	SPATA2L	0.37581678784758	1
COPD-HF	ENSG00000160097	1	10	3	5E+05	0.019747	FNDC5	0.37581678784758	1
COPD-HF	ENSG00000135549	6	561	34	5E+05	0.019704	PKIB	0.375598585315408	1
COPD-HF	ENSG00000078399	7	16	6	5E+05	0.019628	HOXA9	0.374537188405797	1
COPD-HF	ENSG00000177479	3	55	8	5E+05	0.019613	ARIH2	0.374537188405797	1
COPD-HF	ENSG00000269242	19	2	1	5E+05	0.019574	CTD-2192J16	0.374281682572614	1
COPD-HF	ENSG00000176022	1	7	2	5E+05	0.019512	B3GALT6	0.373483588785047	1
COPD-HF	ENSG00000163154	1	3	1	5E+05	0.019496	TNFAIP8L2	0.373483588785047	1

COPD-HF	ENSG00000134201	1	140	22	5E+05	0.019482	GSTM5	0.373483588785047	1
COPD-HF	ENSG00000143033	1	85	10	5E+05	0.019479	MTF2	0.373483588785047	1
COPD-HF	ENSG00000136541	2	5	3	5E+05	0.019402	ERMN	0.372927076120959	1
COPD-HF	ENSG00000176160	17	79	12	5E+05	0.019355	HSF5	0.372412019832985	1
COPD-HF	ENSG00000173545	5	26	5	5E+05	0.019336	ZNF622	0.372412019832985	1
COPD-HF	ENSG00000125820	20	5	2	5E+05	0.019245	NKX2-2	0.371070172594142	1
COPD-HF	ENSG00000103966	15	194	26	5E+05	0.019239	EHD4	0.371070172594142	1
COPD-HF	ENSG00000253368	1	5	2	5E+05	0.019236	TRNP1	0.371070172594142	1
COPD-HF	ENSG00000128694	2	19	5	5E+05	0.019222	OSGEPL1	0.371070172594142	1
COPD-HF	ENSG00000251493	5	3	2	5E+05	0.019204	FOXD1	0.371070172594142	1
COPD-HF	ENSG00000186766	10	6	1	5E+05	0.019196	FOXI2	0.371070172594142	1
COPD-HF	ENSG00000153904	1	637	54	5E+05	0.019193	DDAH1	0.371070172594142	1
COPD-HF	ENSG00000185313	3	294	25	5E+05	0.019175	SCN10A	0.371070172594142	1
COPD-HF	ENSG00000159708	16	96	10	5E+05	0.019132	LRRC36	0.371070172594142	1
COPD-HF	ENSG00000180329	17	14	5	5E+05	0.019131	CCDC43	0.371070172594142	1
COPD-HF	ENSG00000172269	11	28	5	5E+05	0.019123	DPAGT1	0.371070172594142	1
COPD-HF	ENSG00000143702	1	139	13	5E+05	0.019116	CEP170	0.371070172594142	1
COPD-HF	ENSG00000113318	5	573	23	5E+05	0.019114	MSH3	0.371070172594142	1
COPD-HF	ENSG00000154511	1	145	6	5E+05	0.019098	FAM69A	0.371070172594142	1
COPD-HF	ENSG00000166526	7	32	9	5E+05	0.019004	ZNF3	0.371070172594142	1
COPD-HF	ENSG00000198836	3	236	14	5E+05	0.018992	OPA1	0.371070172594142	1
COPD-HF	ENSG00000168228	4	148	17	5E+05	0.018909	ZCCHC4	0.370797443617021	1
COPD-HF	ENSG00000178467	3	11	3	5E+05	0.01885	P4HTM	0.370034132055378	1
COPD-HF	ENSG00000125899	20	3	2	5E+05	0.018794	C20orf187	0.369328147121535	1
COPD-HF	ENSG00000125743	19	6	2	5E+05	0.018783	SNRPD2	0.369328147121535	1
COPD-HF	ENSG00000180828	8	4	2	5E+05	0.01875	BHLHE22	0.369250801282051	1
COPD-HF	ENSG00000068001	3	1	1	5E+05	0.01872	HYAL2	0.369054288770053	1
COPD-HF	ENSG00000182631	5	2	1	5E+05	0.018708	RXFP3	0.369054288770053	1
COPD-HF	ENSG00000103064	16	53	8	5E+05	0.018614	SLC7A6	0.367751191854234	1
COPD-HF	ENSG00000175115	11	263	13	5E+05	0.01852	PACS1	0.366286652360515	1
COPD-HF	ENSG00000137760	11	182	18	5E+05	0.018499	ALKBH8	0.366264303974221	1
COPD-HF	ENSG00000173875	19	36	4	5E+05	0.018478	ZNF791	0.366241907526882	1
COPD-HF	ENSG00000184599	1	16	4	5E+05	0.018444	FAM19A3	0.365961519913886	1

COPD-HF	ENSG00000100401	22	78	10	5E+05	0.018424	RANGAP1	0.365958612068966	1
COPD-HF	ENSG00000175193	3	157	16	5E+05	0.018385	PARL	0.365577891046386	1
COPD-HF	ENSG00000138138	10	139	8	5E+05	0.018303	ATAD1	0.364340387688985	1
COPD-HF	ENSG00000137880	15	2	1	5E+05	0.018278	GCHFR	0.36423608	1
COPD-HF	ENSG00000166508	7	21	4	5E+05	0.018231	MCM7	0.363692665584416	1
COPD-HF	ENSG00000141002	16	95	5	5E+05	0.018207	TCF25	0.363607400866739	1
COPD-HF	ENSG00000165813	10	93	9	5E+05	0.01815	C10orf118	0.362862201735358	1
COPD-HF	ENSG00000070961	12	175	19	5E+05	0.018141	ATP2B1	0.362862201735358	1
COPD-HF	ENSG00000132793	20	48	11	5E+05	0.01813	LPIN3	0.362862201735358	1
COPD-HF	ENSG00000114670	3	607	28	5E+05	0.018111	NEK11	0.362862201735358	1
COPD-HF	ENSG00000092969	1	191	33	5E+05	0.018026	TGFB2	0.361953440087146	1
COPD-HF	ENSG00000204604	19	75	9	5E+05	0.018025	ZNF468	0.361953440087146	1
COPD-HF	ENSG00000152527	2	462	38	5E+05	0.018	PLEKHH2	0.361953440087146	1
COPD-HF	ENSG00000196652	7	39	8	5E+05	0.017985	ZKSCAN5	0.361953440087146	1
COPD-HF	ENSG00000184178	4	885	53	5E+05	0.017956	SCFD2	0.361953440087146	1
COPD-HF	ENSG00000136448	17	164	16	5E+05	0.01794	NMT1	0.361953440087146	1
COPD-HF	ENSG00000235750	1	100	11	5E+05	0.017929	KIAA0040	0.361953440087146	1
COPD-HF	ENSG00000196693	10	90	9	5E+05	0.017927	ZNF33B	0.361953440087146	1
COPD-HF	ENSG00000178882	12	936	75	5E+05	0.017925	FAM101A	0.361953440087146	1
COPD-HF	ENSG00000174684	11	1	1	5E+05	0.017898	B3GNT1	0.361953440087146	1
COPD-HF	ENSG00000149262	11	240	17	5E+05	0.017878	INTS4	0.361953440087146	1
COPD-HF	ENSG00000116604	1	60	8	5E+05	0.017829	MEF2D	0.361953440087146	1
COPD-HF	ENSG00000128699	2	30	5	5E+05	0.017812	ORMDL1	0.361953440087146	1
COPD-HF	ENSG00000051382	3	211	9	5E+05	0.01776	PIK3CB	0.361734895027624	1
COPD-HF	ENSG00000185290	7	1	1	5E+05	0.017697	NUPR1L	0.360850443584071	1
COPD-HF	ENSG00000048471	16	2174	101	5E+05	0.017605	SNX29	0.359372054263566	1
COPD-HF	ENSG00000130368	6	1	1	5E+05	0.017592	MAS1	0.359372054263566	1
COPD-HF	ENSG00000109184	4	80	9	5E+05	0.017523	DCUN1D4	0.358492185349612	1
COPD-HF	ENSG00000173153	11	9	4	5E+05	0.017516	ESRRA	0.358492185349612	1
COPD-HF	ENSG00000143365	1	55	11	5E+05	0.01749	RORC	0.358492185349612	1
COPD-HF	ENSG00000099625	19	18	5	5E+05	0.017439	C19orf26	0.357965575723831	1
COPD-HF	ENSG00000166971	16	16	3	5E+05	0.017436	AKTIP	0.357965575723831	1
COPD-HF	ENSG00000133056	1	154	15	5E+05	0.017389	PIK3C2B	0.357735978794643	1

COPD-HF	ENSG00000266956	17	20	3	5E+05	0.017367	CTB-186H2.3	0.357682582122905	1
COPD-HF	ENSG00000173113	11	3	1	5E+05	0.017341	TRMT112	0.357546591722595	1
COPD-HF	ENSG00000155099	8	77	10	5E+05	0.017324	TMEM55A	0.357546591722595	1
COPD-HF	ENSG00000016391	3	92	19	5E+05	0.017317	CHDH	0.357546591722595	1
COPD-HF	ENSG00000213413	7	9	3	5E+05	0.017245	PVRIG	0.356764405162739	1
COPD-HF	ENSG00000102970	16	42	11	5E+05	0.017238	CCL17	0.356764405162739	1
COPD-HF	ENSG00000234560	11	1	1	5E+05	0.017124	OR10G8	0.355058146231721	1
COPD-HF	ENSG00000163792	2	5	2	5E+05	0.017043	TCF23	0.353776597972973	1
COPD-HF	ENSG00000197261	6	47	6	5E+05	0.016971	C6orf141	0.352679191657272	1
COPD-HF	ENSG00000173250	5	4	2	5E+05	0.016867	GPR151	0.350913556433409	1
COPD-HF	ENSG00000151617	4	107	11	5E+05	0.016849	EDNRA	0.350913556433409	1
COPD-HF	ENSG00000168071	11	39	8	5E+05	0.016786	CCDC88B	0.350018481900452	1
COPD-HF	ENSG00000174804	11	8	4	5E+05	0.016742	FZD4	0.3494963601359	1
COPD-HF	ENSG00000198146	15	10	4	5E+05	0.016726	ZNF770	0.3494963601359	1
COPD-HF	ENSG00000140153	14	135	14	5E+05	0.016725	WDR20	0.3494963601359	1
COPD-HF	ENSG00000128944	15	31	5	5E+05	0.016719	KNSTRN	0.3494963601359	1
COPD-HF	ENSG00000105429	19	53	3	5E+05	0.01667	MEGF8	0.3494963601359	1
COPD-HF	ENSG00000184117	22	63	7	5E+05	0.016624	NIPSNAP1	0.349009330296128	1
COPD-HF	ENSG00000112200	6	90	8	5E+05	0.016596	ZNF451	0.348818777651083	1
COPD-HF	ENSG00000122574	7	340	30	5E+05	0.01656	WIPF3	0.348459452054795	1
COPD-HF	ENSG00000267981	11	32	4	5E+05	0.01652	AP003041.2	0.34801504	1
COPD-HF	ENSG00000101199	20	42	4	5E+05	0.016441	ARFGAP1	0.346747085812357	1
COPD-HF	ENSG00000177311	3	225	25	5E+05	0.016414	ZBTB38	0.34657418327606	1
COPD-HF	ENSG00000163217	2	11	3	5E+05	0.016377	BMP10	0.346189496559633	1
COPD-HF	ENSG00000242265	7	12	4	5E+05	0.016374	PEG10	0.346189496559633	1
COPD-HF	ENSG00000011114	14	250	18	5E+05	0.016326	BTBD7	0.345904779310345	1
COPD-HF	ENSG00000100003	22	67	12	5E+05	0.016309	SEC14L2	0.345904779310345	1
COPD-HF	ENSG00000115325	2	7	2	5E+05	0.016287	DOK1	0.345873584101382	1
COPD-HF	ENSG00000224470	16	63	10	5E+05	0.016286	ATXN1L	0.345873584101382	1
COPD-HF	ENSG00000091164	18	83	7	5E+05	0.016256	TXNL1	0.345873584101382	1
COPD-HF	ENSG00000214113	6	484	35	5E+05	0.016235	LYRM4	0.345873584101382	1
COPD-HF	ENSG00000077809	7	50	16	5E+05	0.016226	GTF2I	0.345873584101382	1
COPD-HF	ENSG00000130208	19	8	4	5E+05	0.016211	APOC1	0.345873584101382	1

COPD-HF	ENSG00000151176	12	53	6	5E+05	0.016111	PLBD2	0.344517474477958	1
COPD-HF	ENSG00000205856	22	31	7	5E+05	0.016091	C22orf42	0.34448943437863	1
COPD-HF	ENSG00000164219	5	106	16	5E+05	0.01605	PGGT1B	0.344011220930233	1
COPD-HF	ENSG00000089280	16	7	3	5E+05	0.016021	FUS	0.343789398137369	1
COPD-HF	ENSG00000183023	2	1686	100	5E+05	0.016006	SLC8A1	0.343789398137369	1
COPD-HF	ENSG00000160844	7	115	13	5E+05	0.016002	GATS	0.343789398137369	1
COPD-HF	ENSG00000068078	4	32	7	5E+05	0.015999	FGFR3	0.343789398137369	1
COPD-HF	ENSG00000176046	16	4	2	5E+05	0.015999	NUPR1	0.343789398137369	1
COPD-HF	ENSG00000138381	2	20	5	5E+05	0.015993	ASNSD1	0.343789398137369	1
COPD-HF	ENSG00000203876	10	21	3	5E+05	0.015964	RP11-451M15	0.343789398137369	1
COPD-HF	ENSG00000169885	1	11	3	5E+05	0.015949	CALML6	0.343789398137369	1
COPD-HF	ENSG00000102921	16	142	7	5E+05	0.015949	N4BP1	0.343789398137369	1
COPD-HF	ENSG00000136859	9	52	10	5E+05	0.015943	ANGPTL2	0.343789398137369	1
COPD-HF	ENSG00000070193	5	129	8	5E+05	0.015917	FGF10	0.343789398137369	1
COPD-HF	ENSG00000186472	7	963	39	5E+05	0.015868	PCLO	0.343789398137369	1
COPD-HF	ENSG00000169228	5	5	3	5E+05	0.015794	RAB24	0.343719955135773	1
COPD-HF	ENSG00000215021	12	7	3	5E+05	0.015766	PHB2	0.3435161678487	1
COPD-HF	ENSG00000198933	17	33	8	5E+05	0.015719	TBKBP1	0.342897428402367	1
COPD-HF	ENSG00000146477	6	209	16	5E+05	0.01571	SLC22A3	0.342897428402367	1
COPD-HF	ENSG00000140995	16	76	11	5E+05	0.015688	DEF8	0.342897428402367	1
COPD-HF	ENSG00000198894	14	34	7	5E+05	0.015657	CIPC	0.34276185391924	1
COPD-HF	ENSG00000168827	3	162	8	5E+05	0.015642	GFM1	0.34276185391924	1
COPD-HF	ENSG00000087884	11	143	12	5E+05	0.01556	AAMDC	0.341449380952381	1
COPD-HF	ENSG00000124104	20	22	6	5E+05	0.01555	SNX21	0.341449380952381	1
COPD-HF	ENSG00000165046	8	27	4	5E+05	0.015518	LETM2	0.341340446300716	1
COPD-HF	ENSG00000137221	6	29	6	5E+05	0.015499	TJAP1	0.341329829151732	1
COPD-HF	ENSG00000271810	1	19	6	5E+05	0.015462	RP11-426L16	0.340922303827751	1
COPD-HF	ENSG00000066933	15	344	13	5E+05	0.015435	MYO9A	0.340734556886228	1
COPD-HF	ENSG00000100462	14	14	3	5E+05	0.015427	PRMT5	0.340734556886228	1
COPD-HF	ENSG00000101400	20	45	6	5E+05	0.015409	SNTA1	0.340734556886228	1
COPD-HF	ENSG00000110693	11	1196	50	5E+05	0.015362	SOX6	0.340345848557692	1
COPD-HF	ENSG00000183798	20	20	5	5E+05	0.015348	EMILIN3	0.340345848557692	1
COPD-HF	ENSG00000174963	3	29	8	5E+05	0.015347	ZIC4	0.340345848557692	1

COPD-HF	ENSG00000100167	22	48	8	5E+05	0.015337	SEPT3	0.340345848557692	1
COPD-HF	ENSG00000103310	16	39	9	5E+05	0.015293	ZP2	0.340345848557692	1
COPD-HF	ENSG00000100296	22	104	10	5E+05	0.015259	THOC5	0.340107795646917	1
COPD-HF	ENSG00000067533	1	81	5	5E+05	0.015216	RRP15	0.33955996125908	1
COPD-HF	ENSG00000129158	11	402	38	5E+05	0.015188	SERGEF	0.339345944242424	1
COPD-HF	ENSG00000214556	17	20	6	5E+05	0.015095	C17orf98	0.337677348300971	1
COPD-HF	ENSG00000065526	1	129	15	5E+05	0.015029	SPEN	0.33660942527339	1
COPD-HF	ENSG00000108443	17	83	11	5E+05	0.015025	RPS6KB1	0.33660942527339	1
COPD-HF	ENSG00000145777	5	14	4	5E+05	0.014962	TSLP	0.335925147381242	1
COPD-HF	ENSG00000251283	4	21	6	5E+05	0.014961	RP11-171N4.1	0.335925147381242	1
COPD-HF	ENSG00000116668	1	132	11	5E+05	0.014929	SWT1	0.335925147381242	1
COPD-HF	ENSG00000204140	6	31	6	5E+05	0.014916	CLPSL1	0.335925147381242	1
COPD-HF	ENSG00000168589	16	41	5	5E+05	0.014895	DYNLRB2	0.335925147381242	1
COPD-HF	ENSG00000242612	16	18	4	5E+05	0.014885	DECR2	0.335925147381242	1
COPD-HF	ENSG00000131351	19	82	11	5E+05	0.01488	HAUS8	0.335925147381242	1
COPD-HF	ENSG00000148399	9	23	5	5E+05	0.014865	DPH7	0.335925147381242	1
COPD-HF	ENSG00000104047	15	30	7	5E+05	0.014848	DTWD1	0.335925147381242	1
COPD-HF	ENSG00000141744	17	3	2	5E+05	0.014816	PNMT	0.335925147381242	1
COPD-HF	ENSG00000162630	1	9	3	5E+05	0.014805	B3GALT2	0.335925147381242	1
COPD-HF	ENSG00000168612	20	6	2	5E+05	0.014773	ZSWIM1	0.335925147381242	1
COPD-HF	ENSG00000072756	3	75	10	5E+05	0.014771	TRNT1	0.335925147381242	1
COPD-HF	ENSG00000163877	1	40	8	5E+05	0.014748	SNIP1	0.335925147381242	1
COPD-HF	ENSG00000196323	11	91	11	5E+05	0.014741	ZBTB44	0.335925147381242	1
COPD-HF	ENSG00000197386	4	326	19	5E+05	0.014729	HTT	0.335925147381242	1
COPD-HF	ENSG00000152977	3	241	22	5E+05	0.014651	ZIC1	0.3354806	1
COPD-HF	ENSG00000134917	11	69	17	5E+05	0.014597	ADAMTS8	0.334659827114428	1
COPD-HF	ENSG00000149926	16	41	6	5E+05	0.014589	FAM57B	0.334659827114428	1
COPD-HF	ENSG00000167528	12	36	7	5E+05	0.014559	ZNF641	0.334621006234414	1
COPD-HF	ENSG00000243789	15	35	6	5E+05	0.014551	JMJD7	0.334621006234414	1
COPD-HF	ENSG00000163681	3	219	19	5E+05	0.014539	SLMAP	0.334621006234414	1
COPD-HF	ENSG00000063015	17	56	9	5E+05	0.014531	SEZ6	0.334621006234414	1
COPD-HF	ENSG00000132394	3	448	16	5E+05	0.01453	EEFSEC	0.334621006234414	1
COPD-HF	ENSG00000005249	7	235	22	5E+05	0.014503	PRKAR2B	0.334621006234414	1

COPD-HF	ENSG00000132185	1	29	6	5E+05	0.014411	FCRLA	0.333716033919598	1
COPD-HF	ENSG00000159723	16	3	1	5E+05	0.014366	AGRP	0.333092425157233	1
COPD-HF	ENSG00000089234	12	29	5	5E+05	0.014315	BRAP	0.332327953400504	1
COPD-HF	ENSG00000138061	2	132	18	5E+05	0.014202	CYP1B1	0.330120385876419	1
COPD-HF	ENSG00000115970	2	967	36	5E+05	0.014201	THADA	0.330120385876419	1
COPD-HF	ENSG00000124257	20	3	1	5E+05	0.014185	NEURL2	0.330120385876419	1
COPD-HF	ENSG00000147548	8	122	9	5E+05	0.014178	WHSC1L1	0.330120385876419	1
COPD-HF	ENSG00000143793	1	5	3	5E+05	0.014125	C1orf35	0.329995088719899	1
COPD-HF	ENSG00000178226	16	8	3	5E+05	0.01411	PRSS36	0.329995088719899	1
COPD-HF	ENSG00000183346	10	340	21	5E+05	0.014107	C10orf107	0.329995088719899	1
COPD-HF	ENSG00000108344	17	56	6	5E+05	0.014093	PSMD3	0.329995088719899	1
COPD-HF	ENSG00000165816	10	124	19	5E+05	0.013991	VWA2	0.328530067515924	1
COPD-HF	ENSG00000182319	8	252	25	5E+05	0.013926	SGK223	0.327420864795918	1
COPD-HF	ENSG00000143801	1	72	8	5E+05	0.013924	PSEN2	0.327420864795918	1
COPD-HF	ENSG00000108278	17	18	5	5E+05	0.013908	ZNHIT3	0.327420864795918	1
COPD-HF	ENSG00000173457	11	4	1	5E+05	0.013901	PPP1R14B	0.327420864795918	1
COPD-HF	ENSG00000062716	17	188	17	5E+05	0.013895	VMP1	0.327420864795918	1
COPD-HF	ENSG00000101473	20	35	10	5E+05	0.013875	ACOT8	0.327420864795918	1
COPD-HF	ENSG00000163071	4	83	9	5E+05	0.013873	SPATA18	0.327420864795918	1
COPD-HF	ENSG00000082898	2	93	9	5E+05	0.013863	XPO1	0.327420864795918	1
COPD-HF	ENSG00000204842	12	101	7	5E+05	0.013828	ATXN2	0.327420864795918	1
COPD-HF	ENSG00000163947	3	984	86	5E+05	0.013797	ARHGEF3	0.327420864795918	1
COPD-HF	ENSG00000130270	19	81	18	5E+05	0.013788	ATP8B3	0.327420864795918	1
COPD-HF	ENSG00000159714	16	32	6	5E+05	0.013757	ZDHHC1	0.327420864795918	1
COPD-HF	ENSG00000169599	2	88	6	5E+05	0.013751	NFU1	0.327420864795918	1
COPD-HF	ENSG00000164087	3	85	10	5E+05	0.01366	POC1A	0.326582075226978	1
COPD-HF	ENSG00000170923	19	4	1	5E+05	0.013644	OR7G2	0.326582075226978	1
COPD-HF	ENSG00000271786	10	34	5	5E+05	0.013626	RP11-139J15.	0.326582075226978	1
COPD-HF	ENSG00000236980	3	19	4	5E+05	0.013546	C3orf84	0.325121638020833	1
COPD-HF	ENSG00000120899	8	352	18	5E+05	0.013527	PTK2B	0.325088906127771	1
COPD-HF	ENSG00000165724	9	12	2	5E+05	0.013514	ZMYND19	0.325088906127771	1
COPD-HF	ENSG00000170571	5	74	7	5E+05	0.013481	EMB	0.324830422222222	1
COPD-HF	ENSG00000100207	22	350	30	5E+05	0.013466	TCF20	0.324830422222222	1

COPD-HF	ENSG0000079257	3	88	7	5E+05	0.013412	LXN	0.324014935779817	1
COPD-HF	ENSG00000243708	15	68	9	5E+05	0.013408	PLA2G4B	0.324014935779817	1
COPD-HF	ENSG00000168970	15	68	9	5E+05	0.013408	JMJD7-PLA2	0.324014935779817	1
COPD-HF	ENSG00000134533	12	422	28	5E+05	0.013406	RERG	0.324014935779817	1
COPD-HF	ENSG00000240583	7	187	34	5E+05	0.013391	AQP1	0.324014935779817	1
COPD-HF	ENSG00000116983	1	67	12	5E+05	0.013365	HPCAL4	0.324014935779817	1
COPD-HF	ENSG00000160716	1	17	6	5E+05	0.013361	CHRN2	0.324014935779817	1
COPD-HF	ENSG00000164746	7	71	8	5E+05	0.01335	C7orf57	0.324014935779817	1
COPD-HF	ENSG00000168758	2	6	3	5E+05	0.013334	SEMA4C	0.324014935779817	1
COPD-HF	ENSG00000099999	22	113	17	5E+05	0.013321	RNF215	0.324014935779817	1
COPD-HF	ENSG00000179941	12	4	2	5E+05	0.01332	BBS10	0.324014935779817	1
COPD-HF	ENSG00000142694	1	3	1	5E+05	0.013312	EVA1B	0.324014935779817	1
COPD-HF	ENSG00000118900	16	124	16	5E+05	0.013307	UBN1	0.324014935779817	1
COPD-HF	ENSG00000250424	7	182	33	5E+05	0.013268	AQP1	0.324014935779817	1
COPD-HF	ENSG00000174840	3	19	5	5E+05	0.013241	PDE12	0.324014935779817	1
COPD-HF	ENSG00000254647	11	6	2	5E+05	0.013218	INS	0.324014935779817	1
COPD-HF	ENSG00000174233	12	38	4	5E+05	0.013214	ADCY6	0.324014935779817	1
COPD-HF	ENSG00000127152	14	249	40	5E+05	0.013149	BCL11B	0.324014935779817	1
COPD-HF	ENSG00000184574	12	27	9	5E+05	0.013114	LPAR5	0.324014935779817	1
COPD-HF	ENSG00000116497	1	54	8	5E+05	0.01309	S100BPB	0.324014935779817	1
COPD-HF	ENSG00000138778	4	152	10	5E+05	0.013058	CENPE	0.323954393001346	1
COPD-HF	ENSG00000128989	15	62	7	5E+05	0.01303	ARPP19	0.323695404312669	1
COPD-HF	ENSG00000268217	5	11	4	5E+05	0.012945	AC008387.1	0.322017793522267	1
COPD-HF	ENSG00000174844	3	617	22	5E+05	0.01293	DNAH12	0.322017793522267	1
COPD-HF	ENSG00000198218	3	46	8	5E+05	0.012911	QRICH1	0.322017793522267	1
COPD-HF	ENSG00000081177	14	90	9	5E+05	0.012905	EXD2	0.322017793522267	1
COPD-HF	ENSG00000073060	12	312	48	5E+05	0.012884	SCARB1	0.322017793522267	1
COPD-HF	ENSG00000070366	17	524	20	5E+05	0.012863	SMG6	0.322017793522267	1
COPD-HF	ENSG00000110011	11	7	3	5E+05	0.012761	DNAJC4	0.320031990476191	1
COPD-HF	ENSG00000101074	20	52	4	5E+05	0.012735	R3HDML	0.319815061307902	1
COPD-HF	ENSG00000107581	10	60	7	5E+05	0.01271	EIF3A	0.319622687585266	1
COPD-HF	ENSG00000243130	19	62	6	5E+05	0.012572	PSG11	0.316584256830601	1
COPD-HF	ENSG00000187513	1	10	3	5E+05	0.012537	GJA4	0.316134775649795	1

COPD-HF	ENSG00000198650	16	21	7	5E+05	0.012524	TAT	0.316134775649795	1
COPD-HF	ENSG00000179958	16	4	2	5E+05	0.012481	DCTPP1	0.315586108367627	1
COPD-HF	ENSG00000070759	1	203	15	5E+05	0.012324	TESK2	0.312044357142857	1
COPD-HF	ENSG00000135436	12	32	7	5E+05	0.012317	FAM186B	0.312044357142857	1
COPD-HF	ENSG00000187266	19	4	2	5E+05	0.012312	EPOR	0.312044357142857	1
COPD-HF	ENSG00000116793	1	92	10	5E+05	0.012291	PHTF1	0.312044357142857	1
COPD-HF	ENSG00000107789	10	77	13	5E+05	0.012267	MINPP1	0.312044357142857	1
COPD-HF	ENSG00000170209	11	38	6	5E+05	0.012235	ANKK1	0.311933271092669	1
COPD-HF	ENSG00000228716	5	122	5	5E+05	0.012234	DHFR	0.311933271092669	1
COPD-HF	ENSG00000128298	22	49	6	5E+05	0.012165	BAIAP2L2	0.311008938973648	1
COPD-HF	ENSG00000213420	7	8	3	5E+05	0.012142	GPC2	0.310852063888889	1
COPD-HF	ENSG00000074855	19	24	7	5E+05	0.0121	ANO8	0.310207649513213	1
COPD-HF	ENSG00000182177	2	266	14	5E+05	0.012045	ASB18	0.309227694986072	1
COPD-HF	ENSG00000197093	7	11	3	5E+05	0.011973	GAL3ST4	0.307807962343096	1
COPD-HF	ENSG00000186314	5	820	30	5E+05	0.011899	PRELID2	0.306332775139665	1
COPD-HF	ENSG00000162522	1	51	13	5E+05	0.011847	KIAA1522	0.305420630769231	1
COPD-HF	ENSG00000167202	15	209	21	5E+05	0.011794	TBC1D2B	0.304480114845938	1
COPD-HF	ENSG00000130598	11	6	3	5E+05	0.01176	TNNI2	0.304028162692847	1
COPD-HF	ENSG00000140983	16	20	4	5E+05	0.011669	RHOT2	0.302099265449438	1
COPD-HF	ENSG00000145283	4	26	7	5E+05	0.011661	SLC10A6	0.302099265449438	1
COPD-HF	ENSG00000176390	17	158	4	5E+05	0.011655	CRLF3	0.302099265449438	1
COPD-HF	ENSG00000115233	2	139	14	5E+05	0.011651	PSMD14	0.302099265449438	1
COPD-HF	ENSG00000167914	17	44	7	5E+05	0.011629	GSDMA	0.302099265449438	1
COPD-HF	ENSG00000119760	2	8	3	5E+05	0.011628	SUPT7L	0.302099265449438	1
COPD-HF	ENSG00000172426	6	73	8	5E+05	0.011619	RSPH9	0.302099265449438	1
COPD-HF	ENSG00000148814	10	181	17	5E+05	0.011539	LRRC27	0.301699839716312	1
COPD-HF	ENSG00000166747	16	160	15	5E+05	0.011501	APIG1	0.301133427556818	1
COPD-HF	ENSG00000135842	1	340	22	5E+05	0.011477	FAM129A	0.300932490753912	1
COPD-HF	ENSG00000161992	16	17	7	5E+05	0.011475	C16orf11	0.300932490753912	1
COPD-HF	ENSG00000103275	16	111	9	5E+05	0.011466	UBE2I	0.300932490753912	1
COPD-HF	ENSG00000118046	19	96	19	5E+05	0.01145	STK11	0.300932490753912	1
COPD-HF	ENSG00000179832	8	86	11	5E+05	0.011441	MROH1	0.300932490753912	1
COPD-HF	ENSG00000162419	1	58	5	5E+05	0.011421	GMEB1	0.300932490753912	1

COPD-HF	ENSG00000182149	16	150	14	5E+05	0.011418	IST1	0.300932490753912	1
COPD-HF	ENSG00000153827	2	169	18	5E+05	0.011413	TRIP12	0.300932490753912	1
COPD-HF	ENSG00000176020	3	3	2	5E+05	0.011402	AMIGO3	0.300932490753912	1
COPD-HF	ENSG00000173540	3	3	2	5E+05	0.011402	GMPPB	0.300932490753912	1
COPD-HF	ENSG00000101049	20	73	17	5E+05	0.011384	SGK2	0.300932490753912	1
COPD-HF	ENSG00000134684	1	65	9	5E+05	0.011376	YARS	0.300932490753912	1
COPD-HF	ENSG00000108294	17	25	8	5E+05	0.011268	PSMB3	0.300583276410999	1
COPD-HF	ENSG00000108424	17	38	7	5E+05	0.011258	KPNB1	0.300583276410999	1
COPD-HF	ENSG00000236287	11	123	11	5E+05	0.011235	ZBED5	0.30057293904209	1
COPD-HF	ENSG00000127081	9	65	9	5E+05	0.011156	ZNF484	0.298893238372093	1
COPD-HF	ENSG00000060237	12	323	21	5E+05	0.011139	WNK1	0.298872179039301	1
COPD-HF	ENSG00000163879	1	26	6	5E+05	0.011124	DNALI1	0.298872179039301	1
COPD-HF	ENSG00000186451	3	39	8	5E+05	0.011112	SPATA12	0.298872179039301	1
COPD-HF	ENSG00000079102	8	161	7	5E+05	0.011076	RUNX1T1	0.298485245614035	1
COPD-HF	ENSG00000113645	5	549	68	5E+05	0.011066	WWC1	0.298485245614035	1
COPD-HF	ENSG00000188186	7	8	2	5E+05	0.011022	LAMTOR4	0.297901064516129	1
COPD-HF	ENSG00000164162	4	110	16	5E+05	0.010937	ANAPC10	0.296037769456681	1
COPD-HF	ENSG00000137513	11	314	6	5E+05	0.010877	NARS2	0.294846677941176	1
COPD-HF	ENSG00000066923	7	100	8	5E+05	0.010864	STAG3	0.294846677941176	1
COPD-HF	ENSG00000183762	22	270	24	5E+05	0.010858	KREMEN1	0.294846677941176	1
COPD-HF	ENSG00000164451	6	63	8	5E+05	0.010827	FAM26D	0.294791862629247	1
COPD-HF	ENSG00000184349	5	687	85	5E+05	0.010802	EFNA5	0.29454625147929	1
COPD-HF	ENSG00000130177	13	85	10	5E+05	0.010775	CDC16	0.294245296296296	1
COPD-HF	ENSG00000146197	6	54	9	5E+05	0.010769	SCUBE3	0.294245296296296	1
COPD-HF	ENSG00000134461	10	118	13	5E+05	0.010766	ANKRD16	0.294245296296296	1
COPD-HF	ENSG00000178821	1	6	2	5E+05	0.010761	TMEM52	0.294245296296296	1
COPD-HF	ENSG00000072364	5	167	11	5E+05	0.010745	AFF4	0.294245296296296	1
COPD-HF	ENSG00000198055	5	63	16	5E+05	0.010601	GRK6	0.291654079104478	1
COPD-HF	ENSG00000129255	17	12	5	5E+05	0.010598	MPDU1	0.291654079104478	1
COPD-HF	ENSG00000129911	19	23	3	5E+05	0.010487	KLF16	0.289381543413174	1
COPD-HF	ENSG00000198356	19	4	2	5E+05	0.010476	ASNA1	0.289381543413174	1
COPD-HF	ENSG00000125450	17	43	6	5E+05	0.010468	NUP85	0.289381543413174	1
COPD-HF	ENSG00000269693	19	82	14	5E+05	0.010459	CTD-2192J16	0.289381543413174	1

COPD-HF	ENSG00000174791	11	18	5	5E+05	0.010458	RIN1	0.289381543413174	1
COPD-HF	ENSG00000065413	2	829	53	5E+05	0.01038	ANKRD44	0.288589049773756	1
COPD-HF	ENSG00000099814	14	102	11	5E+05	0.010372	CEP170B	0.288589049773756	1
COPD-HF	ENSG00000054392	1	1221	95	5E+05	0.010362	HHAT	0.288589049773756	1
COPD-HF	ENSG00000062524	15	26	7	5E+05	0.010321	LTK	0.28825301969697	1
COPD-HF	ENSG00000115841	2	403	22	5E+05	0.010269	RMDN2	0.287235928679818	1
COPD-HF	ENSG00000078142	18	174	13	5E+05	0.010249	PIK3C3	0.287112183890578	1
COPD-HF	ENSG00000147676	8	240	28	5E+05	0.010223	MAL2	0.286819724505327	1
COPD-HF	ENSG00000111897	6	64	10	5E+05	0.010177	SERINC1	0.285964391768293	1
COPD-HF	ENSG00000065029	6	74	9	5E+05	0.010167	ZNF76	0.285964391768293	1
COPD-HF	ENSG00000101391	20	37	7	5E+05	0.010155	CDK5RAP1	0.285964391768293	1
COPD-HF	ENSG00000128573	7	797	42	5E+05	0.010072	FOXP2	0.284314205206738	1
COPD-HF	ENSG00000125445	17	8	1	5E+05	0.010072	MRPS7	0.284314205206738	1
COPD-HF	ENSG00000187801	1	45	14	5E+05	0.010048	ZFP69B	0.284314205206738	1
COPD-HF	ENSG00000140382	15	107	10	5E+05	0.009985	HMG20A	0.283164910153846	1
COPD-HF	ENSG00000110844	12	90	10	5E+05	0.009954	PRPF40B	0.28271223220339	1
COPD-HF	ENSG00000182901	1	1732	145	5E+05	0.009923	RGS7	0.282272380092593	1
COPD-HF	ENSG00000225968	7	121	15	5E+05	0.009914	ELFN1	0.282272380092593	1
COPD-HF	ENSG00000156735	8	47	3	5E+05	0.009885	BAG4	0.2820562874613	1
COPD-HF	ENSG00000025156	6	62	7	5E+05	0.009842	HSF2	0.281273290852713	1
COPD-HF	ENSG00000085276	3	1500	106	5E+05	0.009741	MECOM	0.278819160869565	1
COPD-HF	ENSG00000182986	19	125	15	5E+05	0.009661	ZNF320	0.276939341368585	1
COPD-HF	ENSG00000164402	5	78	7	5E+05	0.00966	SEPT8	0.276939341368585	1
COPD-HF	ENSG00000153208	2	414	16	5E+05	0.009653	MERTK	0.276939341368585	1
COPD-HF	ENSG00000155100	8	23	4	5E+05	0.009621	OTUD6B	0.276939341368585	1
COPD-HF	ENSG00000072135	2	21	3	5E+05	0.009599	PTPN18	0.276910391549296	1
COPD-HF	ENSG00000184863	7	347	11	5E+05	0.009581	RBM33	0.276809921159875	1
COPD-HF	ENSG00000155366	1	14	4	5E+05	0.009559	RHOC	0.276610748822606	1
COPD-HF	ENSG00000166949	15	357	46	5E+05	0.009546	SMAD3	0.276610748822606	1
COPD-HF	ENSG00000068697	2	41	7	5E+05	0.009506	LAPTM4A	0.27593185007874	1
COPD-HF	ENSG00000167619	19	6	1	5E+05	0.009502	TMEM145	0.27593185007874	1
COPD-HF	ENSG00000160321	19	257	11	5E+05	0.0095	ZNF208	0.27593185007874	1
COPD-HF	ENSG00000149927	16	27	4	5E+05	0.009475	DOC2A	0.27593185007874	1

COPD-HF	ENSG00000172922	11	14	4	5E+05	0.009406	RNASEH2C	0.274762706973059	1
COPD-HF	ENSG00000254685	1	90	7	5E+05	0.009381	FPGT	0.274461518253968	1
COPD-HF	ENSG00000102984	16	58	8	5E+05	0.009327	ZNF821	0.273321241812401	1
COPD-HF	ENSG00000175745	5	6	2	5E+05	0.009223	NR2F1	0.270712673566879	1
COPD-HF	ENSG00000175202	15	16	5	5E+05	0.009163	HIGD2B	0.269389328389155	1
COPD-HF	ENSG00000101150	20	62	10	5E+05	0.009155	TPD52L2	0.269389328389155	1
COPD-HF	ENSG00000133639	12	9	4	5E+05	0.009112	BTG1	0.268741343	1
COPD-HF	ENSG00000131771	17	18	4	5E+05	0.009067	PPP1R1B	0.267827945192308	1
COPD-HF	ENSG00000166183	14	72	12	5E+05	0.009059	ASPG	0.267827945192308	1
COPD-HF	ENSG00000085788	8	43	5	5E+05	0.008991	DDHD2	0.266457609163987	1
COPD-HF	ENSG00000160208	21	43	4	5E+05	0.008986	RRP1B	0.266457609163987	1
COPD-HF	ENSG00000145879	5	10	2	5E+05	0.008968	SPINK7	0.266457609163987	1
COPD-HF	ENSG00000171680	1	126	21	5E+05	0.008956	PLEKHG5	0.266457609163987	1
COPD-HF	ENSG00000179029	17	13	3	5E+05	0.008954	TMEM107	0.266457609163987	1
COPD-HF	ENSG00000131437	5	76	5	5E+05	0.008904	KIF3A	0.26600581636953	1
COPD-HF	ENSG00000188033	19	94	5	5E+05	0.008887	ZNF490	0.265931933441558	1
COPD-HF	ENSG00000108826	17	9	2	5E+05	0.00886	MRPL27	0.265543100487805	1
COPD-HF	ENSG00000156218	15	912	37	5E+05	0.008845	ADAMTSL3	0.265537271986971	1
COPD-HF	ENSG00000175229	11	13	3	5E+05	0.008837	GAL3ST3	0.265537271986971	1
COPD-HF	ENSG00000040199	16	168	16	5E+05	0.008819	PHLPP2	0.265537271986971	1
COPD-HF	ENSG00000170382	1	166	22	5E+05	0.008806	LRRN2	0.265537271986971	1
COPD-HF	ENSG00000005339	16	96	29	5E+05	0.00876	CREBBP	0.264694858196721	1
COPD-HF	ENSG00000166275	10	22	6	5E+05	0.008638	C10orf32	0.26146408407225	1
COPD-HF	ENSG00000178202	11	35	6	5E+05	0.008619	KDEL2	0.261296870230263	1
COPD-HF	ENSG00000188486	11	4	1	5E+05	0.008614	H2AFX	0.261296870230263	1
COPD-HF	ENSG00000213246	17	20	5	5E+05	0.008607	SUPT4H1	0.261296870230263	1
COPD-HF	ENSG00000107864	10	283	15	5E+05	0.008589	CPEB3	0.261296870230263	1
COPD-HF	ENSG00000170236	15	141	14	5E+05	0.008506	USP50	0.259584858774834	1
COPD-HF	ENSG00000139734	13	1043	28	5E+05	0.008445	DIAPH3	0.258165933996683	1
COPD-HF	ENSG00000059691	4	191	9	5E+05	0.008442	PET112	0.258165933996683	1
COPD-HF	ENSG00000010327	3	40	10	5E+05	0.008434	STAB1	0.258165933996683	1
COPD-HF	ENSG00000153214	2	117	19	5E+05	0.008414	TMEM87B	0.258165933996683	1
COPD-HF	ENSG00000121552	3	42	8	5E+05	0.008352	CSTA	0.257018796828047	1

COPD-HF	ENSG00000261459	16	5	3	5E+05	0.008329	ZNF747	0.256727302842809	1
COPD-HF	ENSG00000134697	1	60	10	5E+05	0.008326	GNL2	0.256727302842809	1
COPD-HF	ENSG00000176387	16	9	4	5E+05	0.008278	HSD11B2	0.256011483389262	1
COPD-HF	ENSG00000188266	15	46	3	5E+05	0.008252	HYKK	0.25565176907563	1
COPD-HF	ENSG00000121057	17	107	21	5E+05	0.008217	AKAP1	0.254977420538721	1
COPD-HF	ENSG00000106031	7	11	4	5E+05	0.008207	HOXA13	0.254977420538721	1
COPD-HF	ENSG00000131507	5	157	12	5E+05	0.008191	NDFIP1	0.254977420538721	1
COPD-HF	ENSG00000141279	17	93	10	5E+05	0.008156	NPEPPS	0.254378518950931	1
COPD-HF	ENSG00000188993	4	24	7	5E+05	0.008114	LRRC66	0.253506862033898	1
COPD-HF	ENSG00000268861	19	347	16	5E+05	0.008098	CTD-2207O2	0.253430278438031	1
COPD-HF	ENSG00000177238	16	6	2	5E+05	0.008089	TRIM72	0.253430278438031	1
COPD-HF	ENSG00000169957	16	3	2	5E+05	0.008039	ZNF768	0.252425333049404	1
COPD-HF	ENSG00000221843	2	7	3	5E+05	0.007999	C2orf16	0.25161988668942	1
COPD-HF	ENSG00000140750	16	147	11	5E+05	0.007976	ARHGAP17	0.251318988034188	1
COPD-HF	ENSG00000139990	14	149	17	5E+05	0.007945	DCAF5	0.250758239383562	1
COPD-HF	ENSG00000149557	11	97	13	5E+05	0.007906	FEZ1	0.24996792109777	1
COPD-HF	ENSG00000127990	7	87	8	5E+05	0.007906	SGCE	0.24996792109777	1
COPD-HF	ENSG00000095627	10	116	11	5E+05	0.007899	TDRD1	0.24996792109777	1
COPD-HF	ENSG00000166997	7	7	3	5E+05	0.007874	CNPY4	0.24996792109777	1
COPD-HF	ENSG00000168802	16	25	9	5E+05	0.007839	CHTF8	0.249574542659758	1
COPD-HF	ENSG00000011304	19	50	10	5E+05	0.007835	PTBP1	0.249574542659758	1
COPD-HF	ENSG00000219435	11	5	2	5E+05	0.007814	TEX40	0.249574542659758	1
COPD-HF	ENSG00000169247	5	341	29	5E+05	0.007806	SH3TC2	0.249574542659758	1
COPD-HF	ENSG00000160207	21	140	11	5E+05	0.007792	HSF2BP	0.249574542659758	1
COPD-HF	ENSG00000066405	3	67	9	5E+05	0.00777	CLDN18	0.249519878048781	1
COPD-HF	ENSG00000204909	5	25	2	5E+05	0.007768	SPINK9	0.249519878048781	1
COPD-HF	ENSG00000162004	16	11	3	5E+05	0.007754	CCDC78	0.249519878048781	1
COPD-HF	ENSG00000144824	3	814	43	5E+05	0.007715	PHLDB2	0.249052104553415	1
COPD-HF	ENSG00000105426	19	569	73	5E+05	0.007687	PTPRS	0.248599726666667	1
COPD-HF	ENSG00000187957	2	1171	93	5E+05	0.007673	DNER	0.248579857469244	1
COPD-HF	ENSG00000169126	10	463	23	5E+05	0.007616	ARMC4	0.24714499084507	1
COPD-HF	ENSG00000159322	15	66	10	5E+05	0.007572	ADPGK	0.246156947795414	1
COPD-HF	ENSG00000061987	12	284	18	5E+05	0.007567	MON2	0.246156947795414	1

COPD-HF	ENSG00000159720	16	45	9	5E+05	0.007557	ATP6V0D1	0.246156947795414	1
COPD-HF	ENSG00000132591	17	13	1	5E+05	0.007554	ERAL1	0.246156947795414	1
COPD-HF	ENSG00000196604	2	5	2	5E+05	0.007547	POTEF	0.246156947795414	1
COPD-HF	ENSG00000104327	8	55	8	5E+05	0.007523	CALB1	0.246156947795414	1
COPD-HF	ENSG00000260869	16	26	8	5E+05	0.007523	AC002310.13	0.246156947795414	1
COPD-HF	ENSG00000068137	17	7	3	5E+05	0.007501	PLEKHH3	0.246156947795414	1
COPD-HF	ENSG00000162910	1	1	1	5E+05	0.007474	MRPL55	0.246156947795414	1
COPD-HF	ENSG00000169592	16	25	5	5E+05	0.007456	INO80E	0.246156947795414	1
COPD-HF	ENSG00000162620	1	263	13	5E+05	0.00744	LRRIQ3	0.246156947795414	1
COPD-HF	ENSG00000183011	17	54	10	5E+05	0.007433	LSMD1	0.246156947795414	1
COPD-HF	ENSG00000115648	2	329	16	5E+05	0.007425	MLPH	0.246156947795414	1
COPD-HF	ENSG00000188501	15	46	9	5E+05	0.007419	LCTL	0.246156947795414	1
COPD-HF	ENSG00000166689	11	701	42	5E+05	0.0074	PLEKHA7	0.246156947795414	1
COPD-HF	ENSG00000150756	5	123	20	5E+05	0.007395	FAM173B	0.246156947795414	1
COPD-HF	ENSG00000117528	1	101	12	5E+05	0.007373	ABCD3	0.246156947795414	1
COPD-HF	ENSG00000090382	12	19	6	5E+05	0.007349	LYZ	0.246156947795414	1
COPD-HF	ENSG00000198780	5	162	10	5E+05	0.007343	FAM169A	0.246156947795414	1
COPD-HF	ENSG00000101203	20	115	11	5E+05	0.007339	COL20A1	0.246156947795414	1
COPD-HF	ENSG00000171055	2	281	18	5E+05	0.007334	FEZ2	0.246156947795414	1
COPD-HF	ENSG00000072163	2	153	27	5E+05	0.00731	LIMS2	0.246156947795414	1
COPD-HF	ENSG00000269095	19	55	13	5E+05	0.007281	AC010646.3	0.246156947795414	1
COPD-HF	ENSG00000113205	5	8	3	5E+05	0.007267	PCDHB3	0.246156947795414	1
COPD-HF	ENSG00000221986	1	39	9	5E+05	0.007226	MYBPHL	0.245284502394107	1
COPD-HF	ENSG00000176349	7	62	8	5E+05	0.007201	AC110781.3	0.24489362804428	1
COPD-HF	ENSG00000173442	11	24	7	5E+05	0.007156	EHBP1L1	0.243816459704251	1
COPD-HF	ENSG00000173065	17	125	6	5E+05	0.007101	FAM222B	0.242400777037037	1
COPD-HF	ENSG00000140830	16	114	12	5E+05	0.007004	TXNL4B	0.239519564749536	1
COPD-HF	ENSG00000184304	14	1312	100	5E+05	0.00697	PRKD1	0.23881698866171	1
COPD-HF	ENSG00000183066	22	106	9	5E+05	0.006933	WBP2NL	0.237967627188082	1
COPD-HF	ENSG00000182511	15	32	6	5E+05	0.006917	FES	0.237857918843284	1
COPD-HF	ENSG00000165511	10	4	2	5E+05	0.006903	C10orf25	0.237823599626168	1
COPD-HF	ENSG00000268126	5	1	1	5E+05	0.006871	AC091948.1	0.237174718539326	1
COPD-HF	ENSG00000106952	9	90	6	5E+05	0.006859	TNFSF8	0.237174718539326	1

COPD-HF	ENSG0000087460	20	155	31	5E+05	0.006858	GNAS	0.237174718539326	1
COPD-HF	ENSG00000257017	16	6	2	5E+05	0.006836	HP	0.237174718539326	1
COPD-HF	ENSG00000145743	5	1110	40	5E+05	0.006833	FBXL17	0.237174718539326	1
COPD-HF	ENSG00000172733	8	49	9	5E+05	0.006824	PURG	0.237174718539326	1
COPD-HF	ENSG00000166938	15	92	16	5E+05	0.006814	DIS3L	0.237174718539326	1
COPD-HF	ENSG00000172201	6	12	5	5E+05	0.006811	ID4	0.237174718539326	1
COPD-HF	ENSG00000172366	16	5	2	5E+05	0.006785	FAM195A	0.237174718539326	1
COPD-HF	ENSG00000198920	17	177	16	5E+05	0.006752	KIAA0753	0.237079979428571	1
COPD-HF	ENSG00000149932	16	40	5	5E+05	0.00675	TMEM219	0.237079979428571	1
COPD-HF	ENSG00000108590	17	38	6	5E+05	0.006744	MED31	0.237079979428571	1
COPD-HF	ENSG00000141314	17	168	24	5E+05	0.006708	RHBDL3	0.236885237356322	1
COPD-HF	ENSG00000148795	10	18	3	5E+05	0.006637	CYP17A1	0.234810238771593	1
COPD-HF	ENSG00000145332	4	143	17	5E+05	0.00663	KLHL8	0.234810238771593	1
COPD-HF	ENSG00000015532	17	30	4	5E+05	0.006599	XYLT2	0.23436547283237	1
COPD-HF	ENSG00000091536	17	131	17	5E+05	0.00657	MYO15A	0.233778835521236	1
COPD-HF	ENSG00000174197	15	247	19	5E+05	0.006459	MGA	0.230301973307544	1
COPD-HF	ENSG00000159479	1	4	2	5E+05	0.006458	MED8	0.230301973307544	1
COPD-HF	ENSG00000263620	17	25	5	5E+05	0.006454	RP11-599B13	0.230301973307544	1
COPD-HF	ENSG00000268241	2	2	1	5E+05	0.006433	AC018470.1	0.230301973307544	1
COPD-HF	ENSG00000162777	1	42	14	5E+05	0.006429	DENND2D	0.230301973307544	1
COPD-HF	ENSG00000258512	14	7	1	5E+05	0.006396	RP11-796G6.1	0.2302684921875	1
COPD-HF	ENSG00000165895	11	1187	52	5E+05	0.00638	ARHGAP42	0.230149171428571	1
COPD-HF	ENSG00000257955	12	25	5	5E+05	0.006379	RP1-228P16.5	0.230149171428571	1
COPD-HF	ENSG00000170522	4	437	56	5E+05	0.006352	ELOVL6	0.230021387229862	1
COPD-HF	ENSG00000156427	5	76	15	5E+05	0.006336	FGF18	0.229886361220472	1
COPD-HF	ENSG00000213533	3	106	8	5E+05	0.006328	TMEM110	0.229886361220472	1
COPD-HF	ENSG00000182179	3	6	2	5E+05	0.006311	UBA7	0.229886361220472	1
COPD-HF	ENSG00000108242	10	128	14	5E+05	0.006279	CYP2C18	0.229175116435644	1
COPD-HF	ENSG00000240891	3	535	34	5E+05	0.006257	PLCXD2	0.228850815277778	1
COPD-HF	ENSG00000139318	12	26	5	5E+05	0.006239	DUSP6	0.228616839960239	1
COPD-HF	ENSG00000137474	11	250	26	5E+05	0.00618	MYO7A	0.226938870916335	1
COPD-HF	ENSG00000198380	2	110	6	5E+05	0.006166	GFPT1	0.226862031936128	1
COPD-HF	ENSG00000114349	3	2	1	5E+05	0.006131	GNAT1	0.226018073	1

COPD-HF	ENSG00000149131	11	36	4	5E+05	0.006123	SERPING1	0.226018073	1
COPD-HF	ENSG00000089009	12	10	4	5E+05	0.006112	RPL6	0.226018073	1
COPD-HF	ENSG00000153495	13	113	19	5E+05	0.006105	TEX29	0.226018073	1
COPD-HF	ENSG00000196092	9	684	57	5E+05	0.006092	PAX5	0.226018073	1
COPD-HF	ENSG00000116685	1	18	5	5E+05	0.00607	KIAA2013	0.226018073	1
COPD-HF	ENSG00000162992	2	7	2	5E+05	0.006065	NEUROD1	0.226018073	1
COPD-HF	ENSG00000090905	16	143	14	5E+05	0.006026	TNRC6A	0.225297622920893	1
COPD-HF	ENSG00000185888	1	100	16	5E+05	0.006014	PRSS38	0.225297622920893	1
COPD-HF	ENSG00000116514	1	48	6	5E+05	0.006011	RNF19B	0.225297622920893	1
COPD-HF	ENSG00000180336	17	27	9	5E+05	0.00597	C17orf104	0.22457036755102	1
COPD-HF	ENSG00000197128	19	38	4	5E+05	0.005935	ZNF772	0.223725354396728	1
COPD-HF	ENSG00000129167	11	41	5	5E+05	0.005921	TPH1	0.223639883401639	1
COPD-HF	ENSG00000133275	19	114	12	5E+05	0.005918	CSNK1G2	0.223639883401639	1
COPD-HF	ENSG00000128965	15	5	2	5E+05	0.005893	CHAC1	0.223513399794239	1
COPD-HF	ENSG00000115947	2	125	9	5E+05	0.005825	ORC4	0.221367027835052	1
COPD-HF	ENSG00000138668	4	43	5	5E+05	0.005813	HNRNPD	0.221367027835052	1
COPD-HF	ENSG00000162040	16	33	4	5E+05	0.005807	HS3ST6	0.221367027835052	1
COPD-HF	ENSG00000180098	1	35	6	5E+05	0.005744	TRNAU1AP	0.219673939004149	1
COPD-HF	ENSG00000137944	1	98	7	5E+05	0.005731	CCBL2	0.219640116839917	1
COPD-HF	ENSG00000104447	8	482	21	5E+05	0.00571	TRPS1	0.219287416458333	1
COPD-HF	ENSG00000133069	1	118	13	5E+05	0.005683	TMCC2	0.218710046346555	1
COPD-HF	ENSG00000196387	12	5	1	5E+05	0.005683	ZNF140	0.218710046346555	1
COPD-HF	ENSG00000205883	8	11	3	5E+05	0.005675	DEFB135	0.218710046346555	1
COPD-HF	ENSG00000140832	16	30	6	5E+05	0.00566	MARVELD3	0.218710046346555	1
COPD-HF	ENSG00000155363	1	51	9	5E+05	0.00565	MOV10	0.218710046346555	1
COPD-HF	ENSG00000176182	19	39	7	5E+05	0.005602	MYPOP	0.217839949578059	1
COPD-HF	ENSG00000101210	20	46	12	5E+05	0.0056	EEF1A2	0.217839949578059	1
COPD-HF	ENSG00000205971	7	4	2	5E+05	0.005548	AC074389.6	0.216654140042373	1
COPD-HF	ENSG00000108669	17	133	13	5E+05	0.005468	CYTH1	0.213979343524416	1
COPD-HF	ENSG00000198492	1	43	6	5E+05	0.005414	YTHDF2	0.212340316170213	1
COPD-HF	ENSG00000248592	3	116	9	5E+05	0.005411	TMEM110-M	0.212340316170213	1
COPD-HF	ENSG00000138435	2	43	6	5E+05	0.00541	CHRNA1	0.212340316170213	1
COPD-HF	ENSG00000122406	1	9	3	5E+05	0.005367	RPL5	0.211821615631692	1

COPD-HF	ENSG00000118369	11	45	8	5E+05	0.005318	USP35	0.210349801287554	1
COPD-HF	ENSG00000130592	11	173	27	5E+05	0.005299	LSP1	0.210068810537634	1
COPD-HF	ENSG00000215910	1	142	11	5E+05	0.005296	C1orf167	0.210068810537634	1
COPD-HF	ENSG00000008838	17	79	8	5E+05	0.005282	MED24	0.210068810537634	1
COPD-HF	ENSG00000261701	16	36	7	5E+05	0.005275	HPR	0.210068810537634	1
COPD-HF	ENSG00000115138	2	14	6	5E+05	0.005268	POMC	0.210068810537634	1
COPD-HF	ENSG00000163029	2	246	22	5E+05	0.005182	SMC6	0.207631716304348	1
COPD-HF	ENSG00000188334	19	96	13	5E+05	0.005145	BSPH1	0.206602204357298	1
COPD-HF	ENSG00000171105	19	658	68	5E+05	0.005101	INSR	0.205302568340611	1
COPD-HF	ENSG00000117477	1	169	17	5E+05	0.005068	CCDC181	0.2044086595186	1
COPD-HF	ENSG00000121797	3	18	4	5E+05	0.005033	CCRL2	0.203458279824561	1
COPD-HF	ENSG00000140459	15	42	7	5E+05	0.005009	CYP11A1	0.202908843516484	1
COPD-HF	ENSG00000100156	22	12	4	5E+05	0.004989	SLC16A8	0.202568113656388	1
COPD-HF	ENSG00000141101	16	25	7	5E+05	0.004974	NOB1	0.20237643598234	1
COPD-HF	ENSG00000103254	16	6	1	5E+05	0.004972	FAM173A	0.20237643598234	1
COPD-HF	ENSG00000133706	5	236	6	5E+05	0.004964	LARS	0.20237643598234	1
COPD-HF	ENSG00000164338	5	37	4	5E+05	0.004922	UTP15	0.201599672888889	1
COPD-HF	ENSG00000102886	16	16	6	5E+05	0.004917	GDPD3	0.201599672888889	1
COPD-HF	ENSG00000173626	6	134	12	5E+05	0.0049	TRAPPC3L	0.201594479464286	1
COPD-HF	ENSG00000172977	11	22	5	5E+05	0.004855	KAT5	0.200185678970917	1
COPD-HF	ENSG00000168772	4	25	4	5E+05	0.004848	CXXC4	0.200185678970917	1
COPD-HF	ENSG00000163069	4	21	4	5E+05	0.004824	SGCB	0.199834431235955	1
COPD-HF	ENSG00000267534	19	13	4	5E+05	0.004799	S1PR2	0.199225856756757	1
COPD-HF	ENSG00000253958	8	15	2	5E+05	0.004716	CLDN23	0.196217828668172	1
COPD-HF	ENSG00000104880	19	323	14	5E+05	0.004703	ARHGEF18	0.196111272624434	1
COPD-HF	ENSG00000169955	16	6	3	5E+05	0.004701	ZNF747	0.196111272624434	1
COPD-HF	ENSG00000117281	1	4	1	5E+05	0.004686	CD160	0.196111272624434	1
COPD-HF	ENSG00000169344	16	55	6	5E+05	0.004664	UMOD	0.195813884965831	1
COPD-HF	ENSG00000075239	11	44	7	5E+05	0.00463	ACAT1	0.194859535616438	1
COPD-HF	ENSG00000169223	5	24	4	5E+05	0.004605	LMAN2	0.194246700915332	1
COPD-HF	ENSG00000074201	11	229	19	5E+05	0.004594	CLNS1A	0.194210257110092	1
COPD-HF	ENSG00000128285	22	7	2	5E+05	0.00457	MCHR1	0.193635486896552	1
COPD-HF	ENSG00000253350	8	1987	103	5E+05	0.004547	RP11-127H5.1	0.193126023732719	1

COPD-HF	ENSG00000129282	17	11	3	5E+05	0.004542	MRM1	0.193126023732719	1
COPD-HF	ENSG00000156110	10	777	24	5E+05	0.004536	ADK	0.193126023732719	1
COPD-HF	ENSG00000132781	1	14	6	5E+05	0.004521	MUTYH	0.193126023732719	1
COPD-HF	ENSG00000130517	19	89	17	5E+05	0.004491	PGPEP1	0.192513394651163	1
COPD-HF	ENSG00000198758	1	41	11	5E+05	0.004488	EPS8L3	0.192513394651163	1
COPD-HF	ENSG00000174839	3	125	15	5E+05	0.004441	DENND6A	0.191263908878505	1
COPD-HF	ENSG00000173261	5	46	2	5E+05	0.004436	PLAC8L1	0.191263908878505	1
COPD-HF	ENSG00000149295	11	166	21	5E+05	0.004419	DRD2	0.191201268544601	1
COPD-HF	ENSG00000197150	7	46	9	5E+05	0.004389	ABCB8	0.190367349647059	1
COPD-HF	ENSG00000196748	6	7	3	5E+05	0.004361	CLPSL2	0.189603403066038	1
COPD-HF	ENSG00000188452	2	337	22	5E+05	0.004353	CERKL	0.189603403066038	1
COPD-HF	ENSG00000151006	16	12	3	5E+05	0.004342	PRSS53	0.189603403066038	1
COPD-HF	ENSG00000196355	4	91	14	5E+05	0.004328	AC021860.1	0.189500872446556	1
COPD-HF	ENSG00000109787	4	73	15	5E+05	0.004324	KLF3	0.189500872446556	1
COPD-HF	ENSG00000170959	11	637	20	5E+05	0.004313	DCDC1	0.189500872446556	1
COPD-HF	ENSG00000125630	2	91	10	5E+05	0.004308	POLR1B	0.189500872446556	1
COPD-HF	ENSG00000121905	1	13	3	5E+05	0.004288	HPCA	0.189500872446556	1
COPD-HF	ENSG00000100372	22	57	7	5E+05	0.004288	SLC25A17	0.189500872446556	1
COPD-HF	ENSG00000143499	1	177	20	5E+05	0.004258	SMYD2	0.189104813253012	1
COPD-HF	ENSG00000180198	1	57	7	5E+05	0.004174	RCC1	0.185857178502415	1
COPD-HF	ENSG00000146674	7	19	6	5E+05	0.004157	IGFBP3	0.185517210169492	1
COPD-HF	ENSG00000205593	22	63	10	5E+05	0.004138	DENND6B	0.185144273300971	1
COPD-HF	ENSG00000145868	5	60	4	5E+05	0.004132	FBXO38	0.185144273300971	1
COPD-HF	ENSG00000114999	2	99	10	5E+05	0.004099	TTL	0.184289537317073	1
COPD-HF	ENSG00000169230	5	10	5	5E+05	0.004078	PRELID1	0.183793685330073	1
COPD-HF	ENSG00000157851	2	122	7	5E+05	0.004063	DPYSL5	0.183570994117647	1
COPD-HF	ENSG00000175324	8	18	5	5E+05	0.004027	LSM1	0.182364417199017	1
COPD-HF	ENSG00000187778	12	15	4	5E+05	0.004016	MCRS1	0.182332334975369	1
COPD-HF	ENSG00000149596	20	269	34	5E+05	0.004008	JPH2	0.182332334975369	1
COPD-HF	ENSG00000105722	19	8	1	5E+05	0.003957	ERF	0.180524771782178	1
COPD-HF	ENSG00000177733	5	1	1	5E+05	0.003951	HNRNPA0	0.180524771782178	1
COPD-HF	ENSG00000127337	12	111	11	5E+05	0.003924	YEATS4	0.179918918905473	1
COPD-HF	ENSG00000157322	16	1	1	5E+05	0.003912	CLEC18A	0.179802193266833	1

COPD-HF	ENSG0000007541	16	52	4	5E+05	0.003906	PIGQ	0.179802193266833	1
COPD-HF	ENSG00000121989	2	93	10	5E+05	0.003902	ACVR2A	0.179802193266833	1
COPD-HF	ENSG00000119772	2	182	34	5E+05	0.003835	DNMT3A	0.177600565577889	1
COPD-HF	ENSG00000177981	12	80	11	5E+05	0.003831	ASB8	0.177600565577889	1
COPD-HF	ENSG00000171456	20	91	7	5E+05	0.003829	ASXL1	0.177600565577889	1
COPD-HF	ENSG00000037042	17	8	3	5E+05	0.003794	TUBG2	0.177031465316456	1
COPD-HF	ENSG00000126351	17	50	12	5E+05	0.003784	THRA	0.177008262690355	1
COPD-HF	ENSG00000112282	6	40	8	5E+05	0.00378	MED23	0.177008262690355	1
COPD-HF	ENSG00000105723	19	12	3	5E+05	0.003773	GSK3A	0.177008262690355	1
COPD-HF	ENSG00000138829	5	1094	32	5E+05	0.003768	FBN2	0.177008262690355	1
COPD-HF	ENSG00000169194	5	8	2	5E+05	0.003718	IL13	0.175713754102564	1
COPD-HF	ENSG00000055955	3	41	5	5E+05	0.003667	ITIH4	0.17377722596401	1
COPD-HF	ENSG00000172548	5	45	7	5E+05	0.003639	NIPAL4	0.17289013814433	1
COPD-HF	ENSG00000124177	20	438	25	5E+05	0.003613	CHD6	0.172093726873385	1
COPD-HF	ENSG00000127578	16	15	3	5E+05	0.003588	WFIKKN1	0.171345718393782	1
COPD-HF	ENSG00000204957	19	7	2	5E+05	0.003588	AC006486.1	0.171345718393782	1
COPD-HF	ENSG00000113212	5	14	4	5E+05	0.003583	PCDHB7	0.171345718393782	1
COPD-HF	ENSG00000243696	3	55	6	5E+05	0.003571	RP5-966M1.6	0.171345718393782	1
COPD-HF	ENSG00000166147	15	353	13	5E+05	0.003537	FBN1	0.170664487958115	1
COPD-HF	ENSG00000178035	3	4	2	5E+05	0.003523	IMPDH2	0.170430260104987	1
COPD-HF	ENSG00000101152	20	132	14	5E+05	0.003436	DNAJC5	0.166653723157895	1
COPD-HF	ENSG00000130203	19	5	2	5E+05	0.003413	APOE	0.165999135356201	1
COPD-HF	ENSG00000140564	15	27	6	5E+05	0.003299	FURIN	0.160888880687831	1
COPD-HF	ENSG00000116678	1	512	20	5E+05	0.003298	LEPR	0.160888880687831	1
COPD-HF	ENSG00000178301	11	40	4	5E+05	0.003234	AQP11	0.158558116755319	1
COPD-HF	ENSG00000041357	15	22	3	5E+05	0.003213	PSMA4	0.157914282133333	1
COPD-HF	ENSG00000268643	19	25	3	5E+05	0.003182	AC006486.9	0.15682835828877	1
COPD-HF	ENSG00000204160	1	42	6	5E+05	0.00318	ZDHHC18	0.15682835828877	1
COPD-HF	ENSG00000168268	3	21	3	5E+05	0.003178	NT5DC2	0.15682835828877	1
COPD-HF	ENSG00000268163	19	127	13	5E+05	0.003171	AC004076.9	0.15682835828877	1
COPD-HF	ENSG00000115935	2	171	24	5E+05	0.003168	WIPF1	0.15682835828877	1
COPD-HF	ENSG00000165379	14	691	31	5E+05	0.003153	LRFN5	0.15682835828877	1
COPD-HF	ENSG00000108798	17	27	8	5E+05	0.003138	ABI3	0.15682835828877	1

COPD-HF	ENSG00000255622	5	4	2	5E+05	0.003125	PCDHB17	0.15682835828877	1
COPD-HF	ENSG00000258429	16	5	2	5E+05	0.003122	PDF	0.15682835828877	1
COPD-HF	ENSG00000100883	14	175	16	5E+05	0.003106	SRP54	0.15682835828877	1
COPD-HF	ENSG00000241644	7	147	25	5E+05	0.003	INMT	0.151925393681319	1
COPD-HF	ENSG00000147434	8	88	9	5E+05	0.002991	CHRNA6	0.151897060330579	1
COPD-HF	ENSG00000124571	6	56	7	5E+05	0.002977	XPO5	0.151563051104972	1
COPD-HF	ENSG00000106546	7	41	10	5E+05	0.002974	AHR	0.151563051104972	1
COPD-HF	ENSG00000163431	1	111	18	5E+05	0.002958	LMOD1	0.151468057222222	1
COPD-HF	ENSG00000113520	5	15	2	5E+05	0.002954	IL4	0.151468057222222	1
COPD-HF	ENSG00000105662	19	206	24	5E+05	0.002944	CRTC1	0.151468057222222	1
COPD-HF	ENSG00000144035	2	2	1	5E+05	0.002936	NAT8	0.151468057222222	1
COPD-HF	ENSG00000269755	19	183	11	5E+05	0.002934	CTD-3105H1	0.151468057222222	1
COPD-HF	ENSG00000103591	15	100	8	5E+05	0.002885	AAGAB	0.149805769859155	1
COPD-HF	ENSG00000163491	3	720	22	5E+05	0.002884	NEK10	0.149805769859155	1
COPD-HF	ENSG00000142751	1	20	4	5E+05	0.002805	GPN2	0.146471855524079	1
COPD-HF	ENSG00000033327	11	318	5	5E+05	0.002804	GAB2	0.146471855524079	1
COPD-HF	ENSG00000182704	11	45	7	5E+05	0.002763	TSKU	0.145106046438746	1
COPD-HF	ENSG00000137207	6	10	3	5E+05	0.002708	YIPF3	0.142624020857143	1
COPD-HF	ENSG00000186907	11	14	6	5E+05	0.002666	RTN4RL2	0.140782697707736	1
COPD-HF	ENSG00000102879	16	6	3	5E+05	0.00265	CORO1A	0.140355641954023	1
COPD-HF	ENSG00000198670	6	214	17	5E+05	0.002649	LPA	0.140355641954023	1
COPD-HF	ENSG00000135655	12	338	18	5E+05	0.002646	USP15	0.140355641954023	1
COPD-HF	ENSG00000178033	6	37	6	5E+05	0.002644	FAM26E	0.140355641954023	1
COPD-HF	ENSG00000115604	2	317	15	5E+05	0.002621	IL18R1	0.140355641954023	1
COPD-HF	ENSG00000233538	2	1	1	5E+05	0.002601	AC017104.2	0.139752234693878	1
COPD-HF	ENSG00000106261	7	39	8	5E+05	0.002598	ZKSCAN1	0.139752234693878	1
COPD-HF	ENSG00000184838	5	664	40	5E+05	0.002596	PRR16	0.139752234693878	1
COPD-HF	ENSG00000167536	17	7	3	5E+05	0.002575	DHRS13	0.139624553529412	1
COPD-HF	ENSG00000173349	2	9	4	5E+05	0.002563	SFT2D3	0.139356742477876	1
COPD-HF	ENSG00000185650	14	17	4	5E+05	0.002551	ZFP36L1	0.139141882248521	1
COPD-HF	ENSG00000149930	16	23	3	5E+05	0.002545	TAOK2	0.139141882248521	1
COPD-HF	ENSG00000254470	11	8	3	5E+05	0.002518	AP5B1	0.138154237797619	1
COPD-HF	ENSG00000058335	15	353	55	5E+05	0.002517	RASGRF1	0.138154237797619	1

COPD-HF	ENSG0000079459	8	234	25	5E+05	0.002508	FDFT1	0.138154237797619	1
COPD-HF	ENSG0000220205	17	8	2	5E+05	0.002507	VAMP2	0.138154237797619	1
COPD-HF	ENSG0000181019	16	46	10	5E+05	0.002488	NQO1	0.138153114156627	1
COPD-HF	ENSG00000172432	6	21	4	5E+05	0.002474	GTPBP2	0.137779713897281	1
COPD-HF	ENSG00000135519	12	37	6	5E+05	0.00247	KCNH3	0.137779713897281	1
COPD-HF	ENSG00000213347	5	24	8	5E+05	0.002459	MXD3	0.137779713897281	1
COPD-HF	ENSG00000102908	16	259	16	5E+05	0.002433	NFAT5	0.136735769207317	1
COPD-HF	ENSG00000108963	17	35	11	5E+05	0.002392	DPH1	0.134842750152905	1
COPD-HF	ENSG00000116489	1	64	9	5E+05	0.002373	CAPZA1	0.134193370858896	1
COPD-HF	ENSG00000105364	19	16	5	5E+05	0.002371	MRPL4	0.134193370858896	1
COPD-HF	ENSG00000180834	3	29	4	5E+05	0.002354	MAP6D1	0.13390095308642	1
COPD-HF	ENSG00000158636	11	189	21	5E+05	0.002353	C11orf30	0.13390095308642	1
COPD-HF	ENSG00000268870	19	219	8	5E+05	0.002337	CTD-3105H1	0.133759465217391	1
COPD-HF	ENSG00000143079	1	144	5	5E+05	0.002317	CTTNBP2NL	0.133027687850467	1
COPD-HF	ENSG00000204393	20	54	11	5E+05	0.002313	RP11-410N8.4	0.133027687850467	1
COPD-HF	ENSG00000244624	21	1	1	5E+05	0.002308	KRTAP20-1	0.133027687850467	1
COPD-HF	ENSG00000163347	3	82	18	5E+05	0.002306	CLDN1	0.133027687850467	1
COPD-HF	ENSG0000007341	1	188	15	5E+05	0.002287	ST7L	0.132990896845426	1
COPD-HF	ENSG00000132773	1	5	3	5E+05	0.002265	TOE1	0.132099277848101	1
COPD-HF	ENSG00000125611	2	12	3	5E+05	0.002256	CHCHD5	0.131997835238095	1
COPD-HF	ENSG00000167083	17	25	7	5E+05	0.002236	GNGT2	0.131232393312102	1
COPD-HF	ENSG00000048649	11	305	12	5E+05	0.002221	RSF1	0.130774184664537	1
COPD-HF	ENSG00000116127	2	357	12	5E+05	0.002213	ALMS1	0.13076204775641	1
COPD-HF	ENSG00000171453	6	25	5	5E+05	0.002209	POLR1C	0.13076204775641	1
COPD-HF	ENSG00000005955	17	69	10	5E+05	0.002187	GGNBP2	0.130029949677419	1
COPD-HF	ENSG00000170734	6	40	8	5E+05	0.002139	POLH	0.12756948381877	1
COPD-HF	ENSG00000054282	1	381	27	5E+05	0.002123	SDCCAG8	0.127032096753247	1
COPD-HF	ENSG00000091542	17	61	7	5E+05	0.002093	ALKBH5	0.125668628664495	1
COPD-HF	ENSG00000171060	8	36	12	5E+05	0.002084	C8orf74	0.125519091830065	1
COPD-HF	ENSG00000128908	15	110	11	5E+05	0.002083	INO80	0.125519091830065	1
COPD-HF	ENSG00000055483	17	80	9	5E+05	0.002083	USP36	0.125519091830065	1
COPD-HF	ENSG00000153107	2	131	11	5E+05	0.002059	ANAPC1	0.125283565016502	1
COPD-HF	ENSG00000116406	1	110	13	5E+05	0.002031	EDEM3	0.123964976821192	1

COPD-HF	ENSG00000161996	16	68	4	5E+05	0.00203	WDR90	0.123964976821192	1
COPD-HF	ENSG00000162757	1	2	1	5E+05	0.00201	C1orf74	0.123525677333333	1
COPD-HF	ENSG00000184489	8	100	14	5E+05	0.001977	PTP4A3	0.121885900668896	1
COPD-HF	ENSG00000178951	19	37	7	5E+05	0.001971	ZBTB7A	0.121885900668896	1
COPD-HF	ENSG00000117399	1	5	3	5E+05	0.001968	CDC20	0.121885900668896	1
COPD-HF	ENSG00000152556	12	97	14	5E+05	0.001917	PFKM	0.119391039189189	1
COPD-HF	ENSG00000168214	4	420	45	5E+05	0.001905	RBPJ	0.119033440677966	1
COPD-HF	ENSG00000076604	17	7	2	5E+05	0.001896	TRAF4	0.118842692176871	1
COPD-HF	ENSG00000077782	8	74	14	5E+05	0.001894	FGFR1	0.118842692176871	1
COPD-HF	ENSG00000052344	16	4	2	5E+05	0.001892	PRSS8	0.118842692176871	1
COPD-HF	ENSG00000106290	7	18	5	5E+05	0.00189	TAF6	0.118842692176871	1
COPD-HF	ENSG00000253626	10	5	2	5E+05	0.001886	EIF5AL1	0.118842692176871	1
COPD-HF	ENSG00000165512	10	15	4	5E+05	0.001854	ZNF22	0.118258219031142	1
COPD-HF	ENSG00000272573	3	7	2	5E+05	0.001844	MUSTN1	0.118048004166667	1
COPD-HF	ENSG00000149084	11	552	23	5E+05	0.001826	HSD17B12	0.117303244599303	1
COPD-HF	ENSG00000116981	1	16	5	5E+05	0.001791	NT5C1A	0.115406048251748	1
COPD-HF	ENSG00000117595	1	54	6	5E+05	0.001787	IRF6	0.115406048251748	1
COPD-HF	ENSG00000113649	5	162	12	5E+05	0.00175	TCERG1	0.113590117253521	1
COPD-HF	ENSG00000135074	5	583	31	5E+05	0.001747	ADAM19	0.113590117253521	1
COPD-HF	ENSG00000123689	1	3	2	5E+05	0.001741	G0S2	0.113590117253521	1
COPD-HF	ENSG00000197415	3	709	33	5E+05	0.001719	VEPH1	0.112749609964413	1
COPD-HF	ENSG00000125520	20	11	3	5E+05	0.001697	SLC2A4RG	0.111743479285714	1
COPD-HF	ENSG00000221838	7	17	4	5E+05	0.001695	AP4M1	0.111743479285714	1
COPD-HF	ENSG00000167395	16	13	3	5E+05	0.001681	ZNF646	0.111479866546763	1
COPD-HF	ENSG00000185787	15	310	14	5E+05	0.001668	MORF4L1	0.111010579783394	1
COPD-HF	ENSG00000144152	2	112	17	5E+05	0.001619	FBLN7	0.108146945289855	1
COPD-HF	ENSG00000107960	10	84	8	5E+05	0.001611	OBFC1	0.108010677090909	1
COPD-HF	ENSG00000140463	15	92	14	5E+05	0.001609	BBS4	0.108010677090909	1
COPD-HF	ENSG00000146555	7	3276	92	5E+05	0.001582	SDK1	0.106823623809524	1
COPD-HF	ENSG00000268466	14	2	1	5E+05	0.001578	AL132989.1	0.106823623809524	1
COPD-HF	ENSG00000054598	6	3	1	5E+05	0.001573	FOXC1	0.106823623809524	1
COPD-HF	ENSG00000180855	19	66	5	5E+05	0.001496	ZNF443	0.102098338888889	1
COPD-HF	ENSG00000147905	9	267	16	5E+05	0.001495	ZCCHC7	0.102098338888889	1

COPD-HF	ENSG00000178922	1	6	3	5E+05	0.00147	HYI	0.101092624626866	1
COPD-HF	ENSG00000228008	3	11	3	5E+05	0.001456	CTD-2330K9	0.100484013108614	1
COPD-HF	ENSG00000131899	17	41	6	5E+05	0.001438	LLGL1	0.0996282860902256	1
COPD-HF	ENSG00000164989	9	1250	16	5E+05	0.001403	CCDC171	0.0976183856603773	1
COPD-HF	ENSG00000178685	8	54	4	5E+05	0.001401	PARP10	0.0976183856603773	1
COPD-HF	ENSG00000079313	19	58	6	5E+05	0.0014	REXO1	0.0976183856603773	1
COPD-HF	ENSG00000270316	10	132	13	5E+05	0.001389	C10orf32-AS1	0.0976183856603773	1
COPD-HF	ENSG00000099365	16	25	5	5E+05	0.001383	STX1B	0.0976183856603773	1
COPD-HF	ENSG00000137802	15	81	12	5E+05	0.001369	MAPKBP1	0.0970426553846154	1
COPD-HF	ENSG00000164400	5	4	2	5E+05	0.001366	CSF2	0.0970426553846154	1
COPD-HF	ENSG00000166292	17	8	3	5E+05	0.001345	TMEM100	0.0961016600775194	1
COPD-HF	ENSG00000133812	11	1530	32	5E+05	0.001345	SBF2	0.0961016600775194	1
COPD-HF	ENSG00000072778	17	10	3	5E+05	0.00133	ACADVL	0.09577959609375	1
COPD-HF	ENSG00000108272	17	16	4	5E+05	0.001324	DHRS11	0.0956781129411765	1
COPD-HF	ENSG00000177455	16	6	3	5E+05	0.001319	CD19	0.0956781129411765	1
COPD-HF	ENSG00000120915	8	141	10	5E+05	0.001302	EPHX2	0.0948534494071146	1
COPD-HF	ENSG00000170296	17	3	2	5E+05	0.001298	GABARAP	0.0948534494071146	1
COPD-HF	ENSG00000262526	17	3	2	5E+05	0.001298	CTD-2545G14	0.0948534494071146	1
COPD-HF	ENSG00000121848	1	5	2	5E+05	0.001294	RNF115	0.0948534494071146	1
COPD-HF	ENSG00000269383	2	1	1	5E+05	0.001292	AC012493.2	0.0948534494071146	1
COPD-HF	ENSG00000137877	15	130	22	5E+05	0.00127	SPTBN5	0.0943799330645161	1
COPD-HF	ENSG00000158019	2	834	40	5E+05	0.001263	BRE	0.0942844218623482	1
COPD-HF	ENSG00000196911	6	79	9	5E+05	0.001253	KPNA5	0.0939033967479675	1
COPD-HF	ENSG00000102967	16	47	8	5E+05	0.00124	DHODH	0.0932559326530612	1
COPD-HF	ENSG00000255439	16	19	4	5E+05	0.00122	RP11-196G11	0.0921272274590164	1
COPD-HF	ENSG00000064651	5	146	12	5E+05	0.001194	SLC12A2	0.0906023670781893	1
COPD-HF	ENSG00000213380	16	44	7	5E+05	0.001178	COG8	0.0897275785123967	1
COPD-HF	ENSG00000111834	6	46	10	5E+05	0.001166	RSPH4A	0.0891973634854772	1
COPD-HF	ENSG00000131067	20	45	6	5E+05	0.001157	GGT7	0.088824019	1
COPD-HF	ENSG00000204138	1	330	9	5E+05	0.001156	PHACTR4	0.088824019	1
COPD-HF	ENSG00000101350	20	69	7	5E+05	0.001148	KIF3B	0.088824019	1
COPD-HF	ENSG00000143156	1	680	19	5E+05	0.001141	NME7	0.0887195067510548	1
COPD-HF	ENSG00000214435	10	99	11	5E+05	0.00113	AS3MT	0.0882675139830509	1

COPD-HF	ENSG00000134871	13	901	94	5E+05	0.001112	COL4A2	0.0871841680851064	1
COPD-HF	ENSG00000177731	17	20	6	5E+05	0.001111	FLII	0.0871841680851064	1
COPD-HF	ENSG00000154328	8	93	14	5E+05	0.001087	NEIL2	0.0860101184549356	1
COPD-HF	ENSG00000154783	3	467	32	5E+05	0.001077	FGD5	0.0855704353448276	1
COPD-HF	ENSG00000157315	16	18	7	5E+05	0.001072	TMED6	0.0855578467532468	1
COPD-HF	ENSG00000182450	11	6	2	5E+05	0.000998	KCNK4	0.0800152486956522	1
COPD-HF	ENSG00000124469	19	13	6	5E+05	0.000996	CEACAM8	0.0800152486956522	1
COPD-HF	ENSG00000124688	6	13	4	5E+05	0.000994	MAD2L1BP	0.0800152486956522	1
COPD-HF	ENSG00000176953	16	17	5	5E+05	0.000991	NFATC2IP	0.0800152486956522	1
COPD-HF	ENSG00000137962	1	176	25	5E+05	0.000986	ARHGAP29	0.0800152486956522	1
COPD-HF	ENSG00000173868	17	16	5	5E+05	0.00098	PHOSPHO1	0.0800152486956522	1
COPD-HF	ENSG00000109118	17	35	7	5E+05	0.000973	PHF12	0.0800152486956522	1
COPD-HF	ENSG00000082258	2	75	7	5E+05	0.000942	CCNT2	0.0779038094618834	1
COPD-HF	ENSG00000162374	1	172	27	5E+05	0.000929	ELAVL4	0.0771188561711712	1
COPD-HF	ENSG00000204882	8	39	7	5E+05	0.000909	GPR20	0.07584720760181	1
COPD-HF	ENSG00000198892	1	7	3	5E+05	0.000896	SHISA4	0.0750616895909091	1
COPD-HF	ENSG00000138600	15	191	15	5E+05	0.000891	SPPL2A	0.0749987426940639	1
COPD-HF	ENSG00000164116	4	176	26	5E+05	0.000832	GUCY1A3	0.0703870023853211	1
COPD-HF	ENSG00000149782	11	25	8	5E+05	0.000832	PLCB3	0.0703870023853211	1
COPD-HF	ENSG00000217075	2	47	8	5E+05	0.000832	AC007401.2	0.0703870023853211	1
COPD-HF	ENSG00000119669	14	4	2	5E+05	0.00082	IRF2BPL	0.0703274677674419	1
COPD-HF	ENSG00000189377	19	14	2	5E+05	0.000805	CXCL17	0.0693528704672897	1
COPD-HF	ENSG00000197256	19	111	12	5E+05	0.000796	KANK2	0.0689074002347418	1
COPD-HF	ENSG00000169900	16	1	1	5E+05	0.00079	PYDC1	0.0686490133018868	1
COPD-HF	ENSG00000129951	19	33	7	5E+05	0.000786	LPPR3	0.0686490133018868	1
COPD-HF	ENSG00000164330	5	678	51	5E+05	0.000784	EBF1	0.0686490133018868	1
COPD-HF	ENSG00000158186	3	122	10	5E+05	0.000738	MRAS	0.0650570244976077	1
COPD-HF	ENSG00000106536	7	1331	53	5E+05	0.000731	POU6F2	0.0647981984134616	1
COPD-HF	ENSG00000111605	12	54	9	5E+05	0.000715	CPSF6	0.0636383741545894	1
COPD-HF	ENSG00000144730	3	190	20	5E+05	0.00071	IL17RD	0.063505264223301	1
COPD-HF	ENSG00000167394	16	14	2	5E+05	0.000705	ZNF668	0.0633816457073171	1
COPD-HF	ENSG00000189308	4	191	9	5E+05	0.000704	LIN54	0.0633816457073171	1
COPD-HF	ENSG00000103496	16	17	3	5E+05	0.000696	STX4	0.0631543636945813	1

COPD-HF	ENSG0000079387	12	155	15	5E+05	0.00069	SENP1	0.0629240568316832	1
COPD-HF	ENSG00000132603	16	14	5	5E+05	0.000685	NIP7	0.0628391057711443	1
COPD-HF	ENSG00000181163	5	56	6	5E+05	0.000666	NPM1	0.061423364	1
COPD-HF	ENSG00000197114	20	70	7	5E+05	0.000662	ZGPAT	0.0613077874874372	1
COPD-HF	ENSG00000033867	3	353	21	5E+05	0.000655	SLC4A7	0.0610150919191919	1
COPD-HF	ENSG00000130940	1	377	67	5E+05	0.000651	CASZ1	0.0608672630964467	1
COPD-HF	ENSG00000259900	16	35	8	5E+05	0.000642	RP11-343C2.7	0.0604160384183674	1
COPD-HF	ENSG00000178719	8	3	1	5E+05	0.000632	GRINA	0.059729536974359	1
COPD-HF	ENSG00000115525	2	143	13	5E+05	0.000627	ST3GAL5	0.0595651943298969	1
COPD-HF	ENSG00000273154	20	75	7	5E+05	0.000626	RP4-583P15.10	0.0595651943298969	1
COPD-HF	ENSG00000159788	4	285	30	5E+05	0.000612	RGS12	0.0587542274479167	1
COPD-HF	ENSG00000153086	2	102	6	5E+05	0.000611	ACMSD	0.0587542274479167	1
COPD-HF	ENSG00000130584	20	360	19	5E+05	0.00061	ZBTB46	0.0587542274479167	1
COPD-HF	ENSG00000129968	19	16	3	5E+05	0.000609	ABHD17A	0.0587542274479167	1
COPD-HF	ENSG00000243509	20	10	2	5E+05	0.000601	TNFRSF6B	0.0587542274479167	1
COPD-HF	ENSG00000197272	16	22	5	5E+05	0.000574	IL27	0.0565824099465241	1
COPD-HF	ENSG00000138663	4	47	9	5E+05	0.00057	COPS4	0.0564624592473118	1
COPD-HF	ENSG00000176974	17	81	9	5E+05	0.000561	SHMT1	0.0559366821621622	1
COPD-HF	ENSG00000109758	4	34	11	5E+05	0.000554	HGFAC	0.0554723102717391	1
COPD-HF	ENSG00000260371	16	38	10	5E+05	0.000549	RP11-343C2.5	0.0553413052459016	1
COPD-HF	ENSG00000163660	3	24	4	5E+05	0.000536	CCNL1	0.0542932874175824	1
COPD-HF	ENSG00000164077	3	21	5	5E+05	0.000535	MON1A	0.0542932874175824	1
COPD-HF	ENSG00000128585	7	880	83	5E+05	0.000528	MKLN1	0.0541182639444444	1
COPD-HF	ENSG00000177374	17	9	4	5E+05	0.000499	HIC1	0.0514074744692738	1
COPD-HF	ENSG00000188981	4	90	7	5E+05	0.000489	MSANTD1	0.0506037628089888	1
COPD-HF	ENSG00000141076	16	160	20	5E+05	0.000481	CIRH1A	0.0501263044632768	1
COPD-HF	ENSG00000148842	10	368	18	5E+05	0.000461	CNNM2	0.0483279745454546	1
COPD-HF	ENSG00000187492	3	14	5	5E+05	0.000453	CDHR4	0.047748843	1
COPD-HF	ENSG00000102882	16	11	4	5E+05	0.000444	MAPK3	0.0469946156896552	1
COPD-HF	ENSG00000136709	2	228	25	5E+05	0.000427	WDR33	0.0454900868208093	1
COPD-HF	ENSG00000157388	3	689	67	5E+05	0.000417	CACNA1D	0.044695738255814	1
COPD-HF	ENSG00000115526	2	41	6	5E+05	0.000414	CHST10	0.0446003143274854	1
COPD-HF	ENSG00000136378	15	76	13	5E+05	0.000412	ADAMTS7	0.0446003143274854	1

COPD-HF	ENSG00000138785	4	427	13	5E+05	0.000403	INTS12	0.0440090601775148	1
COPD-HF	ENSG00000101336	20	74	9	5E+05	0.000403	HCK	0.0440090601775148	1
COPD-HF	ENSG00000258366	20	159	18	5E+05	0.000398	RTEL1	0.0439268323952096	1
COPD-HF	ENSG00000164078	3	20	4	5E+05	0.000394	MST1R	0.0437173018072289	1
COPD-HF	ENSG00000061455	5	344	25	5E+05	0.000391	PRDM6	0.0437074358787879	1
COPD-HF	ENSG00000168152	4	33	4	5E+05	0.000381	THAP9	0.0428308738414634	1
COPD-HF	ENSG00000138780	4	300	11	5E+05	0.000381	GSTCD	0.0428308738414634	1
COPD-HF	ENSG00000178201	19	2	1	5E+05	0.00038	VN1R1	0.0428308738414634	1
COPD-HF	ENSG00000273047	20	5	2	5E+05	0.000372	RP4-583P15.10	0.0425859545341615	1
COPD-HF	ENSG00000167397	16	7	3	5E+05	0.000355	VKORC1	0.040916652	1
COPD-HF	ENSG00000153975	6	68	9	5E+05	0.000354	ZUFSP	0.040916652	1
COPD-HF	ENSG00000103507	16	6	2	5E+05	0.000327	BCKDK	0.0381493101265823	1
COPD-HF	ENSG00000066056	1	26	3	5E+05	0.000324	TIE1	0.0380189430573248	1
COPD-HF	ENSG00000111832	6	57	9	5E+05	0.00032	RWDD1	0.0377663811538462	1
COPD-HF	ENSG00000026036	20	164	19	5E+05	0.000318	RTEL1-TNFR	0.0377663811538462	1
COPD-HF	ENSG00000197479	5	6	2	5E+05	0.000309	PCDHB11	0.0369402107792208	1
COPD-HF	ENSG00000165995	10	1367	101	5E+05	0.000308	CACNB2	0.0369402107792208	1
COPD-HF	ENSG00000168769	4	233	28	5E+05	0.0003	TET2	0.0364294289473684	1
COPD-HF	ENSG00000079385	19	41	6	5E+05	0.0003	CEACAM1	0.0364294289473684	1
COPD-HF	ENSG00000177302	17	77	8	5E+05	0.000299	TOP3A	0.0364294289473684	1
COPD-HF	ENSG00000196502	16	47	5	5E+05	0.000296	SULT1A1	0.0364294289473684	1
COPD-HF	ENSG00000153815	16	1031	94	5E+05	0.000292	CMIP	0.0363055371621622	1
COPD-HF	ENSG00000181873	1	16	4	5E+05	0.000291	IBA57	0.0363055371621622	1
COPD-HF	ENSG00000076685	10	218	16	5E+05	0.000282	NT5C2	0.0355504393150685	1
COPD-HF	ENSG00000143761	1	25	6	5E+05	0.000279	ARF1	0.0354828893793103	1
COPD-HF	ENSG00000203896	20	8	2	5E+05	0.000272	LIME1	0.0348191689583333	1
COPD-HF	ENSG00000170606	5	92	6	5E+05	0.000272	HSPA4	0.0348191689583333	1
COPD-HF	ENSG00000175029	10	639	60	5E+05	0.000271	CTBP2	0.0348191689583333	1
COPD-HF	ENSG00000176994	17	33	5	5E+05	0.000271	SMCR8	0.0348191689583333	1
COPD-HF	ENSG00000272617	16	12	3	5E+05	0.000262	RP11-343C2.10	0.0344894596428571	1
COPD-HF	ENSG00000120324	5	4	2	5E+05	0.000259	PCDHB10	0.0343888169784173	1
COPD-HF	ENSG00000180592	10	7	2	5E+05	0.000257	SKIDA1	0.0343414804347826	1
COPD-HF	ENSG00000169783	15	576	34	5E+05	0.000253	LINGO1	0.0340714495620438	1

COPD-HF	ENSG00000198700	1	82	13	5E+05	0.000253	IPO9	0.0340714495620438	1
COPD-HF	ENSG00000111249	12	334	27	5E+05	0.000248	CUX2	0.0338402571851852	1
COPD-HF	ENSG00000154319	8	253	20	5E+05	0.000246	FAM167A	0.0338402571851852	1
COPD-HF	ENSG00000186998	22	171	27	5E+05	0.000234	EMID1	0.0323783267669173	1
COPD-HF	ENSG00000255524	16	3	2	5E+05	0.000233	NPIP8	0.0323783267669173	1
COPD-HF	ENSG00000178149	3	4	2	5E+05	0.000214	DALRD3	0.0301428798473282	1
COPD-HF	ENSG00000101246	20	14	2	5E+05	0.000214	ARFRP1	0.0301428798473282	1
COPD-HF	ENSG00000166165	14	5	2	5E+05	0.000211	CKB	0.0301428798473282	1
COPD-HF	ENSG00000117971	15	153	20	5E+05	0.000206	CHRN4	0.02972609265625	1
COPD-HF	ENSG00000198198	1	83	7	5E+05	0.000198	SZT2	0.0287801540944882	1
COPD-HF	ENSG00000156931	3	413	22	5E+05	0.000197	VPS8	0.0287801540944882	1
COPD-HF	ENSG00000177710	8	8	2	5E+05	0.000189	SLC35G5	0.027853	1
COPD-HF	ENSG00000205089	5	6	2	5E+05	0.000185	CCNI2	0.0275365235483871	1
COPD-HF	ENSG00000145020	3	8	2	5E+05	0.00017	AMT	0.0254824985365854	1
COPD-HF	ENSG00000187555	16	178	17	5E+05	0.000166	USP7	0.0250839890163934	1
COPD-HF	ENSG00000103510	16	22	4	5E+05	0.000147	KAT8	0.0223785760330578	1
COPD-HF	ENSG00000117400	1	13	3	5E+05	0.000146	MPL	0.022354621	1
COPD-HF	ENSG00000178952	16	7	2	5E+05	0.000143	TUFM	0.0221196	1
COPD-HF	ENSG00000183763	3	35	5	5E+05	0.000143	TRAIP	0.0221196	1
COPD-HF	ENSG00000143816	1	79	9	5E+05	0.000137	WNT9A	0.0216091476923077	1
COPD-HF	ENSG00000196296	16	24	4	5E+05	0.000137	ATP2A1	0.0216091476923077	1
COPD-HF	ENSG00000178188	16	41	3	5E+05	0.000125	SH2B1	0.0201128073043478	1
COPD-HF	ENSG00000132535	17	36	7	5E+05	0.000123	DLG4	0.0198235596491228	1
COPD-HF	ENSG00000213658	16	6	3	5E+05	0.000118	LAT	0.0191915261061947	1
COPD-HF	ENSG00000168488	16	26	2	5E+05	0.000115	ATXN2L	0.0189777609821429	1
COPD-HF	ENSG00000108342	17	11	3	5E+05	0.000114	CSF3	0.0189777609821429	1
COPD-HF	ENSG00000104643	8	102	8	5E+05	0.000113	MTMR9	0.0189022036363636	1
COPD-HF	ENSG00000184730	16	11	3	5E+05	0.000112	APOBR	0.0188946705504587	1
COPD-HF	ENSG00000170500	2	160	9	5E+05	0.000109	LONRF2	0.0185524731481481	1
COPD-HF	ENSG00000236699	4	374	31	5E+05	0.000108	ARHGEF38	0.0185524731481481	1
COPD-HF	ENSG00000168807	16	220	21	5E+05	0.000106	SNTB2	0.0184747350943396	1
COPD-HF	ENSG00000125347	5	36	2	5E+05	0.000105	IRF1	0.0184681104761905	1
COPD-HF	ENSG00000177548	16	30	7	5E+05	0.000101	RABEP2	0.0179650853846154	1

COPD-HF	ENSG00000176476	16	77	9	5E+05	9.6188e-05	CCDC101	0.0172139165436893	1
COPD-HF	ENSG00000172037	3	10	6	5E+05	8.5042e-05	LAMB2	0.0153684233921569	1
COPD-HF	ENSG00000164076	3	15	3	5E+05	8.1148e-05	CAMKV	0.0148099117227723	1
COPD-HF	ENSG00000143774	1	12	4	5E+05	8.0757e-05	GUK1	0.0148099117227723	1
COPD-HF	ENSG00000173145	10	92	9	5E+05	8.0324e-05	NOC3L	0.0148099117227723	1
COPD-HF	ENSG00000157884	2	128	16	5E+05	7.9515e-05	CIB4	0.0148099117227723	1
COPD-HF	ENSG00000198835	1	12	4	5E+05	7.1916e-05	GJC2	0.0136662642061856	1
COPD-HF	ENSG00000170291	17	12	3	5E+05	7.0872e-05	ELP5	0.013608162	1
COPD-HF	ENSG00000067560	3	79	8	5E+05	6.992e-05	RHOA	0.013566688	1
COPD-HF	ENSG00000164038	4	72	16	5E+05	6.7226e-05	SLC9B2	0.0131827325319149	1
COPD-HF	ENSG00000176095	3	82	8	5E+05	6.693e-05	IP6K1	0.0131827325319149	1
COPD-HF	ENSG00000138640	4	1106	43	5E+05	6.3502e-05	FAM13A	0.0127231778913044	1
COPD-HF	ENSG00000117597	1	97	10	5E+05	6.3029e-05	DIEXF	0.0127231778913044	1
COPD-HF	ENSG00000164068	3	44	7	5E+05	6.2126e-05	RNF123	0.0127231778913044	1
COPD-HF	ENSG00000175826	17	5	2	5E+05	5.8871e-05	CTDNEP1	0.0121929117191011	1
COPD-HF	ENSG00000132612	16	34	7	5E+05	5.4975e-05	VPS4A	0.0115153883522727	1
COPD-HF	ENSG00000169682	16	12	4	5E+05	4.8071e-05	SPNS1	0.0101849740574713	0.886092743
COPD-HF	ENSG00000262302	17	21	3	5E+05	4.5951e-05	RP1-4G17.5	0.00984900910465116	0.847014783
COPD-HF	ENSG00000109332	4	145	7	5E+05	4.5834e-05	UBE2D3	0.00984900910465116	0.844858122
COPD-HF	ENSG00000188603	16	28	5	5E+05	4.4883e-05	CLN3	0.00984900910465116	0.827328339
COPD-HF	ENSG00000197165	16	18	4	5E+05	4.3956e-05	SULT1A2	0.00976193913253012	0.810240948
COPD-HF	ENSG00000181885	17	6	3	5E+05	4.3049e-05	CLDN7	0.00967710020731707	0.793522217
COPD-HF	ENSG00000164270	5	467	33	5E+05	3.8994e-05	HTR4	0.00887378274074074	0.718776402
COPD-HF	ENSG00000101204	20	173	31	5E+05	3.87e-05	CHRNA4	0.00887378274074074	0.7133571
COPD-HF	ENSG00000163798	2	23	8	5E+05	3.739e-05	SLC4A1AP	0.00872417556962025	0.68920987
COPD-HF	ENSG00000167085	17	24	8	5E+05	3.5687e-05	PHB	0.00843357014102564	0.657818471
COPD-HF	ENSG00000261832	16	23	4	5E+05	3.5637e-05	CLN3	0.00843357014102564	0.656896821
COPD-HF	ENSG00000145354	4	33	4	5E+05	3.1853e-05	CISD2	0.00772560985526316	0.587146349
COPD-HF	ENSG00000173402	3	97	10	5E+05	3.0442e-05	DAG1	0.00748183181333333	0.561137386
COPD-HF	ENSG00000166822	16	80	10	5E+05	2.5783e-05	TMEM170A	0.00642240593243243	0.475258039
COPD-HF	ENSG00000198373	16	422	24	5E+05	2.4949e-05	WWP2	0.00629979338356165	0.459884917
COPD-HF	ENSG00000132604	16	82	14	5E+05	2.4517e-05	TERF2	0.00627669251388889	0.451921861
COPD-HF	ENSG00000080644	15	34	4	5E+05	2.3454e-05	CHRNA3	0.00608912087323944	0.432327582

COPD-HF	ENSG00000197183	20	229	22	5E+05	2.0296e-05	C20orf112	0.00534451668571429	0.374116168
COPD-HF	ENSG00000172818	11	23	6	5E+05	2.0186e-05	OVOL1	0.00534451668571429	0.372088538
COPD-HF	ENSG00000164037	4	229	8	5E+05	2.0067e-05	SLC9B1	0.00534451668571429	0.369895011
COPD-HF	ENSG00000109736	4	7	3	5E+05	1.9112e-05	MFS10	0.00525808202985075	0.352291496
COPD-HF	ENSG00000169684	15	34	4	5E+05	1.8066e-05	CHRNA5	0.00504561481818182	0.333010578
COPD-HF	ENSG00000145029	3	7	4	5E+05	1.7996e-05	NICN1	0.00504561481818182	0.331720268
COPD-HF	ENSG00000145022	3	6	2	5E+05	1.7376e-05	TCTA	0.00500456	0.320291808
COPD-HF	ENSG00000164062	3	7	2	5E+05	1.6281e-05	APEH	0.00476361385714286	0.300107673
COPD-HF	ENSG00000101346	20	33	5	5E+05	1.4273e-05	POFUT1	0.00424345498387097	0.263094209
COPD-HF	ENSG00000205884	8	4	2	5E+05	1.1426e-05	DEFB136	0.00345271242622951	0.210615458
COPD-HF	ENSG00000205334	2	13	4	5E+05	1.0814e-05	AC074091.13	0.00332224103333333	0.199334462
COPD-HF	ENSG00000040633	17	4	2	5E+05	1.0587e-05	PHF23	0.00330763001694915	0.195150171
COPD-HF	ENSG00000260914	16	33	5	5E+05	8.8901e-06	RP11-343C2.10	0.00282536574655172	0.163871213
COPD-HF	ENSG00000255098	8	3	2	5E+05	7.9969e-06	RP11-481A20	0.00258608522280702	0.147406858
COPD-HF	ENSG00000104626	8	400	25	5E+05	7.6454e-06	ERII	0.002516565	0.140927658
COPD-HF	ENSG00000136770	10	331	16	5E+05	6.0281e-06	DNAJC1	0.00202029031454545	0.111115967
COPD-HF	ENSG00000204682	10	7	3	5E+05	6.0167e-06	CASC10	0.00202029031454545	0.110905831
COPD-HF	ENSG00000261717	16	184	11	5E+05	5.8507e-06	RP11-77K12.10	0.00202029031454545	0.107845953
COPD-HF	ENSG00000138193	10	552	43	5E+05	5.5829e-06	PLCE1	0.00197903068653846	0.102909596
COPD-HF	ENSG00000181856	17	6	2	5E+05	5.5329e-06	SLC2A4	0.00197903068653846	0.101987946
COPD-HF	ENSG00000175206	1	11	4	5E+05	4.89e-06	NPPA	0.001802747	0.09013737
COPD-HF	ENSG00000136574	8	241	34	5E+05	4.857e-06	GATA4	0.001802747	0.089529081
COPD-HF	ENSG00000126003	20	10	2	5E+05	4.6185e-06	PLAGL2	0.00177360021875	0.085132811
COPD-HF	ENSG00000233276	3	2	1	5E+05	4.5515e-06	GPX1	0.00177360021875	0.0838978
COPD-HF	ENSG00000142599	1	598	19	5E+05	4.4095e-06	RERE	0.00176696333695652	0.081280314
COPD-HF	ENSG00000153774	16	451	15	5E+05	3.3769e-06	CFDP1	0.00138325328222222	0.062246398
COPD-HF	ENSG00000164061	3	148	13	5E+05	3.1492e-06	BSN	0.00131930008181818	0.058049204
COPD-HF	ENSG00000075413	14	254	9	5E+05	2.6178e-06	MARK3	0.00112218389302326	0.048253907
COPD-HF	ENSG00000173273	8	726	17	5E+05	2.1404e-06	TNKS	0.000939380790476191	0.039453993
COPD-HF	ENSG00000004975	17	11	3	5E+05	2.093e-06	DVL2	0.000939380790476191	0.038580269
COPD-HF	ENSG00000087269	4	53	8	5E+05	1.9032e-06	NOP14	0.000877042	0.035081686
COPD-HF	ENSG00000215346	8	11	3	5E+05	1.8319e-06	AF131215.5	0.000865831094871795	0.033767413
COPD-HF	ENSG00000154342	1	87	10	5E+05	1.8181e-06	WNT3A	0.000865831094871795	0.033513037

COPD-HF	ENSG00000205882	8	14	4	5E+05	1.7815e-06	DEFB134	0.000865831094871795	0.03283839
COPD-HF	ENSG00000171303	2	74	11	5E+05	1.3834e-06	KCNK3	0.000708339227777778	0.025500212
COPD-HF	ENSG00000166166	14	18	3	5E+05	1.3176e-06	TRMT61A	0.000693923451428571	0.024287321
COPD-HF	ENSG00000173531	3	6	3	5E+05	1.3125e-06	MST1	0.000693923451428571	0.024193313
COPD-HF	ENSG00000125388	4	224	17	5E+05	1.2064e-06	GRK4	0.000673865793939394	0.022237571
COPD-HF	ENSG00000136573	8	241	23	5E+05	8.1673e-07	BLK	0.0004704620028125	0.015054784
COPD-HF	ENSG00000088808	14	226	11	5E+05	7.7083e-07	PPP1R13B	0.000458345464193548	0.014208709
COPD-HF	ENSG00000254093	8	404	19	5E+05	5.858e-07	PINX1	0.000359935046666667	0.010798051
COPD-HF	ENSG00000196782	4	985	104	5E+05	5.507e-07	MAML3	0.000350036313793103	0.010151053
COPD-HF	ENSG00000136379	15	224	25	5E+05	5.2782e-07	ABHD17C	0.000347475216428571	0.009729306
COPD-HF	ENSG00000147324	8	431	27	5E+05	4.6574e-07	MFHAS1	0.000317962422962963	0.008584985
COPD-HF	ENSG00000175806	8	1486	61	5E+05	4.2683e-07	MSRA	0.000302606053461535	0.007867757
COPD-HF	ENSG00000262039	17	253	36	5E+05	3.8572e-07	RP11-81K2.1	0.0002843990704	0.007109977
COPD-HF	ENSG00000256500	14	260	15	5E+05	2.7563e-07	RP11-73M18	0.000211695324583333	0.005080688
COPD-HF	ENSG00000087274	4	124	15	5E+05	1.9819e-07	ADD1	0.000158836359565217	0.003653236
COPD-HF	ENSG00000126214	14	297	16	5E+05	1.7059e-07	KLC1	0.000142931157727273	0.003144485
COPD-HF	ENSG00000183638	8	304	38	5E+05	1.4333e-07	RP1L1	0.000125809613809524	0.002642002
COPD-HF	ENSG00000171056	8	559	19	5E+05	1.2864e-07	SOX7	0.000118561	0.002371221
COPD-HF	ENSG00000134245	1	147	28	5E+05	1.0906e-07	WNT2B	0.000105805	0.002010303
COPD-HF	ENSG00000177000	1	78	11	5E+05	1.0144e-07	MTHFR	0.000103880195555556	0.001869844
COPD-HF	ENSG00000258724	8	553	19	5E+05	9.2425e-08	SOX7	0.000100215883823525	0.00170367
COPD-HF	ENSG00000078403	10	154	23	5E+05	8.8952e-08	MLLT10	0.000100215883823525	0.001639652
COPD-HF	ENSG00000072682	5	235	21	5E+05	3.222e-08	P4HA2	3.9594084e-05	0.000593911
COPD-HF	ENSG00000011021	1	184	14	5E+05	3.1641e-08	CLCN6	3.9594084e-05	0.000583239
COPD-HF	ENSG00000131435	5	41	7	5E+05	2.8037e-08	PDLIM4	3.9594084e-05	0.000516806
COPD-HF	ENSG00000100711	14	40	9	5E+05	2.6904e-08	ZFYVE21	3.9594084e-05	0.000495921
COPD-HF	ENSG00000184608	8	280	23	5E+05	6.2746e-09	C8orf12	1.05145183454545e-05	0.0001156597018
COPD-HF	ENSG00000197536	5	179	17	5E+05	3.386e-09	C5orf56	6.2414138e-06	6.2414138e-05
COPD-HF	ENSG00000198740	17	141	12	5E+05	3.2437e-09	ZNF652	6.2414138e-06	5.97911221e-05
COPD-HF	ENSG00000224997	14	1	1	5E+05	2.5183e-09	AL049840.1	5.8024779875e-06	4.64198239e-05
COPD-HF	ENSG00000197208	5	117	10	5E+05	2.3995e-09	SLC22A4	5.8024779875e-06	4.42299835e-05
COPD-HF	ENSG00000256053	14	94	11	5E+05	2.3609e-09	APOPT1	5.8024779875e-06	4.35184697e-05
COPD-HF	ENSG00000166170	14	9	2	5E+05	1.445e-09	BAG5	5.327137e-06	2.6635685e-05

COPD-HF	ENSG00000197375	5	82	8	5E+05	9.5719e-10	SLC22A5	4.4109708175e-06	1.764388327e-05	
COPD-HF	ENSG00000171044	8	969	32	5E+05	5.0901e-10	XKR6	3.12752711e-06	9.38258133e-06	
COPD-HF	ENSG00000126215	14	27	6	5E+05	2.5895e-10	XRCC3	2.386612675e-06	4.77322535e-06	
COPD-HF	ENSG00000127663	19	518	32	5E+05	1.6228e-10	KDM4B	2.386612675e-06	2.99130724e-06	
COPD-CHD	ENSG00000132703	1	2	1	4E+05	0.049906	APCS	0.713698256767208		1
COPD-CHD	ENSG00000101336	20	80	9	4E+05	0.049693	HCK	0.711202215944272		1
COPD-CHD	ENSG00000185332	17	81	9	4E+05	0.049599	TMEM105	0.710406745933385		1
COPD-CHD	ENSG00000253958	8	17	2	4E+05	0.049598	CLDN23	0.710406745933385		1
COPD-CHD	ENSG00000149527	1	242	39	4E+05	0.049525	PLCH2	0.710406745933385		1
COPD-CHD	ENSG00000130517	19	95	17	4E+05	0.049523	PGPEP1	0.710406745933385		1
COPD-CHD	ENSG00000131408	19	102	10	4E+05	0.04951	NR1H2	0.710406745933385		1
COPD-CHD	ENSG00000169398	8	525	11	4E+05	0.049469	PTK2	0.710406745933385		1
COPD-CHD	ENSG00000083635	13	68	13	4E+05	0.049463	NUFIP1	0.710406745933385		1
COPD-CHD	ENSG00000149428	11	21	6	4E+05	0.049455	HYOU1	0.710406745933385		1
COPD-CHD	ENSG00000169607	2	47	6	4E+05	0.049449	CKAP2L	0.710406745933385		1
COPD-CHD	ENSG00000113108	5	37	10	4E+05	0.049359	APBB3	0.710406745933385		1
COPD-CHD	ENSG00000108963	17	37	12	4E+05	0.049304	DPH1	0.710406745933385		1
COPD-CHD	ENSG00000164532	7	120	5	4E+05	0.049297	TBX20	0.710406745933385		1
COPD-CHD	ENSG00000120688	13	18	8	4E+05	0.049277	WBP4	0.710406745933385		1
COPD-CHD	ENSG00000147432	8	192	6	4E+05	0.04926	CHRN3	0.710406745933385		1
COPD-CHD	ENSG00000140263	15	67	11	4E+05	0.049156	SORD	0.710406745933385		1
COPD-CHD	ENSG00000108061	10	183	21	4E+05	0.049049	SHOC2	0.710406745933385		1
COPD-CHD	ENSG0000013288	4	115	16	4E+05	0.049035	MAN2B2	0.710406745933385		1
COPD-CHD	ENSG00000154016	17	9	4	4E+05	0.048982	GRAP	0.710406745933385		1
COPD-CHD	ENSG00000250091	12	13	2	4E+05	0.048904	DNAH10OS	0.710356531029065		1
COPD-CHD	ENSG00000197746	10	122	17	4E+05	0.048883	PSAP	0.710356531029065		1
COPD-CHD	ENSG00000185090	1	5	2	4E+05	0.048882	MANEAL	0.710356531029065		1
COPD-CHD	ENSG00000188771	11	19	3	4E+05	0.048821	PLET1	0.710356531029065		1
COPD-CHD	ENSG00000234857	11	61	7	4E+05	0.04874	HNRNPUL2-10	0.710205941686367		1
COPD-CHD	ENSG00000254462	11	99	10	4E+05	0.048715	TMX2-CTNN	0.710205941686367		1
COPD-CHD	ENSG00000163795	2	1	1	4E+05	0.048664	ZNF513	0.710205941686367		1
COPD-CHD	ENSG00000160145	3	1860	82	4E+05	0.04861	KALRN	0.709990134281201		1
COPD-CHD	ENSG00000196588	22	356	14	4E+05	0.048548	MKL1	0.709645113043478		1

COPD-CHD	ENSG00000100842	14	18	4	4E+05	0.048379	EFS	0.707734247626582	1
COPD-CHD	ENSG00000119321	9	221	20	4E+05	0.048343	FKBP15	0.707734247626582	1
COPD-CHD	ENSG00000124766	6	3	1	4E+05	0.048283	SOX4	0.707449249603803	1
COPD-CHD	ENSG00000164109	4	29	5	4E+05	0.048191	MAD2L1	0.706661206185567	1
COPD-CHD	ENSG00000124593	6	29	7	4E+05	0.04806	PRICKLE4	0.705299571428571	1
COPD-CHD	ENSG00000198270	12	127	6	4E+05	0.048051	TMEM116	0.705299571428571	1
COPD-CHD	ENSG00000116985	1	118	17	4E+05	0.047994	BMP8B	0.705299571428571	1
COPD-CHD	ENSG00000141026	17	19	4	4E+05	0.047966	MED9	0.705299571428571	1
COPD-CHD	ENSG00000151611	4	84	15	4E+05	0.047949	MMAA	0.705299571428571	1
COPD-CHD	ENSG00000139567	12	43	10	4E+05	0.047946	ACVRL1	0.705299571428571	1
COPD-CHD	ENSG00000110944	12	1	1	4E+05	0.047879	IL23A	0.705299571428571	1
COPD-CHD	ENSG00000227011	17	3	2	4E+05	0.047835	C17orf112	0.705299571428571	1
COPD-CHD	ENSG00000123454	9	129	25	4E+05	0.04776	DBH	0.705299571428571	1
COPD-CHD	ENSG00000164080	3	99	19	4E+05	0.047749	RAD54L2	0.705299571428571	1
COPD-CHD	ENSG0000012223	3	166	20	4E+05	0.047718	LTF	0.705299571428571	1
COPD-CHD	ENSG00000144642	3	2796	148	4E+05	0.047678	RBMS3	0.705299571428571	1
COPD-CHD	ENSG00000186074	17	29	7	4E+05	0.047623	CD300LF	0.705299571428571	1
COPD-CHD	ENSG00000214113	6	509	30	4E+05	0.047604	LYRM4	0.705299571428571	1
COPD-CHD	ENSG00000086619	1	363	12	4E+05	0.047544	ERO1LB	0.705299571428571	1
COPD-CHD	ENSG00000126091	1	467	23	4E+05	0.04751	ST3GAL3	0.705299571428571	1
COPD-CHD	ENSG00000188163	9	7	4	4E+05	0.047501	FAM166A	0.705299571428571	1
COPD-CHD	ENSG00000092148	14	126	12	4E+05	0.047486	HECTD1	0.705299571428571	1
COPD-CHD	ENSG00000137198	6	117	18	4E+05	0.047484	GMPR	0.705299571428571	1
COPD-CHD	ENSG00000135164	7	138	10	4E+05	0.047481	DMTF1	0.705299571428571	1
COPD-CHD	ENSG00000127022	5	108	11	4E+05	0.047438	CANX	0.705299571428571	1
COPD-CHD	ENSG00000173548	15	18	4	4E+05	0.047392	SNX33	0.705299571428571	1
COPD-CHD	ENSG00000168765	1	21	7	4E+05	0.047328	GSTM4	0.705299571428571	1
COPD-CHD	ENSG00000154359	8	95	10	4E+05	0.047299	LONRF1	0.705299571428571	1
COPD-CHD	ENSG00000214686	3	1	1	4E+05	0.047282	IQCF6	0.705299571428571	1
COPD-CHD	ENSG00000217075	2	50	8	4E+05	0.047247	AC007401.2	0.705299571428571	1
COPD-CHD	ENSG00000135801	1	82	10	4E+05	0.047199	TAF5L	0.705299571428571	1
COPD-CHD	ENSG00000147571	8	2	1	4E+05	0.047159	CRH	0.705299571428571	1
COPD-CHD	ENSG00000168000	11	39	6	4E+05	0.047135	BSCL2	0.705299571428571	1

COPD-CHD	ENSG0000062485	12	41	5	4E+05	0.047084	CS	0.705299571428571	1
COPD-CHD	ENSG00000244486	22	45	9	4E+05	0.047059	SCARF2	0.705299571428571	1
COPD-CHD	ENSG0000082153	2	20	5	4E+05	0.047044	BZW1	0.705299571428571	1
COPD-CHD	ENSG00000130429	7	49	7	4E+05	0.047033	ARPC1B	0.705299571428571	1
COPD-CHD	ENSG00000159176	1	94	12	4E+05	0.046978	CSRP1	0.705299571428571	1
COPD-CHD	ENSG00000179941	12	4	2	4E+05	0.046913	BBS10	0.705299571428571	1
COPD-CHD	ENSG00000173991	17	5	2	4E+05	0.046833	TCAP	0.705299571428571	1
COPD-CHD	ENSG00000162222	11	20	4	4E+05	0.046789	TTC9C	0.705299571428571	1
COPD-CHD	ENSG00000127081	9	71	9	4E+05	0.046788	ZNF484	0.705299571428571	1
COPD-CHD	ENSG00000188039	19	272	27	4E+05	0.046767	NWD1	0.705299571428571	1
COPD-CHD	ENSG00000157800	7	408	42	4E+05	0.046752	SLC37A3	0.705299571428571	1
COPD-CHD	ENSG00000074410	15	130	20	4E+05	0.046734	CA12	0.705299571428571	1
COPD-CHD	ENSG00000156265	21	297	15	4E+05	0.046714	MAP3K7CL	0.705299571428571	1
COPD-CHD	ENSG00000213424	17	15	2	4E+05	0.046712	KRT222	0.705299571428571	1
COPD-CHD	ENSG00000177710	8	11	3	4E+05	0.046457	SLC35G5	0.705299571428571	1
COPD-CHD	ENSG00000142046	19	69	9	4E+05	0.04642	TMEM91	0.705299571428571	1
COPD-CHD	ENSG00000165304	9	157	9	4E+05	0.046375	MELK	0.705299571428571	1
COPD-CHD	ENSG00000075213	7	1751	65	4E+05	0.046362	SEMA3A	0.705299571428571	1
COPD-CHD	ENSG00000173715	11	73	13	4E+05	0.046353	C11orf80	0.705299571428571	1
COPD-CHD	ENSG00000107854	10	168	14	4E+05	0.046282	TNKS2	0.705299571428571	1
COPD-CHD	ENSG00000153086	2	109	6	4E+05	0.046254	ACMSD	0.705299571428571	1
COPD-CHD	ENSG00000154319	8	266	19	4E+05	0.046253	FAM167A	0.705299571428571	1
COPD-CHD	ENSG00000134371	1	186	14	4E+05	0.046114	CDC73	0.70528864681555	1
COPD-CHD	ENSG00000266953	19	23	7	4E+05	0.046047	RP11-618P17	0.704846918046358	1
COPD-CHD	ENSG00000131149	16	147	28	4E+05	0.046014	GSE1	0.704846918046358	1
COPD-CHD	ENSG00000120915	8	145	10	4E+05	0.045999	EPHX2	0.704846918046358	1
COPD-CHD	ENSG00000072134	17	77	8	4E+05	0.04599	EPN2	0.704846918046358	1
COPD-CHD	ENSG00000167601	19	105	17	4E+05	0.04593	AXL	0.704846918046358	1
COPD-CHD	ENSG00000168209	10	3	1	4E+05	0.045813	DDIT4	0.704179703241895	1
COPD-CHD	ENSG00000103942	15	313	25	4E+05	0.045727	HOMER2	0.703442559900166	1
COPD-CHD	ENSG00000183317	1	185	19	4E+05	0.045674	EPHA10	0.703212268109908	1
COPD-CHD	ENSG00000186635	11	268	19	4E+05	0.045602	ARAP1	0.702688818333333	1
COPD-CHD	ENSG00000226887	4	40	3	4E+05	0.045545	ERVMER34-10	0.702395825688074	1

COPD-CHD ENSG00000188573	5	10	4	4E+05	0.045521	FBLL1	0.702395825688074	1
COPD-CHD ENSG00000188396	1	2	1	4E+05	0.045449	TCTEX1D4	0.702086431913116	1
COPD-CHD ENSG00000128656	2	272	14	4E+05	0.04541	CHN1	0.702070493311037	1
COPD-CHD ENSG00000078304	14	414	38	4E+05	0.045347	PPP2R5C	0.701683160669456	1
COPD-CHD ENSG00000020633	1	124	24	4E+05	0.045321	RUNX3	0.701683160669456	1
COPD-CHD ENSG00000077312	19	31	8	4E+05	0.045301	SNRPA	0.701683160669456	1
COPD-CHD ENSG00000162367	1	33	7	4E+05	0.045128	TAL1	0.70005188590604	1
COPD-CHD ENSG00000159899	9	29	4	4E+05	0.045063	NPR2	0.699630506297229	1
COPD-CHD ENSG00000129152	11	6	3	4E+05	0.044943	MYOD1	0.698353792436975	1
COPD-CHD ENSG00000007129	19	47	6	4E+05	0.044924	CEACAM21	0.698353792436975	1
COPD-CHD ENSG00000185670	11	6	3	4E+05	0.044865	ZBTB3	0.698315416666667	1
COPD-CHD ENSG00000118246	2	61	9	4E+05	0.044852	FASTKD2	0.698315416666667	1
COPD-CHD ENSG00000138622	15	132	21	4E+05	0.044833	HCN4	0.698315416666667	1
COPD-CHD ENSG00000196323	11	95	11	4E+05	0.044754	ZBTB44	0.698315416666667	1
COPD-CHD ENSG00000181689	11	2	1	4E+05	0.044661	OR8K3	0.697488641047297	1
COPD-CHD ENSG00000186665	17	1	1	4E+05	0.044633	C17orf58	0.697488641047297	1
COPD-CHD ENSG00000113369	5	18	9	4E+05	0.044613	ARRDC3	0.697488641047297	1
COPD-CHD ENSG00000153485	14	3	2	4E+05	0.04459	TMEM251	0.697488641047297	1
COPD-CHD ENSG00000168575	8	201	27	4E+05	0.044561	SLC20A2	0.697488641047297	1
COPD-CHD ENSG00000100991	20	240	14	4E+05	0.044496	TRPC4AP	0.697488641047297	1
COPD-CHD ENSG00000100804	14	26	6	4E+05	0.044483	PSMB5	0.697488641047297	1
COPD-CHD ENSG00000146955	7	83	16	4E+05	0.044346	RAB19	0.696688093457944	1
COPD-CHD ENSG00000196796	16	6	2	4E+05	0.044247	CTB-134H23.	0.695723875	1
COPD-CHD ENSG00000229615	2	4	2	4E+05	0.044239	AC111200.1	0.695723875	1
COPD-CHD ENSG00000125398	17	8	2	4E+05	0.044102	SOX9	0.694625282793867	1
COPD-CHD ENSG00000110011	11	7	3	4E+05	0.04409	DNAJC4	0.694625282793867	1
COPD-CHD ENSG00000147457	8	68	15	4E+05	0.043973	CHMP7	0.693775377986348	1
COPD-CHD ENSG00000128335	22	80	15	4E+05	0.043968	APOL2	0.693775377986348	1
COPD-CHD ENSG00000170608	19	22	6	4E+05	0.043945	FOXA3	0.693775377986348	1
COPD-CHD ENSG00000214753	11	16	3	4E+05	0.043896	HNRNPUL2	0.693775377986348	1
COPD-CHD ENSG00000163531	1	536	47	4E+05	0.043862	NFASC	0.693775377986348	1
COPD-CHD ENSG00000181634	9	30	9	4E+05	0.043849	TNFSF15	0.693775377986348	1
COPD-CHD ENSG00000125788	20	7	3	4E+05	0.043833	DEFB126	0.693775377986348	1

COPD-CHD	ENSG00000107249	9	2193	165	4E+05	0.043734	GLIS3	0.693775377986348	1
COPD-CHD	ENSG00000196792	14	310	19	4E+05	0.04372	STRN3	0.693775377986348	1
COPD-CHD	ENSG00000091583	17	170	19	4E+05	0.043708	APOH	0.693775377986348	1
COPD-CHD	ENSG00000257594	12	13	3	4E+05	0.043691	GALNT4	0.693775377986348	1
COPD-CHD	ENSG00000259075	12	13	3	4E+05	0.043691	POC1B-GALNT4	0.693775377986348	1
COPD-CHD	ENSG00000108960	17	59	8	4E+05	0.043547	MMD	0.693775377986348	1
COPD-CHD	ENSG00000165895	11	1279	48	4E+05	0.04353	ARHGAP42	0.693775377986348	1
COPD-CHD	ENSG00000148308	9	21	5	4E+05	0.043476	GTF3C5	0.693775377986348	1
COPD-CHD	ENSG00000179148	17	81	20	4E+05	0.043399	ALOXE3	0.693596291270527	1
COPD-CHD	ENSG00000038382	5	913	47	4E+05	0.043371	TRIO	0.693596291270527	1
COPD-CHD	ENSG00000150787	11	96	3	4E+05	0.043278	PTS	0.692860171428571	1
COPD-CHD	ENSG00000269795	1	11	4	4E+05	0.043256	AC092782.1	0.692860171428571	1
COPD-CHD	ENSG00000139540	12	10	2	4E+05	0.043161	SLC39A5	0.692185647007806	1
COPD-CHD	ENSG00000175352	11	61	8	4E+05	0.043108	NRIP3	0.691935788194444	1
COPD-CHD	ENSG00000149305	11	115	16	4E+05	0.043048	HTR3B	0.691573039096438	1
COPD-CHD	ENSG00000214226	17	115	10	4E+05	0.042983	C17orf67	0.691129263478261	1
COPD-CHD	ENSG00000140382	15	113	11	4E+05	0.042959	HMG20A	0.691129263478261	1
COPD-CHD	ENSG00000169744	4	1033	104	4E+05	0.042954	LDB2	0.691129263478261	1
COPD-CHD	ENSG00000065526	1	140	16	4E+05	0.042905	SPEN	0.691129263478261	1
COPD-CHD	ENSG00000130768	1	69	9	4E+05	0.042824	SMPDL3B	0.690976076788831	1
COPD-CHD	ENSG00000101040	20	184	27	4E+05	0.042822	ZMYND8	0.690976076788831	1
COPD-CHD	ENSG00000116459	1	23	4	4E+05	0.042808	ATP5F1	0.690976076788831	1
COPD-CHD	ENSG00000139725	12	60	6	4E+05	0.042744	RHOF	0.690976076788831	1
COPD-CHD	ENSG00000160113	19	36	13	4E+05	0.042677	NR2F6	0.690976076788831	1
COPD-CHD	ENSG00000177599	19	23	5	4E+05	0.042642	ZNF491	0.690976076788831	1
COPD-CHD	ENSG00000258941	14	272	15	4E+05	0.042593	RP11-407N170	0.69086593245614	1
COPD-CHD	ENSG00000168792	17	6	4	4E+05	0.042574	ABHD15	0.69086593245614	1
COPD-CHD	ENSG00000198060	10	78	10	4E+05	0.042559	5-Mar	0.69086593245614	1
COPD-CHD	ENSG00000176020	3	3	2	4E+05	0.042508	AMIGO3	0.69086593245614	1
COPD-CHD	ENSG00000173540	3	3	2	4E+05	0.042508	GMPPB	0.69086593245614	1
COPD-CHD	ENSG00000165553	14	9	4	4E+05	0.042491	NGB	0.69086593245614	1
COPD-CHD	ENSG00000272896	9	30	5	4E+05	0.04249	RP11-216L13	0.69086593245614	1
COPD-CHD	ENSG00000261147	15	59	6	4E+05	0.042432	RP11-697E2.1	0.69086593245614	1

COPD-CHD ENSG00000136933	9	65	9	4E+05	0.042269 RABEPK	0.690455900176679	1
COPD-CHD ENSG00000157014	3	89	11	4E+05	0.042257 TATDN2	0.690455900176679	1
COPD-CHD ENSG00000185133	22	24	7	4E+05	0.04225 INPP5J	0.690455900176679	1
COPD-CHD ENSG00000128989	15	64	7	4E+05	0.042227 ARPP19	0.690455900176679	1
COPD-CHD ENSG00000147697	8	112	17	4E+05	0.042173 GSDMC	0.690455900176679	1
COPD-CHD ENSG00000172878	2	174	23	4E+05	0.042129 METAP1D	0.690455900176679	1
COPD-CHD ENSG00000188761	1	21	6	4E+05	0.042128 BCL2L15	0.690455900176679	1
COPD-CHD ENSG00000167916	17	7	2	4E+05	0.042119 KRT24	0.690455900176679	1
COPD-CHD ENSG00000213160	2	351	25	4E+05	0.042072 KLHL23	0.690455900176679	1
COPD-CHD ENSG00000228716	5	141	5	4E+05	0.042054 DHFR	0.690455900176679	1
COPD-CHD ENSG00000171136	19	9	3	4E+05	0.042036 RLN3	0.690455900176679	1
COPD-CHD ENSG00000143344	1	888	44	4E+05	0.04201 RGL1	0.690455900176679	1
COPD-CHD ENSG00000180287	1	1662	94	4E+05	0.042 PLD5	0.690455900176679	1
COPD-CHD ENSG00000158292	1	34	2	4E+05	0.041946 GPR153	0.690455900176679	1
COPD-CHD ENSG00000169570	5	275	25	4E+05	0.041873 DTWD2	0.690455900176679	1
COPD-CHD ENSG00000008196	6	66	11	4E+05	0.041824 TFAP2B	0.690455900176679	1
COPD-CHD ENSG00000181001	11	8	3	4E+05	0.041806 OR52N1	0.690455900176679	1
COPD-CHD ENSG00000165972	12	287	27	4E+05	0.041763 CCDC38	0.690455900176679	1
COPD-CHD ENSG00000268821	2	11	4	4E+05	0.04173 AC068039.1	0.690455900176679	1
COPD-CHD ENSG00000166199	11	142	15	4E+05	0.041693 ALKBH3	0.690455900176679	1
COPD-CHD ENSG00000162695	1	117	10	4E+05	0.041656 SLC30A7	0.690455900176679	1
COPD-CHD ENSG00000171735	1	2468	187	4E+05	0.041609 CAMTA1	0.690455900176679	1
COPD-CHD ENSG00000196843	2	20	6	4E+05	0.04148 ARID5A	0.690455900176679	1
COPD-CHD ENSG00000166793	11	5	3	4E+05	0.041467 YPEL4	0.690455900176679	1
COPD-CHD ENSG00000170485	2	525	55	4E+05	0.041438 NPAS2	0.690455900176679	1
COPD-CHD ENSG00000106852	9	43	12	4E+05	0.041372 LHX6	0.690455900176679	1
COPD-CHD ENSG00000129003	15	550	19	4E+05	0.041371 VPS13C	0.690455900176679	1
COPD-CHD ENSG00000157833	2	36	6	4E+05	0.041322 GAREML	0.690455900176679	1
COPD-CHD ENSG00000134375	1	38	8	4E+05	0.041314 TIMM17A	0.690455900176679	1
COPD-CHD ENSG00000149548	11	263	15	4E+05	0.041246 CCDC15	0.690455900176679	1
COPD-CHD ENSG00000131196	18	585	41	4E+05	0.041228 NFATC1	0.690455900176679	1
COPD-CHD ENSG00000123119	8	318	11	4E+05	0.041141 NECAB1	0.690455900176679	1
COPD-CHD ENSG00000116678	1	579	23	4E+05	0.041083 LEPR	0.690455900176679	1

COPD-CHD ENSG00000185069	12	27	5	4E+05	0.041064	KRT76	0.690455900176679	1
COPD-CHD ENSG00000169717	1	4	1	4E+05	0.040865	ACTRT2	0.688191908014572	1
COPD-CHD ENSG00000186106	8	122	15	4E+05	0.040812	ANKRD46	0.687925881494986	1
COPD-CHD ENSG00000050327	7	8	1	4E+05	0.04081	ARHGEF5	0.687925881494986	1
COPD-CHD ENSG00000159377	1	2	1	4E+05	0.040764	PSMB4	0.687925881494986	1
COPD-CHD ENSG00000182898	1	2	1	4E+05	0.040755	TCHHL1	0.687925881494986	1
COPD-CHD ENSG00000126368	17	15	5	4E+05	0.040737	NR1D1	0.687925881494986	1
COPD-CHD ENSG00000126882	9	25	5	4E+05	0.040707	FAM78A	0.687925881494986	1
COPD-CHD ENSG00000196981	3	6	2	4E+05	0.040682	WDR5B	0.687925881494986	1
COPD-CHD ENSG00000164163	4	14	4	4E+05	0.040674	ABCE1	0.687925881494986	1
COPD-CHD ENSG00000100523	14	165	11	4E+05	0.040656	DDHD1	0.687925881494986	1
COPD-CHD ENSG00000197183	20	242	23	4E+05	0.040558	C20orf112	0.687925881494986	1
COPD-CHD ENSG00000100426	22	111	5	4E+05	0.040504	ZBED4	0.687925881494986	1
COPD-CHD ENSG00000267318	17	46	8	4E+05	0.040489	RP11-178C3.10	0.687925881494986	1
COPD-CHD ENSG00000107438	10	180	23	4E+05	0.040485	PDLIM1	0.687925881494986	1
COPD-CHD ENSG00000013503	12	309	13	4E+05	0.040452	POLR3B	0.687925881494986	1
COPD-CHD ENSG00000101391	20	48	7	4E+05	0.040451	CDK5RAP1	0.687925881494986	1
COPD-CHD ENSG00000204941	19	16	6	4E+05	0.040406	PSG5	0.687925881494986	1
COPD-CHD ENSG00000268960	18	2	1	4E+05	0.040242	AC091150.1	0.687925881494986	1
COPD-CHD ENSG00000134201	1	155	24	4E+05	0.040179	GSTM5	0.687916563888889	1
COPD-CHD ENSG00000091129	7	1067	40	4E+05	0.040115	NRCAM	0.68745733549583	1
COPD-CHD ENSG00000173517	15	458	20	4E+05	0.040071	PEAK1	0.687340316326531	1
COPD-CHD ENSG00000100393	22	131	13	4E+05	0.03998	EP300	0.686416137418756	1
COPD-CHD ENSG00000145839	5	7	2	4E+05	0.039893	IL9	0.685558980483271	1
COPD-CHD ENSG00000109133	4	72	7	4E+05	0.03989	TMEM33	0.685558980483271	1
COPD-CHD ENSG00000196979	9	17	3	4E+05	0.039867	AL360004.1	0.685558980483271	1
COPD-CHD ENSG00000125779	20	85	10	4E+05	0.039825	PANK2	0.685558980483271	1
COPD-CHD ENSG00000139645	12	21	3	4E+05	0.039823	ANKRD52	0.685558980483271	1
COPD-CHD ENSG00000120265	6	140	4	4E+05	0.039806	PCMT1	0.685558980483271	1
COPD-CHD ENSG00000255974	19	30	7	4E+05	0.039796	CYP2A6	0.685558980483271	1
COPD-CHD ENSG00000135480	12	55	10	4E+05	0.03975	KRT7	0.685558980483271	1
COPD-CHD ENSG00000148848	10	1311	97	4E+05	0.03968	ADAM12	0.685558980483271	1
COPD-CHD ENSG00000167103	9	12	2	4E+05	0.039646	PIP5KL1	0.685558980483271	1

COPD-CHD ENSG0000087269	4	60	9	4E+05	0.039597	NOP14	0.685558980483271	1
COPD-CHD ENSG0000056558	9	79	6	4E+05	0.039499	TRAF1	0.685558980483271	1
COPD-CHD ENSG0000198561	11	76	10	4E+05	0.03949	CTNND1	0.685558980483271	1
COPD-CHD ENSG0000062716	17	200	17	4E+05	0.039373	VMP1	0.684897594543744	1
COPD-CHD ENSG0000100146	22	10	3	4E+05	0.039262	SOX10	0.683609832391714	1
COPD-CHD ENSG0000106624	7	26	7	4E+05	0.039232	AEBP1	0.683609832391714	1
COPD-CHD ENSG0000154143	11	8	5	4E+05	0.039219	PANX3	0.683609832391714	1
COPD-CHD ENSG0000146676	7	10	4	4E+05	0.039167	PURB	0.683609832391714	1
COPD-CHD ENSG0000100883	14	191	16	4E+05	0.038945	SRP54	0.680654059546314	1
COPD-CHD ENSG0000121690	11	68	7	4E+05	0.038898	DEPDC7	0.680475797540208	1
COPD-CHD ENSG0000141720	17	66	12	4E+05	0.038802	PIP4K2B	0.679439188	1
COPD-CHD ENSG0000196072	10	24	6	4E+05	0.038729	BLOC1S2	0.678803733649289	1
COPD-CHD ENSG0000176253	14	2	1	4E+05	0.038709	OR4K13	0.678803733649289	1
COPD-CHD ENSG0000213471	15	52	5	4E+05	0.038667	TTLL13	0.678803733649289	1
COPD-CHD ENSG0000065413	2	897	54	4E+05	0.038652	ANKRD44	0.678803733649289	1
COPD-CHD ENSG0000140395	15	49	10	4E+05	0.038633	WDR61	0.678803733649289	1
COPD-CHD ENSG0000174886	19	45	9	4E+05	0.038599	NDUFA11	0.678803733649289	1
COPD-CHD ENSG0000171720	5	22	7	4E+05	0.038511	HDAC3	0.678803733649289	1
COPD-CHD ENSG0000126351	17	53	12	4E+05	0.03835	THRA	0.676650620229008	1
COPD-CHD ENSG0000240303	3	142	14	4E+05	0.038317	ACAD11	0.676650620229008	1
COPD-CHD ENSG0000115211	2	11	6	4E+05	0.038295	EIF2B4	0.676650620229008	1
COPD-CHD ENSG0000205883	8	10	2	4E+05	0.038234	DEFB135	0.676540568421053	1
COPD-CHD ENSG0000164308	5	202	8	4E+05	0.038208	ERAP2	0.676540568421053	1
COPD-CHD ENSG0000019186	20	83	15	4E+05	0.038037	CYP24A1	0.67434531831256	1
COPD-CHD ENSG0000091542	17	62	8	4E+05	0.038021	ALKBH5	0.67434531831256	1
COPD-CHD ENSG0000127831	2	37	4	4E+05	0.037898	VIL1	0.673171871277618	1
COPD-CHD ENSG0000108474	17	247	14	4E+05	0.037895	PIGL	0.673171871277618	1
COPD-CHD ENSG0000120656	1	63	9	4E+05	0.037754	TAF12	0.671904922040424	1
COPD-CHD ENSG0000262246	16	160	17	4E+05	0.037749	CORO7	0.671904922040424	1
COPD-CHD ENSG0000189366	3	48	5	4E+05	0.037735	ALG1L	0.671904922040424	1
COPD-CHD ENSG0000054282	1	401	29	4E+05	0.037686	SDCCAG8	0.671904922040424	1
COPD-CHD ENSG0000091844	6	410	20	4E+05	0.037659	RGS17	0.671904922040424	1
COPD-CHD ENSG0000166704	19	89	8	4E+05	0.037621	ZNF606	0.671904922040424	1

COPD-CHD	ENSG00000174437	12	156	12	4E+05	0.037586	ATP2A2	0.671904922040424	1
COPD-CHD	ENSG00000185043	15	15	2	4E+05	0.03749	CIB1	0.671732160852713	1
COPD-CHD	ENSG00000115507	2	10	5	4E+05	0.037432	OTX1	0.671343464597478	1
COPD-CHD	ENSG00000103740	15	253	36	4E+05	0.03741	ACSBG1	0.671343464597478	1
COPD-CHD	ENSG00000065135	1	64	10	4E+05	0.037348	GNAI3	0.67113884159378	1
COPD-CHD	ENSG00000254732	11	58	9	4E+05	0.037331	RP11-691N7.1	0.67113884159378	1
COPD-CHD	ENSG00000198625	1	123	9	4E+05	0.037303	MDM4	0.67113884159378	1
COPD-CHD	ENSG00000173486	11	3	2	4E+05	0.037238	FKBP2	0.671118769980507	1
COPD-CHD	ENSG00000181291	17	127	26	4E+05	0.037145	TMEM132E	0.6700958	1
COPD-CHD	ENSG00000205882	8	14	4	4E+05	0.037121	DEFB134	0.6700958	1
COPD-CHD	ENSG00000108443	17	87	10	4E+05	0.037025	RPS6KB1	0.669236827956989	1
COPD-CHD	ENSG00000157856	2	111	16	4E+05	0.036967	DRC1	0.668842267123288	1
COPD-CHD	ENSG0000006377	7	6	2	4E+05	0.036927	DLX6	0.668772925563173	1
COPD-CHD	ENSG00000114487	3	445	14	4E+05	0.036915	MORC1	0.668772925563173	1
COPD-CHD	ENSG00000169946	8	1056	75	4E+05	0.036912	ZFPM2	0.668772925563173	1
COPD-CHD	ENSG00000138308	10	12	5	4E+05	0.03684	PLA2G12B	0.668772925563173	1
COPD-CHD	ENSG00000105507	19	107	7	4E+05	0.036831	CABP5	0.668772925563173	1
COPD-CHD	ENSG00000113318	5	636	23	4E+05	0.036765	MSH3	0.668772925563173	1
COPD-CHD	ENSG00000173338	11	2	1	4E+05	0.036755	KCNK7	0.668772925563173	1
COPD-CHD	ENSG00000181450	1	275	14	4E+05	0.0367	ZNF678	0.668772925563173	1
COPD-CHD	ENSG00000100285	22	27	6	4E+05	0.036696	NEFH	0.668772925563173	1
COPD-CHD	ENSG00000163328	2	92	9	4E+05	0.036579	GPR155	0.668361945652174	1
COPD-CHD	ENSG00000179772	20	2	1	4E+05	0.036419	FOXS1	0.666096665677547	1
COPD-CHD	ENSG00000197361	15	10	4	4E+05	0.036285	FBXL22	0.664302905940594	1
COPD-CHD	ENSG00000161850	12	46	8	4E+05	0.036244	KRT82	0.664209914767096	1
COPD-CHD	ENSG00000104140	15	1	1	4E+05	0.036215	RHOV	0.664209914767096	1
COPD-CHD	ENSG00000135913	2	201	10	4E+05	0.036155	USP37	0.663894841112215	1
COPD-CHD	ENSG00000152953	4	1975	97	4E+05	0.036134	STK32B	0.663894841112215	1
COPD-CHD	ENSG00000150722	2	328	29	4E+05	0.036125	PPP1R1C	0.663894841112215	1
COPD-CHD	ENSG00000169251	3	347	19	4E+05	0.036088	NMD3	0.663894841112215	1
COPD-CHD	ENSG00000032219	14	99	12	4E+05	0.036028	ARID4A	0.663894841112215	1
COPD-CHD	ENSG00000140090	14	733	56	4E+05	0.03601	SLC24A4	0.663894841112215	1
COPD-CHD	ENSG00000106804	9	207	19	4E+05	0.035963	C5	0.663894841112215	1

COPD-CHD ENSG00000261611	16	72	13	4E+05	0.035827	AC010547.9	0.662477057	1
COPD-CHD ENSG00000205835	3	107	19	4E+05	0.03582	GMNC	0.662477057	1
COPD-CHD ENSG00000145721	5	71	10	4E+05	0.035728	LIX1	0.661970388777555	1
COPD-CHD ENSG00000105321	19	52	5	4E+05	0.035636	CCDC9	0.660928060180542	1
COPD-CHD ENSG00000083290	17	150	7	4E+05	0.035616	ULK2	0.660928060180542	1
COPD-CHD ENSG00000112137	6	1329	61	4E+05	0.035572	PHACTR1	0.660928060180542	1
COPD-CHD ENSG00000179837	3	8	4	4E+05	0.03551	RBM15B	0.660578883299799	1
COPD-CHD ENSG00000176904	11	2	1	4E+05	0.035474	OR51HIP	0.660573750251762	1
COPD-CHD ENSG00000122779	7	190	19	4E+05	0.035422	TRIM24	0.660270364919355	1
COPD-CHD ENSG00000175003	6	101	21	4E+05	0.03534	SLC22A1	0.659406599394551	1
COPD-CHD ENSG00000146166	6	37	11	4E+05	0.035332	LGSN	0.659406599394551	1
COPD-CHD ENSG00000197309	11	6	2	4E+05	0.035249	OR10D3	0.659038684529828	1
COPD-CHD ENSG00000135100	12	84	14	4E+05	0.035233	HNF1A	0.659038684529828	1
COPD-CHD ENSG00000077380	2	110	14	4E+05	0.035159	DYNC112	0.658688013171226	1
COPD-CHD ENSG00000114395	3	5	2	4E+05	0.035066	CYB561D2	0.657611973630832	1
COPD-CHD ENSG00000182896	17	6	3	4E+05	0.034955	TMEM95	0.656195842639594	1
COPD-CHD ENSG00000198765	1	325	17	4E+05	0.03487	SYCP1	0.655265416666667	1
COPD-CHD ENSG00000115840	2	451	27	4E+05	0.034782	SLC25A12	0.654276665310275	1
COPD-CHD ENSG00000172938	11	1	1	4E+05	0.034776	MRGPRD	0.654276665310275	1
COPD-CHD ENSG00000189050	17	22	5	4E+05	0.034776	RNFT1	0.654276665310275	1
COPD-CHD ENSG00000108294	17	28	9	4E+05	0.034674	PSMB3	0.654241769387755	1
COPD-CHD ENSG00000108424	17	40	7	4E+05	0.034625	KPNB1	0.653984550561798	1
COPD-CHD ENSG00000173334	8	22	9	4E+05	0.034569	TRIB1	0.653594457055215	1
COPD-CHD ENSG00000017260	3	249	23	4E+05	0.034551	ATP2C1	0.653594457055215	1
COPD-CHD ENSG00000143442	1	72	5	4E+05	0.034536	POGZ	0.653594457055215	1
COPD-CHD ENSG00000136492	17	273	17	4E+05	0.034529	BRIP1	0.653594457055215	1
COPD-CHD ENSG00000181754	1	9	4	4E+05	0.034461	AMIGO1	0.653594457055215	1
COPD-CHD ENSG00000183914	17	250	32	4E+05	0.03443	DNAH2	0.653594457055215	1
COPD-CHD ENSG00000005249	7	267	16	4E+05	0.034341	PRKAR2B	0.653291595679012	1
COPD-CHD ENSG00000079557	4	49	7	4E+05	0.034317	AFM	0.653291595679012	1
COPD-CHD ENSG00000164221	5	52	9	4E+05	0.034249	CCDC112	0.652884803092784	1
COPD-CHD ENSG00000137821	15	218	19	4E+05	0.034239	LRRC49	0.652884803092784	1
COPD-CHD ENSG00000084754	2	98	3	4E+05	0.034227	HADHA	0.652884803092784	1

COPD-CHD	ENSG00000148604	10	59	12	4E+05	0.034185	RGR	0.652884803092784	1
COPD-CHD	ENSG00000136451	17	24	5	4E+05	0.034047	VEZF1	0.651721611801242	1
COPD-CHD	ENSG00000072364	5	181	12	4E+05	0.033996	AFF4	0.65141972642487	1
COPD-CHD	ENSG00000182858	22	76	5	4E+05	0.033983	ALG12	0.65141972642487	1
COPD-CHD	ENSG00000189129	10	76	13	4E+05	0.0339	PLAC9	0.650929283489097	1
COPD-CHD	ENSG00000196867	19	47	10	4E+05	0.033821	ZFP28	0.650087433471934	1
COPD-CHD	ENSG00000163947	3	1056	78	4E+05	0.03372	ARHGEF3	0.648820520291363	1
COPD-CHD	ENSG00000109832	11	65	11	4E+05	0.033713	DDX25	0.648820520291363	1
COPD-CHD	ENSG00000120094	17	4	1	4E+05	0.033566	HOXB1	0.647204281543274	1
COPD-CHD	ENSG00000189079	12	140	17	4E+05	0.033532	ARID2	0.647204281543274	1
COPD-CHD	ENSG00000114054	3	111	13	4E+05	0.03339	PCCB	0.645156206896552	1
COPD-CHD	ENSG00000124224	20	214	17	4E+05	0.033256	PPP4R1L	0.643239221757322	1
COPD-CHD	ENSG00000149782	11	27	9	4E+05	0.033197	PLCB3	0.642770394764398	1
COPD-CHD	ENSG00000167578	19	65	13	4E+05	0.033167	RAB4B	0.642770394764398	1
COPD-CHD	ENSG00000064102	12	76	13	4E+05	0.03308	ASUN	0.641849192025184	1
COPD-CHD	ENSG00000168116	6	6	2	4E+05	0.033014	KIAA1586	0.641241464285714	1
COPD-CHD	ENSG00000131378	3	609	56	4E+05	0.03297	RFTN1	0.641060220820189	1
COPD-CHD	ENSG00000051825	12	236	10	4E+05	0.032934	MPHOSPH9	0.641034309473684	1
COPD-CHD	ENSG00000186517	1	42	10	4E+05	0.032881	ARHGAP30	0.640677103266596	1
COPD-CHD	ENSG00000162971	2	46	9	4E+05	0.032864	TYW5	0.640677103266596	1
COPD-CHD	ENSG00000116586	1	6	3	4E+05	0.032847	LAMTOR2	0.640677103266596	1
COPD-CHD	ENSG00000144426	2	292	19	4E+05	0.032845	NBEAL1	0.640677103266596	1
COPD-CHD	ENSG00000118513	6	59	9	4E+05	0.03273	MYB	0.640434317460317	1
COPD-CHD	ENSG00000077585	1	233	17	4E+05	0.032625	GPR137B	0.639056011652543	1
COPD-CHD	ENSG00000105509	19	44	9	4E+05	0.03261	HAS1	0.639056011652543	1
COPD-CHD	ENSG00000259003	14	6	2	4E+05	0.032608	AE000662.92	0.639056011652543	1
COPD-CHD	ENSG00000184220	3	465	24	4E+05	0.032542	CMSS1	0.639056011652543	1
COPD-CHD	ENSG00000169612	15	6	2	4E+05	0.032439	FAM103A1	0.638116541489362	1
COPD-CHD	ENSG00000177666	11	14	4	4E+05	0.03235	PNPLA2	0.63704350372737	1
COPD-CHD	ENSG00000203485	14	127	17	4E+05	0.03235	INF2	0.63704350372737	1
COPD-CHD	ENSG00000176495	11	2	1	4E+05	0.032296	OR5AN1	0.63704350372737	1
COPD-CHD	ENSG00000070366	17	573	21	4E+05	0.032268	SMG6	0.63704350372737	1
COPD-CHD	ENSG00000156026	10	160	10	4E+05	0.03224	MCU	0.63704350372737	1

COPD-CHD	ENSG00000105352	19	32	6	4E+05	0.032224	CEACAM4	0.63704350372737	1
COPD-CHD	ENSG00000110375	11	96	18	4E+05	0.032205	UPK2	0.63704350372737	1
COPD-CHD	ENSG00000108826	17	9	2	4E+05	0.032065	MRPL27	0.636173728540773	1
COPD-CHD	ENSG00000133958	14	765	24	4E+05	0.032061	UNC79	0.636173728540773	1
COPD-CHD	ENSG00000141526	17	45	12	4E+05	0.032053	SLC16A3	0.636173728540773	1
COPD-CHD	ENSG00000131899	17	42	6	4E+05	0.031964	LLGL1	0.636173728540773	1
COPD-CHD	ENSG00000184599	1	16	4	4E+05	0.031961	FAM19A3	0.636173728540773	1
COPD-CHD	ENSG00000215717	1	24	6	4E+05	0.03194	TMEM167B	0.636173728540773	1
COPD-CHD	ENSG00000076604	17	8	3	4E+05	0.031904	TRAF4	0.636173728540773	1
COPD-CHD	ENSG00000160097	1	12	4	4E+05	0.031862	FNDC5	0.636173728540773	1
COPD-CHD	ENSG00000198218	3	58	10	4E+05	0.031767	QRICH1	0.635718178571429	1
COPD-CHD	ENSG00000268870	19	266	7	4E+05	0.031706	CTD-3105H1	0.635184881906826	1
COPD-CHD	ENSG00000239474	2	33	11	4E+05	0.031666	KLHL41	0.635071590021692	1
COPD-CHD	ENSG00000143702	1	188	17	4E+05	0.031647	CEP170	0.635071590021692	1
COPD-CHD	ENSG00000260272	16	13	8	4E+05	0.031641	RP11-20I23.1	0.635071590021692	1
COPD-CHD	ENSG00000127125	1	35	5	4E+05	0.031625	PPCS	0.635071590021692	1
COPD-CHD	ENSG00000100479	14	94	5	4E+05	0.031589	POLE2	0.635071590021692	1
COPD-CHD	ENSG00000108829	17	43	7	4E+05	0.031571	LRRRC59	0.635071590021692	1
COPD-CHD	ENSG00000172320	11	4	1	4E+05	0.031518	OR5A1	0.635071590021692	1
COPD-CHD	ENSG00000253626	10	15	4	4E+05	0.031512	EIF5AL1	0.635071590021692	1
COPD-CHD	ENSG00000164180	5	120	16	4E+05	0.031494	TMEM161B	0.635071590021692	1
COPD-CHD	ENSG00000135185	7	69	7	4E+05	0.031476	TMEM243	0.635071590021692	1
COPD-CHD	ENSG00000183742	7	223	19	4E+05	0.031428	MACC1	0.635071590021692	1
COPD-CHD	ENSG00000069956	15	237	22	4E+05	0.031427	MAPK6	0.635071590021692	1
COPD-CHD	ENSG00000163508	3	10	4	4E+05	0.031383	EOMES	0.635071590021692	1
COPD-CHD	ENSG00000070193	5	139	8	4E+05	0.031376	FGF10	0.635071590021692	1
COPD-CHD	ENSG00000111237	12	20	5	4E+05	0.031363	VPS29	0.635071590021692	1
COPD-CHD	ENSG00000122515	7	30	7	4E+05	0.031292	ZMIZ2	0.635071590021692	1
COPD-CHD	ENSG00000115568	2	34	4	4E+05	0.031244	ZNF142	0.635071590021692	1
COPD-CHD	ENSG00000272410	3	99	12	4E+05	0.031176	RP11-438J1.1	0.635071590021692	1
COPD-CHD	ENSG00000100012	22	101	10	4E+05	0.031096	SEC14L3	0.635071590021692	1
COPD-CHD	ENSG00000254834	11	3	2	4E+05	0.031079	OR5M10	0.635071590021692	1
COPD-CHD	ENSG00000267881	19	98	10	4E+05	0.031047	CEA	0.635071590021692	1

COPD-CHD	ENSG00000178999	17	15	6	4E+05	0.03098	AURKB	0.635071590021692	1
COPD-CHD	ENSG00000123066	12	435	25	4E+05	0.03092	MED13L	0.635071590021692	1
COPD-CHD	ENSG00000147434	8	105	11	4E+05	0.030896	CHRNA6	0.635071590021692	1
COPD-CHD	ENSG00000204852	12	61	8	4E+05	0.03088	TCTN1	0.635071590021692	1
COPD-CHD	ENSG00000143153	1	101	16	4E+05	0.030871	ATP1B1	0.635071590021692	1
COPD-CHD	ENSG00000035681	8	148	11	4E+05	0.030803	NSMAF	0.635071590021692	1
COPD-CHD	ENSG00000101489	18	788	81	4E+05	0.030798	CELF4	0.635071590021692	1
COPD-CHD	ENSG00000123352	12	328	18	4E+05	0.030719	SPATS2	0.635071590021692	1
COPD-CHD	ENSG00000068001	3	1	1	4E+05	0.030601	HYAL2	0.633642879059351	1
COPD-CHD	ENSG00000125630	2	100	10	4E+05	0.030472	POLR1B	0.631679094170404	1
COPD-CHD	ENSG00000135973	2	1	1	4E+05	0.030431	GPR45	0.631537172839506	1
COPD-CHD	ENSG00000165512	10	16	4	4E+05	0.03029	ZNF22	0.629317292134831	1
COPD-CHD	ENSG00000187871	6	425	25	4E+05	0.030237	GFRAL	0.628922797525309	1
COPD-CHD	ENSG00000212938	21	1	1	4E+05	0.03019	KRTAP6-3	0.628652353603604	1
COPD-CHD	ENSG00000114204	3	102	10	4E+05	0.030117	SERPINI2	0.627839286358512	1
COPD-CHD	ENSG00000180116	12	711	28	4E+05	0.030072	C12orf40	0.627608749435666	1
COPD-CHD	ENSG00000103723	15	112	18	4E+05	0.029918	AP3B2	0.625100268926554	1
COPD-CHD	ENSG00000168386	3	379	22	4E+05	0.029866	FILIP1L	0.624719690045249	1
COPD-CHD	ENSG00000136653	1	171	24	4E+05	0.029863	RASSF5	0.624719690045249	1
COPD-CHD	ENSG00000161405	17	217	5	4E+05	0.029852	IKZF3	0.624719690045249	1
COPD-CHD	ENSG00000166884	11	4	1	4E+05	0.029843	OR4D6	0.624719690045249	1
COPD-CHD	ENSG00000187498	13	691	72	4E+05	0.029787	COL4A1	0.624719690045249	1
COPD-CHD	ENSG00000115556	2	43	5	4E+05	0.029786	PLCD4	0.624719690045249	1
COPD-CHD	ENSG00000126561	17	54	6	4E+05	0.029737	STAT5A	0.624719690045249	1
COPD-CHD	ENSG00000111252	12	36	4	4E+05	0.029603	SH2B3	0.624160858608894	1
COPD-CHD	ENSG00000091536	17	130	16	4E+05	0.029582	MYO15A	0.624160858608894	1
COPD-CHD	ENSG00000119655	14	47	5	4E+05	0.0295	NPC2	0.623410857142857	1
COPD-CHD	ENSG00000150760	10	1790	116	4E+05	0.029491	DOCK1	0.623410857142857	1
COPD-CHD	ENSG00000099991	22	191	22	4E+05	0.029479	CABIN1	0.623410857142857	1
COPD-CHD	ENSG00000064651	5	158	12	4E+05	0.029429	SLC12A2	0.623410857142857	1
COPD-CHD	ENSG00000115526	2	41	6	4E+05	0.029405	CHST10	0.623410857142857	1
COPD-CHD	ENSG00000111275	12	36	5	4E+05	0.029397	ALDH2	0.623410857142857	1
COPD-CHD	ENSG00000123933	4	35	4	4E+05	0.029346	MXD4	0.623410857142857	1

COPD-CHD	ENSG00000261701	16	42	7	4E+05	0.029251	HPR	0.623133918202765	1
COPD-CHD	ENSG00000173110	1	8	3	4E+05	0.029226	HSPA6	0.623133918202765	1
COPD-CHD	ENSG00000136731	2	249	17	4E+05	0.029215	UGGT1	0.623133918202765	1
COPD-CHD	ENSG00000120253	6	39	3	4E+05	0.029187	NUP43	0.623133918202765	1
COPD-CHD	ENSG00000197261	6	50	6	4E+05	0.029167	C6orf141	0.623133918202765	1
COPD-CHD	ENSG00000156599	11	48	8	4E+05	0.029166	ZDHHC5	0.623133918202765	1
COPD-CHD	ENSG00000185313	3	304	24	4E+05	0.029098	SCN10A	0.623133918202765	1
COPD-CHD	ENSG00000077044	2	225	23	4E+05	0.029045	DGKD	0.623133918202765	1
COPD-CHD	ENSG00000107745	10	392	8	4E+05	0.028962	MICU1	0.622716676744186	1
COPD-CHD	ENSG00000268556	2	7	3	4E+05	0.028931	AC012360.1	0.622716676744186	1
COPD-CHD	ENSG00000169826	10	112	12	4E+05	0.028899	CSGALNACT10	0.622716676744186	1
COPD-CHD	ENSG00000175161	3	2853	49	4E+05	0.028886	CADM2	0.622695752625438	1
COPD-CHD	ENSG00000155307	21	324	31	4E+05	0.028777	SAMSN1	0.621630265186916	1
COPD-CHD	ENSG00000173041	7	176	12	4E+05	0.028776	ZNF680	0.621630265186916	1
COPD-CHD	ENSG00000187231	2	372	20	4E+05	0.028772	SESTD1	0.621630265186916	1
COPD-CHD	ENSG00000086200	5	382	18	4E+05	0.028757	IPO11	0.621630265186916	1
COPD-CHD	ENSG00000171570	19	94	16	4E+05	0.028745	RAB4B-EGLT	0.621630265186916	1
COPD-CHD	ENSG00000106536	7	1452	57	4E+05	0.028686	POU6F2	0.621630265186916	1
COPD-CHD	ENSG00000011021	1	200	14	4E+05	0.028684	CLCN6	0.621630265186916	1
COPD-CHD	ENSG00000112208	6	22	4	4E+05	0.02866	BAG2	0.621630265186916	1
COPD-CHD	ENSG00000124523	6	64	10	4E+05	0.028633	SIRT5	0.621630265186916	1
COPD-CHD	ENSG00000109686	4	517	18	4E+05	0.028553	SH3D19	0.621630265186916	1
COPD-CHD	ENSG00000219435	11	5	2	4E+05	0.0285	TEX40	0.621630265186916	1
COPD-CHD	ENSG00000185800	19	20	7	4E+05	0.028428	DMWD	0.621630265186916	1
COPD-CHD	ENSG00000138413	2	47	7	4E+05	0.028422	IDH1	0.621630265186916	1
COPD-CHD	ENSG00000160654	11	19	5	4E+05	0.028347	CD3G	0.621630265186916	1
COPD-CHD	ENSG00000158109	1	11	3	4E+05	0.028332	TPRG1L	0.621630265186916	1
COPD-CHD	ENSG00000106780	9	108	10	4E+05	0.028229	MEGF9	0.620668774078478	1
COPD-CHD	ENSG00000205517	19	81	7	4E+05	0.028164	RGL3	0.619976814285714	1
COPD-CHD	ENSG00000119318	9	164	17	4E+05	0.028138	RAD23B	0.619976814285714	1
COPD-CHD	ENSG00000132170	3	340	22	4E+05	0.028126	PPARG	0.619976814285714	1
COPD-CHD	ENSG00000138867	22	36	5	4E+05	0.028119	GUCD1	0.619976814285714	1
COPD-CHD	ENSG00000111639	12	14	1	4E+05	0.028114	MRPL51	0.619976814285714	1

COPD-CHD	ENSG00000120256	6	73	5	4E+05	0.027956	LRP11	0.619083108982036	1
COPD-CHD	ENSG00000131023	6	80	3	4E+05	0.027935	LATS1	0.619083108982036	1
COPD-CHD	ENSG00000144580	2	48	4	4E+05	0.027857	RQCD1	0.618371893157263	1
COPD-CHD	ENSG00000178078	19	68	11	4E+05	0.027765	STAP2	0.617070450721154	1
COPD-CHD	ENSG00000143740	1	129	16	4E+05	0.027764	SNAP47	0.617070450721154	1
COPD-CHD	ENSG00000048828	9	311	18	4E+05	0.027636	FAM120A	0.615683465060241	1
COPD-CHD	ENSG00000197170	17	50	9	4E+05	0.027635	PSMD12	0.615683465060241	1
COPD-CHD	ENSG00000031698	1	37	8	4E+05	0.027609	SARS	0.615683465060241	1
COPD-CHD	ENSG00000137460	4	112	26	4E+05	0.027598	FHDC1	0.615683465060241	1
COPD-CHD	ENSG00000138193	10	577	44	4E+05	0.027528	PLCE1	0.615683465060241	1
COPD-CHD	ENSG00000159352	1	17	4	4E+05	0.027516	PSMD4	0.615683465060241	1
COPD-CHD	ENSG00000118898	16	344	41	4E+05	0.027491	PPL	0.615683465060241	1
COPD-CHD	ENSG00000102970	16	46	11	4E+05	0.027476	CCL17	0.615683465060241	1
COPD-CHD	ENSG00000229644	10	7	2	4E+05	0.027424	NAMPTL	0.615683465060241	1
COPD-CHD	ENSG00000157578	21	106	8	4E+05	0.027412	LCA5L	0.615683465060241	1
COPD-CHD	ENSG00000116497	1	56	8	4E+05	0.027287	S100PBP	0.61532185	1
COPD-CHD	ENSG00000176148	11	285	18	4E+05	0.027219	TCP11L1	0.614537886446886	1
COPD-CHD	ENSG00000257767	12	24	3	4E+05	0.027161	RP11-162P23	0.613978057457213	1
COPD-CHD	ENSG00000186298	12	50	8	4E+05	0.027119	PPP1CC	0.613778982864137	1
COPD-CHD	ENSG00000163884	3	23	6	4E+05	0.02705	KLF15	0.612967585784314	1
COPD-CHD	ENSG00000130997	4	399	11	4E+05	0.027039	POLN	0.612967585784314	1
COPD-CHD	ENSG00000156218	15	1003	40	4E+05	0.027015	ADAMTSL3	0.612967585784314	1
COPD-CHD	ENSG00000135837	1	390	16	4E+05	0.026984	CEP350	0.612967585784314	1
COPD-CHD	ENSG00000198054	21	112	12	4E+05	0.02698	DSCR8	0.612967585784314	1
COPD-CHD	ENSG00000118007	3	588	22	4E+05	0.026917	STAG1	0.612967585784314	1
COPD-CHD	ENSG00000259030	1	653	49	4E+05	0.02689	FPGT-TNNI310	0.612967585784314	1
COPD-CHD	ENSG00000116783	1	653	49	4E+05	0.02689	TNNI3K	0.612967585784314	1
COPD-CHD	ENSG00000163159	1	17	7	4E+05	0.026837	VPS72	0.612967585784314	1
COPD-CHD	ENSG00000165501	14	52	6	4E+05	0.026826	LRR1	0.612967585784314	1
COPD-CHD	ENSG00000168899	2	22	6	4E+05	0.026804	VAMP5	0.612967585784314	1
COPD-CHD	ENSG00000142444	19	12	5	4E+05	0.02679	C19orf52	0.612967585784314	1
COPD-CHD	ENSG00000114933	2	202	20	4E+05	0.026636	INO80D	0.612594870646766	1
COPD-CHD	ENSG00000140107	14	21	5	4E+05	0.026565	SLC25A47	0.611722808219178	1

COPD-CHD	ENSG00000111249	12	345	27	4E+05	0.026558	CUX2	0.611722808219178	1
COPD-CHD	ENSG00000141279	17	137	10	4E+05	0.026518	NPEPPS	0.611722808219178	1
COPD-CHD	ENSG00000197296	20	13	4	4E+05	0.026428	FITM2	0.610850185	1
COPD-CHD	ENSG00000156471	8	135	15	4E+05	0.026412	PTDSS1	0.610850185	1
COPD-CHD	ENSG00000132017	19	8	3	4E+05	0.026354	DCAF15	0.61066643358396	1
COPD-CHD	ENSG00000183137	6	83	10	4E+05	0.02633	CEP57L1	0.61066643358396	1
COPD-CHD	ENSG00000165502	14	6	2	4E+05	0.026288	RPL36AL	0.61066643358396	1
COPD-CHD	ENSG00000107263	9	398	24	4E+05	0.02628	RAPGEF1	0.61066643358396	1
COPD-CHD	ENSG00000164038	4	78	18	4E+05	0.026261	SLC9B2	0.61066643358396	1
COPD-CHD	ENSG00000156587	11	48	8	4E+05	0.026151	UBE2L6	0.609783279949559	1
COPD-CHD	ENSG00000023228	2	128	10	4E+05	0.026138	NDUFS1	0.609783279949559	1
COPD-CHD	ENSG00000111737	12	66	12	4E+05	0.026059	RAB35	0.609174423514539	1
COPD-CHD	ENSG00000269554	1	4	2	4E+05	0.026011	AL590822.2	0.608822026582279	1
COPD-CHD	ENSG00000074582	2	9	2	4E+05	0.025794	BCS1L	0.604508053231939	1
COPD-CHD	ENSG00000170266	3	331	26	4E+05	0.02579	GLB1	0.604508053231939	1
COPD-CHD	ENSG00000198546	10	69	13	4E+05	0.02577	ZNF511	0.604508053231939	1
COPD-CHD	ENSG00000129038	15	110	15	4E+05	0.02577	LOXL1	0.604508053231939	1
COPD-CHD	ENSG00000129933	19	74	8	4E+05	0.02575	MAU2	0.604508053231939	1
COPD-CHD	ENSG00000073050	19	107	16	4E+05	0.025715	XRCC1	0.604508053231939	1
COPD-CHD	ENSG00000182450	11	6	2	4E+05	0.02569	KCNK4	0.604508053231939	1
COPD-CHD	ENSG00000184990	14	43	7	4E+05	0.025687	SIVA1	0.604508053231939	1
COPD-CHD	ENSG00000196776	3	92	16	4E+05	0.025596	CD47	0.604508053231939	1
COPD-CHD	ENSG00000166862	22	388	46	4E+05	0.025527	CACNG2	0.604508053231939	1
COPD-CHD	ENSG00000171234	4	354	9	4E+05	0.025378	UGT2B7	0.602393578947368	1
COPD-CHD	ENSG00000162819	1	33	9	4E+05	0.025337	BROX	0.602193402313625	1
COPD-CHD	ENSG00000146757	7	88	8	4E+05	0.025192	ZNF92	0.599517724581725	1
COPD-CHD	ENSG00000113194	5	111	13	4E+05	0.025167	FAF2	0.599517724581725	1
COPD-CHD	ENSG00000138640	4	1231	46	4E+05	0.025119	FAM13A	0.599323134193548	1
COPD-CHD	ENSG00000268472	11	2	1	4E+05	0.025096	AP002884.2	0.599323134193548	1
COPD-CHD	ENSG00000149639	20	106	20	4E+05	0.025071	SOGA1	0.599323134193548	1
COPD-CHD	ENSG00000168140	16	24	5	4E+05	0.024936	VASN	0.597268880829016	1
COPD-CHD	ENSG00000064726	15	119	16	4E+05	0.024841	BTBD1	0.595765150453956	1
COPD-CHD	ENSG00000147573	8	102	9	4E+05	0.024791	TRIM55	0.595338157142857	1

COPD-CHD	ENSG00000152583	4	182	13	4E+05	0.024746	SPARCL1	0.595030280884265	1
COPD-CHD	ENSG00000187266	19	5	2	4E+05	0.024721	EPOR	0.595030280884265	1
COPD-CHD	ENSG00000140836	16	635	71	4E+05	0.024652	ZFHX3	0.594315687092569	1
COPD-CHD	ENSG00000109189	4	80	6	4E+05	0.024607	USP46	0.594005270234987	1
COPD-CHD	ENSG00000110931	12	176	28	4E+05	0.024574	CAMKK2	0.593984096732026	1
COPD-CHD	ENSG00000138496	3	79	10	4E+05	0.024551	PARP9	0.593984096732026	1
COPD-CHD	ENSG00000136425	15	93	14	4E+05	0.024542	CIB2	0.593984096732026	1
COPD-CHD	ENSG00000178201	19	2	1	4E+05	0.024519	VN1R1	0.593984096732026	1
COPD-CHD	ENSG00000126391	11	32	8	4E+05	0.024506	FRMD8	0.593984096732026	1
COPD-CHD	ENSG00000120251	4	258	19	4E+05	0.024501	GRIA2	0.593984096732026	1
COPD-CHD	ENSG00000145425	4	4	2	4E+05	0.024496	RPS3A	0.593984096732026	1
COPD-CHD	ENSG00000101306	20	40	6	4E+05	0.024494	MYLK2	0.593984096732026	1
COPD-CHD	ENSG00000175745	5	6	2	4E+05	0.024487	NR2F1	0.593984096732026	1
COPD-CHD	ENSG00000147533	8	56	10	4E+05	0.024483	GOLGA7	0.593984096732026	1
COPD-CHD	ENSG00000154227	15	694	25	4E+05	0.024447	CERS3	0.593984096732026	1
COPD-CHD	ENSG00000167491	19	181	13	4E+05	0.024366	GATAD2A	0.593984096732026	1
COPD-CHD	ENSG00000090447	16	21	4	4E+05	0.024266	TFAP4	0.593984096732026	1
COPD-CHD	ENSG00000153933	17	79	5	4E+05	0.024228	DGKE	0.593984096732026	1
COPD-CHD	ENSG00000149243	11	7	3	4E+05	0.024213	KLHL35	0.593984096732026	1
COPD-CHD	ENSG00000113742	5	180	17	4E+05	0.024077	CPEB4	0.593610409333333	1
COPD-CHD	ENSG00000170748	11	6	2	4E+05	0.024064	RBMXL2	0.593610409333333	1
COPD-CHD	ENSG00000213281	1	12	3	4E+05	0.023806	NRAS	0.588498323529412	1
COPD-CHD	ENSG00000100425	22	110	10	4E+05	0.023805	BRD1	0.588498323529412	1
COPD-CHD	ENSG00000174942	11	8	3	4E+05	0.023754	OR5R1	0.588498323529412	1
COPD-CHD	ENSG00000101000	20	10	2	4E+05	0.023671	PROCR	0.587517397315436	1
COPD-CHD	ENSG00000101074	20	57	5	4E+05	0.023634	R3HDML	0.587387491935484	1
COPD-CHD	ENSG00000148935	11	466	34	4E+05	0.023586	GAS2	0.586983480484522	1
COPD-CHD	ENSG00000147509	8	126	18	4E+05	0.023583	RGS20	0.586983480484522	1
COPD-CHD	ENSG00000119965	10	32	7	4E+05	0.02358	C10orf88	0.586983480484522	1
COPD-CHD	ENSG00000152795	4	27	5	4E+05	0.023454	HNRNPDL	0.586064748648649	1
COPD-CHD	ENSG00000114942	2	3	1	4E+05	0.023425	EEF1B2	0.586064748648649	1
COPD-CHD	ENSG00000106460	7	202	9	4E+05	0.023371	TMEM106B	0.585573388888889	1
COPD-CHD	ENSG00000164626	6	136	24	4E+05	0.023322	KCNK5	0.585138537313433	1

COPD-CHD ENSG00000248483	5	6	2	4E+05	0.023239	POU5F2	0.583848300271739	1
COPD-CHD ENSG00000167778	12	29	8	4E+05	0.023239	SPRYD3	0.583848300271739	1
COPD-CHD ENSG00000153930	17	824	44	4E+05	0.023086	ANKFN1	0.581584776566757	1
COPD-CHD ENSG00000197415	3	760	32	4E+05	0.023076	VEPH1	0.581584776566757	1
COPD-CHD ENSG00000103591	15	103	9	4E+05	0.023059	AAGAB	0.581584776566757	1
COPD-CHD ENSG00000132464	4	75	10	4E+05	0.022966	ENAM	0.580936123119015	1
COPD-CHD ENSG00000129355	19	5	2	4E+05	0.022948	CDKN2D	0.580936123119015	1
COPD-CHD ENSG00000138029	2	76	8	4E+05	0.022908	HADHB	0.580936123119015	1
COPD-CHD ENSG00000159228	21	14	4	4E+05	0.022906	CBR1	0.580936123119015	1
COPD-CHD ENSG00000150593	10	57	12	4E+05	0.022868	PDCD4	0.580936123119015	1
COPD-CHD ENSG00000214919	3	2	1	4E+05	0.022837	AC104472.1	0.580936123119015	1
COPD-CHD ENSG00000163481	2	21	3	4E+05	0.022794	RNF25	0.580936123119015	1
COPD-CHD ENSG00000125966	20	57	8	4E+05	0.022747	MMP24	0.580936123119015	1
COPD-CHD ENSG00000203780	10	300	14	4E+05	0.022706	FANK1	0.580714586445367	1
COPD-CHD ENSG00000196937	7	92	6	4E+05	0.022642	FAM3C	0.579879808864266	1
COPD-CHD ENSG00000267873	12	3	2	4E+05	0.022634	AC121757.1	0.579879808864266	1
COPD-CHD ENSG00000103199	16	82	10	4E+05	0.022634	ZNF500	0.579879808864266	1
COPD-CHD ENSG00000140798	16	54	11	4E+05	0.022525	ABCC12	0.579290368567455	1
COPD-CHD ENSG00000178913	5	5	2	4E+05	0.022492	TAF7	0.579247314763231	1
COPD-CHD ENSG00000131504	5	167	23	4E+05	0.022488	DIAPH1	0.579247314763231	1
COPD-CHD ENSG00000157890	15	1123	101	4E+05	0.022467	MEGF11	0.579247314763231	1
COPD-CHD ENSG00000150433	11	53	11	4E+05	0.022446	TMEM218	0.579247314763231	1
COPD-CHD ENSG00000140632	16	129	19	4E+05	0.022437	GLYR1	0.579247314763231	1
COPD-CHD ENSG00000168159	1	25	8	4E+05	0.022389	RNF187	0.579247314763231	1
COPD-CHD ENSG00000162814	1	728	34	4E+05	0.022378	SPATA17	0.579247314763231	1
COPD-CHD ENSG00000145934	5	2140	185	4E+05	0.02234	TENM2	0.579247314763231	1
COPD-CHD ENSG00000172425	11	2	1	4E+05	0.022319	TTC36	0.579247314763231	1
COPD-CHD ENSG00000178074	2	92	13	4E+05	0.022244	C2orf69	0.579247314763231	1
COPD-CHD ENSG00000215012	22	32	5	4E+05	0.022151	C22orf29	0.578522798022599	1
COPD-CHD ENSG00000122490	18	111	16	4E+05	0.022095	PQLC1	0.5778764427157	1
COPD-CHD ENSG00000189320	7	55	10	4E+05	0.021911	FAM180A	0.573875780453258	1
COPD-CHD ENSG00000177731	17	21	6	4E+05	0.021886	FLII	0.573875780453258	1
COPD-CHD ENSG00000206557	3	154	25	4E+05	0.021877	TRIM71	0.573875780453258	1

COPD-CHD	ENSG00000171060	8	36	12	4E+05	0.021809	C8orf74	0.573641847795164	1
COPD-CHD	ENSG00000176593	19	38	6	4E+05	0.021709	CTD-2368P220	0.571824955840456	1
COPD-CHD	ENSG00000182986	19	140	17	4E+05	0.0217	ZNF320	0.571824955840456	1
COPD-CHD	ENSG00000002745	7	35	7	4E+05	0.021596	WNT16	0.570473765714286	1
COPD-CHD	ENSG00000174136	5	63	8	4E+05	0.021519	RGMB	0.569252974248927	1
COPD-CHD	ENSG00000157353	16	21	10	4E+05	0.021381	FUK	0.566412709169054	1
COPD-CHD	ENSG00000089248	12	11	4	4E+05	0.021366	ERP29	0.566412709169054	1
COPD-CHD	ENSG00000015532	17	33	5	4E+05	0.021289	XYLT2	0.565596119252874	1
COPD-CHD	ENSG00000068137	17	7	3	4E+05	0.02119	PLEKHH3	0.563775956834532	1
COPD-CHD	ENSG00000167645	19	33	8	4E+05	0.021181	YIF1B	0.563775956834532	1
COPD-CHD	ENSG00000142453	19	77	9	4E+05	0.021166	CARM1	0.563775956834532	1
COPD-CHD	ENSG00000115652	2	181	20	4E+05	0.021101	UXS1	0.563775956834532	1
COPD-CHD	ENSG00000243156	22	920	58	4E+05	0.021029	MICAL3	0.562731170767004	1
COPD-CHD	ENSG00000164270	5	511	25	4E+05	0.020985	HTR4	0.562367586956522	1
COPD-CHD	ENSG00000119714	14	69	7	4E+05	0.02094	GPR68	0.56197611030479	1
COPD-CHD	ENSG00000266258	18	56	11	4E+05	0.020905	RP11-41O4.1	0.561852260174419	1
COPD-CHD	ENSG00000236699	4	398	31	4E+05	0.020881	ARHGEF38	0.561852260174419	1
COPD-CHD	ENSG00000214367	4	34	5	4E+05	0.020764	HAUS3	0.559689685131195	1
COPD-CHD	ENSG00000108591	17	34	5	4E+05	0.020751	DRG2	0.559689685131195	1
COPD-CHD	ENSG00000164116	4	185	26	4E+05	0.020522	GUCY1A3	0.554784067251462	1
COPD-CHD	ENSG00000164039	4	47	6	4E+05	0.020381	BDH2	0.551779020497804	1
COPD-CHD	ENSG00000147316	8	1205	75	4E+05	0.020361	MCPH1	0.551779020497804	1
COPD-CHD	ENSG00000134242	1	96	13	4E+05	0.020278	PTPN22	0.550602787077827	1
COPD-CHD	ENSG00000143466	1	80	18	4E+05	0.020259	IKBKE	0.550602787077827	1
COPD-CHD	ENSG00000184164	22	77	4	4E+05	0.020242	CRELD2	0.550602787077827	1
COPD-CHD	ENSG00000186625	6	107	4	4E+05	0.020102	KATNA1	0.54823905899705	1
COPD-CHD	ENSG00000135148	12	23	5	4E+05	0.020078	TRAFD1	0.54823905899705	1
COPD-CHD	ENSG00000177275	1	1	1	4E+05	0.020054	OR2AJ1	0.54823905899705	1
COPD-CHD	ENSG00000087301	14	293	15	4E+05	0.020005	TXNDC16	0.548018451851852	1
COPD-CHD	ENSG00000176087	5	6	3	4E+05	0.019936	SLC35A4	0.546938540059347	1
COPD-CHD	ENSG00000167531	12	3	2	4E+05	0.019877	LALBA	0.54613017384844	1
COPD-CHD	ENSG00000176953	16	18	5	4E+05	0.019854	NFATC2IP	0.54613017384844	1
COPD-CHD	ENSG00000108557	17	174	22	4E+05	0.019818	RAI1	0.54613017384844	1

COPD-CHD	ENSG00000170683	11	1	1	4E+05	0.019766	OR10A3	0.545512098507463	1
COPD-CHD	ENSG00000144730	3	203	21	4E+05	0.019741	IL17RD	0.545512098507463	1
COPD-CHD	ENSG00000111231	12	37	7	4E+05	0.019695	GPN3	0.54518000748503	1
COPD-CHD	ENSG00000163596	2	190	14	4E+05	0.019693	ICA1L	0.54518000748503	1
COPD-CHD	ENSG00000154479	2	189	10	4E+05	0.019675	CCDC173	0.54518000748503	1
COPD-CHD	ENSG00000112200	6	98	8	4E+05	0.019669	ZNF451	0.54518000748503	1
COPD-CHD	ENSG00000160712	1	146	14	4E+05	0.019658	IL6R	0.54518000748503	1
COPD-CHD	ENSG00000138443	2	181	24	4E+05	0.019634	ABI2	0.54518000748503	1
COPD-CHD	ENSG00000115977	2	254	16	4E+05	0.019611	AAK1	0.54518000748503	1
COPD-CHD	ENSG00000149273	11	35	8	4E+05	0.01959	RPS3	0.54518000748503	1
COPD-CHD	ENSG00000159263	21	139	33	4E+05	0.019554	SIM2	0.54518000748503	1
COPD-CHD	ENSG00000105388	19	41	8	4E+05	0.019473	CEACAM5	0.54518000748503	1
COPD-CHD	ENSG00000183638	8	314	40	4E+05	0.019424	RP1L1	0.54518000748503	1
COPD-CHD	ENSG00000188352	9	892	36	4E+05	0.01942	FOCAD	0.54518000748503	1
COPD-CHD	ENSG00000157429	16	166	22	4E+05	0.019417	ZNF19	0.54518000748503	1
COPD-CHD	ENSG00000267748	19	41	8	4E+05	0.019413	CTB-102L5.4	0.54518000748503	1
COPD-CHD	ENSG00000117877	19	20	6	4E+05	0.019352	CD3EAP	0.54518000748503	1
COPD-CHD	ENSG00000188938	9	21	6	4E+05	0.019349	FAM120AOS	0.54518000748503	1
COPD-CHD	ENSG00000130940	1	379	64	4E+05	0.019297	CASZ1	0.54518000748503	1
COPD-CHD	ENSG00000146409	6	97	10	4E+05	0.019283	SLC18B1	0.54518000748503	1
COPD-CHD	ENSG00000241852	8	8	2	4E+05	0.01923	C8orf58	0.54518000748503	1
COPD-CHD	ENSG00000183431	1	89	10	4E+05	0.019202	SF3A3	0.54518000748503	1
COPD-CHD	ENSG00000146049	6	2	1	4E+05	0.019177	KAAG1	0.54518000748503	1
COPD-CHD	ENSG00000124749	6	1372	49	4E+05	0.019143	COL21A1	0.54518000748503	1
COPD-CHD	ENSG00000115970	2	1034	31	4E+05	0.01907	THADA	0.54518000748503	1
COPD-CHD	ENSG00000268163	19	144	13	4E+05	0.019056	AC004076.9	0.54518000748503	1
COPD-CHD	ENSG00000118094	11	44	4	4E+05	0.019	TREH	0.54518000748503	1
COPD-CHD	ENSG00000139734	13	1126	29	4E+05	0.018965	DIAPH3	0.54518000748503	1
COPD-CHD	ENSG00000204138	1	379	9	4E+05	0.018743	PHACTR4	0.53983927258567	1
COPD-CHD	ENSG00000130758	19	32	7	4E+05	0.0187	MAP3K10	0.539441029641186	1
COPD-CHD	ENSG00000146555	7	3441	96	4E+05	0.018692	SDK1	0.539441029641186	1
COPD-CHD	ENSG00000132781	1	14	6	4E+05	0.018658	MUTYH	0.539441029641186	1
COPD-CHD	ENSG00000186367	5	58	9	4E+05	0.018657	KIAA1024L	0.539441029641186	1

COPD-CHD	ENSG00000163394	4	24	5	4E+05	0.018565	CCKAR	0.538909599686028	1
COPD-CHD	ENSG00000176994	17	33	5	4E+05	0.018492	SMCR8	0.537634547169811	1
COPD-CHD	ENSG00000177191	19	6	2	4E+05	0.018488	B3GNT8	0.537634547169811	1
COPD-CHD	ENSG00000129691	8	35	12	4E+05	0.018479	ASH2L	0.537634547169811	1
COPD-CHD	ENSG00000165689	9	50	9	4E+05	0.018471	SDCCAG3	0.537634547169811	1
COPD-CHD	ENSG00000151012	4	196	19	4E+05	0.018406	SLC7A11	0.537634547169811	1
COPD-CHD	ENSG00000134684	1	75	10	4E+05	0.018396	YARS	0.537634547169811	1
COPD-CHD	ENSG00000139218	12	78	11	4E+05	0.018353	SCAF11	0.537634547169811	1
COPD-CHD	ENSG00000235608	4	4	2	4E+05	0.01833	NKX1-1	0.537634547169811	1
COPD-CHD	ENSG00000184571	22	188	20	4E+05	0.018237	PIWIL3	0.536975106687898	1
COPD-CHD	ENSG00000214530	11	79	10	4E+05	0.01821	STARD10	0.536975106687898	1
COPD-CHD	ENSG00000138231	3	21	2	4E+05	0.018199	DBR1	0.536975106687898	1
COPD-CHD	ENSG00000167644	19	5	2	4E+05	0.018175	C19orf33	0.536975106687898	1
COPD-CHD	ENSG00000149761	11	7	3	4E+05	0.018142	NUDT22	0.536975106687898	1
COPD-CHD	ENSG00000182179	3	6	2	4E+05	0.018139	UBA7	0.536975106687898	1
COPD-CHD	ENSG00000149131	11	36	4	4E+05	0.018099	SERPING1	0.536975106687898	1
COPD-CHD	ENSG00000182261	11	20	6	4E+05	0.018049	NLRP10	0.536975106687898	1
COPD-CHD	ENSG00000197386	4	355	19	4E+05	0.018021	HTT	0.536975106687898	1
COPD-CHD	ENSG00000146250	6	31	4	4E+05	0.017977	PRSS35	0.536975106687898	1
COPD-CHD	ENSG00000108423	17	60	9	4E+05	0.017938	TUBD1	0.536717731391586	1
COPD-CHD	ENSG00000129167	11	43	5	4E+05	0.017926	TPH1	0.536717731391586	1
COPD-CHD	ENSG00000180855	19	91	6	4E+05	0.017738	ZNF443	0.53245675	1
COPD-CHD	ENSG00000131626	11	230	8	4E+05	0.017679	PPFIA1	0.5315486	1
COPD-CHD	ENSG00000080546	6	209	9	4E+05	0.01761	SESN1	0.530336335504886	1
COPD-CHD	ENSG00000258512	14	8	1	4E+05	0.017549	RP11-796G6.2	0.529361433931484	1
COPD-CHD	ENSG00000119396	9	83	11	4E+05	0.017482	RAB14	0.528202062091503	1
COPD-CHD	ENSG00000148019	9	96	15	4E+05	0.01746	CEP78	0.528202062091503	1
COPD-CHD	ENSG00000140564	15	30	6	4E+05	0.017438	FURIN	0.528202062091503	1
COPD-CHD	ENSG00000130270	19	81	18	4E+05	0.017389	ATP8B3	0.527980293924466	1
COPD-CHD	ENSG00000181264	11	12	3	4E+05	0.01729	TMEM136	0.525837813	1
COPD-CHD	ENSG00000125755	19	183	12	4E+05	0.017284	SYMPK	0.525837813	1
COPD-CHD	ENSG00000204850	19	3	2	4E+05	0.017223	AC011484.1	0.525528866336634	1
COPD-CHD	ENSG00000214212	19	47	10	4E+05	0.017165	C19orf38	0.524624818181818	1

COPD-CHD	ENSG00000164162	4	125	18	4E+05	0.017126	ANAPC10	0.524299447019868	1
COPD-CHD	ENSG00000183559	10	7	2	4E+05	0.017091	C10orf120	0.524095656716418	1
COPD-CHD	ENSG00000088881	20	166	20	4E+05	0.017079	EBF4	0.524095656716418	1
COPD-CHD	ENSG00000173917	17	14	4	4E+05	0.017062	HOXB2	0.524095656716418	1
COPD-CHD	ENSG00000100197	22	14	5	4E+05	0.016994	CYP2D6	0.523726756666667	1
COPD-CHD	ENSG00000108861	17	30	4	4E+05	0.016975	DUSP3	0.523726756666667	1
COPD-CHD	ENSG00000165617	14	30	7	4E+05	0.016968	DACT1	0.523726756666667	1
COPD-CHD	ENSG00000033170	14	697	28	4E+05	0.016941	FUT8	0.523726756666667	1
COPD-CHD	ENSG00000125388	4	236	18	4E+05	0.016933	GRK4	0.523726756666667	1
COPD-CHD	ENSG00000166526	7	33	9	4E+05	0.016898	ZNF3	0.523726756666667	1
COPD-CHD	ENSG00000085721	16	76	12	4E+05	0.016872	RRN3	0.523726756666667	1
COPD-CHD	ENSG00000182511	15	36	7	4E+05	0.016846	FES	0.523726756666667	1
COPD-CHD	ENSG00000138780	4	326	12	4E+05	0.016818	GSTCD	0.523726756666667	1
COPD-CHD	ENSG00000150526	14	59	9	4E+05	0.016733	MIA2	0.523536214890017	1
COPD-CHD	ENSG00000132911	5	147	6	4E+05	0.016628	NMUR2	0.521132793220339	1
COPD-CHD	ENSG00000137962	1	197	27	4E+05	0.016627	ARHGAP29	0.521132793220339	1
COPD-CHD	ENSG00000136404	15	46	8	4E+05	0.016537	TM6SF1	0.520043651360544	1
COPD-CHD	ENSG00000213213	9	25	5	4E+05	0.016499	CCDC183	0.519732553662692	1
COPD-CHD	ENSG00000136457	17	8	3	4E+05	0.01649	CHAD	0.519732553662692	1
COPD-CHD	ENSG00000174233	12	38	4	4E+05	0.016442	ADCY6	0.51970772991453	1
COPD-CHD	ENSG00000138380	2	138	9	4E+05	0.016376	CARF	0.518507904109589	1
COPD-CHD	ENSG00000177455	16	6	3	4E+05	0.016328	CD19	0.517874867924528	1
COPD-CHD	ENSG00000141002	16	100	5	4E+05	0.016327	TCF25	0.517874867924528	1
COPD-CHD	ENSG00000138442	2	276	11	4E+05	0.016234	WDR12	0.516665910499139	1
COPD-CHD	ENSG00000118849	3	113	13	4E+05	0.016208	RARRES1	0.516665910499139	1
COPD-CHD	ENSG00000162374	1	180	28	4E+05	0.016202	ELAVL4	0.516665910499139	1
COPD-CHD	ENSG00000073711	3	282	19	4E+05	0.016198	PPP2R3A	0.516665910499139	1
COPD-CHD	ENSG00000170099	14	83	13	4E+05	0.016091	SERPINA6	0.515664958405546	1
COPD-CHD	ENSG00000140835	16	15	6	4E+05	0.016073	CHST4	0.515664958405546	1
COPD-CHD	ENSG00000171495	5	320	25	4E+05	0.015925	MROH2B	0.512120304347826	1
COPD-CHD	ENSG00000124177	20	469	25	4E+05	0.015898	CHD6	0.512120304347826	1
COPD-CHD	ENSG00000165816	10	127	19	4E+05	0.015867	VWA2	0.512036120418848	1
COPD-CHD	ENSG00000258875	14	31	4	4E+05	0.015804	CTD-2547L240	0.510894692307692	1

COPD-CHD	ENSG00000084112	12	105	18	4E+05	0.015683	SSH1	0.507871021015762	1
COPD-CHD	ENSG00000166503	15	140	10	4E+05	0.01565	HDGFRP3	0.50769149122807	1
COPD-CHD	ENSG00000183072	5	4	2	4E+05	0.01563	NKX2-5	0.50769149122807	1
COPD-CHD	ENSG00000162526	1	4	2	4E+05	0.015575	TSSK3	0.507037544014085	1
COPD-CHD	ENSG00000138785	4	482	14	4E+05	0.01557	INTS12	0.507037544014085	1
COPD-CHD	ENSG00000268361	19	86	14	4E+05	0.01553	L34079.2	0.507037544014085	1
COPD-CHD	ENSG00000068784	2	641	26	4E+05	0.015494	SRBD1	0.507037544014085	1
COPD-CHD	ENSG00000166529	7	18	3	4E+05	0.015473	ZSCAN21	0.507037544014085	1
COPD-CHD	ENSG00000108798	17	34	8	4E+05	0.015451	ABI3	0.507037544014085	1
COPD-CHD	ENSG00000099974	22	10	3	4E+05	0.015438	DDTL	0.507037544014085	1
COPD-CHD	ENSG00000183196	16	36	11	4E+05	0.015436	CHST6	0.507037544014085	1
COPD-CHD	ENSG00000173391	12	48	6	4E+05	0.015362	OLR1	0.507037544014085	1
COPD-CHD	ENSG00000160716	1	20	7	4E+05	0.015301	CHRN2	0.506137372093023	1
COPD-CHD	ENSG00000174579	3	50	11	4E+05	0.015291	MSL2	0.506137372093023	1
COPD-CHD	ENSG00000099977	22	3	1	4E+05	0.015249	DDT	0.506137372093023	1
COPD-CHD	ENSG00000124194	20	76	9	4E+05	0.015245	GDAP1L1	0.506137372093023	1
COPD-CHD	ENSG00000125347	5	41	2	4E+05	0.015212	IRF1	0.506137372093023	1
COPD-CHD	ENSG00000120696	13	4	1	4E+05	0.015179	KBTBD7	0.506137372093023	1
COPD-CHD	ENSG00000152518	2	10	4	4E+05	0.015155	ZFP36L2	0.506137372093023	1
COPD-CHD	ENSG00000182022	10	188	27	4E+05	0.01513	CHST15	0.506137372093023	1
COPD-CHD	ENSG00000255692	12	1	1	4E+05	0.015119	RP1-127H14.3	0.506137372093023	1
COPD-CHD	ENSG00000170500	2	180	10	4E+05	0.015105	LONRF2	0.506137372093023	1
COPD-CHD	ENSG00000185650	14	19	4	4E+05	0.015076	ZFP36L1	0.506137372093023	1
COPD-CHD	ENSG00000101049	20	75	17	4E+05	0.015053	SGK2	0.506137372093023	1
COPD-CHD	ENSG00000115705	2	614	37	4E+05	0.015044	TPO	0.506137372093023	1
COPD-CHD	ENSG00000186998	22	178	27	4E+05	0.015	EMID1	0.506137372093023	1
COPD-CHD	ENSG00000138778	4	172	11	4E+05	0.014949	CENPE	0.506137372093023	1
COPD-CHD	ENSG00000112539	6	79	10	4E+05	0.014827	C6orf118	0.503981722426471	1
COPD-CHD	ENSG00000166159	12	59	18	4E+05	0.014806	LRTM2	0.503981722426471	1
COPD-CHD	ENSG00000269755	19	214	11	4E+05	0.014805	CTD-3105H1	0.503981722426471	1
COPD-CHD	ENSG00000101236	20	204	15	4E+05	0.014714	RNF24	0.502914184842884	1
COPD-CHD	ENSG00000187581	14	8	3	4E+05	0.014601	COX8C	0.499976094444445	1
COPD-CHD	ENSG00000163825	3	12	3	4E+05	0.014535	RTP3	0.498639489795918	1

COPD-CHD	ENSG00000205971	7	4	2	4E+05	0.01449	AC074389.6	0.49801968401487	1
COPD-CHD	ENSG00000087884	11	176	14	4E+05	0.014467	AAMDC	0.49801968401487	1
COPD-CHD	ENSG00000125743	19	10	4	4E+05	0.014446	SNRPD2	0.49801968401487	1
COPD-CHD	ENSG00000130733	19	5	3	4E+05	0.014325	YIPF2	0.495109485981308	1
COPD-CHD	ENSG00000011114	14	271	15	4E+05	0.01428	BTBD7	0.494478426966292	1
COPD-CHD	ENSG00000176974	17	97	10	4E+05	0.014139	SHMT1	0.490514538461539	1
COPD-CHD	ENSG00000088325	20	98	9	4E+05	0.014121	TPX2	0.490514538461539	1
COPD-CHD	ENSG00000143498	1	76	9	4E+05	0.014097	TAF1A	0.490514538461539	1
COPD-CHD	ENSG00000128242	22	50	18	4E+05	0.014095	GAL3ST1	0.490514538461539	1
COPD-CHD	ENSG00000177427	17	11	4	4E+05	0.014075	MIEF2	0.490514538461539	1
COPD-CHD	ENSG00000177302	17	86	8	4E+05	0.014062	TOP3A	0.490514538461539	1
COPD-CHD	ENSG00000147465	8	6	3	4E+05	0.014026	STAR	0.490514538461539	1
COPD-CHD	ENSG00000130640	10	83	13	4E+05	0.014013	TUBGCP2	0.490514538461539	1
COPD-CHD	ENSG00000108306	17	285	9	4E+05	0.014012	FBXL20	0.490514538461539	1
COPD-CHD	ENSG00000101199	20	42	4	4E+05	0.013999	ARFGAP1	0.490514538461539	1
COPD-CHD	ENSG00000257704	19	2	1	4E+05	0.013958	PRR24	0.490514538461539	1
COPD-CHD	ENSG00000128408	22	55	5	4E+05	0.013938	RIBC2	0.490514538461539	1
COPD-CHD	ENSG00000244624	21	1	1	4E+05	0.013912	KRTAP20-1	0.490514538461539	1
COPD-CHD	ENSG00000162630	1	9	3	4E+05	0.013866	B3GALT2	0.490514538461539	1
COPD-CHD	ENSG00000129351	19	47	5	4E+05	0.013782	ILF3	0.490514538461539	1
COPD-CHD	ENSG00000100142	22	80	8	4E+05	0.013772	POLR2F	0.490514538461539	1
COPD-CHD	ENSG00000111300	12	75	11	4E+05	0.01377	NAA25	0.490514538461539	1
COPD-CHD	ENSG00000113391	5	658	21	4E+05	0.013673	FAM172A	0.489975664728682	1
COPD-CHD	ENSG00000167202	15	242	23	4E+05	0.013649	TBC1D2B	0.489975664728682	1
COPD-CHD	ENSG00000114670	3	678	29	4E+05	0.013633	NEK11	0.489975664728682	1
COPD-CHD	ENSG00000186907	11	14	6	4E+05	0.013563	RTN4RL2	0.488876087719298	1
COPD-CHD	ENSG00000073060	12	333	49	4E+05	0.013492	SCARB1	0.4872667421875	1
COPD-CHD	ENSG00000115841	2	457	22	4E+05	0.01348	RMDN2	0.4872667421875	1
COPD-CHD	ENSG00000171044	8	1032	29	4E+05	0.013368	XKR6	0.484681741176471	1
COPD-CHD	ENSG00000104228	8	40	6	4E+05	0.013356	TRIM35	0.484681741176471	1
COPD-CHD	ENSG00000196826	19	267	19	4E+05	0.013336	ZNF709	0.484681741176471	1
COPD-CHD	ENSG00000100003	22	70	13	4E+05	0.01331	SEC14L2	0.484681741176471	1
COPD-CHD	ENSG00000197128	19	41	4	4E+05	0.013303	ZNF772	0.484681741176471	1

COPD-CHD	ENSG00000130643	10	22	7	4E+05	0.013285	CALY	0.484681741176471	1
COPD-CHD	ENSG00000196914	11	253	12	4E+05	0.013116	ARHGEF12	0.481206261904762	1
COPD-CHD	ENSG00000177374	17	9	4	4E+05	0.013029	HIC1	0.478964689860835	1
COPD-CHD	ENSG00000178093	19	5	2	4E+05	0.013008	TSSK6	0.478964689860835	1
COPD-CHD	ENSG00000059377	7	527	66	4E+05	0.013002	TBXAS1	0.478964689860835	1
COPD-CHD	ENSG00000113212	5	18	5	4E+05	0.012996	PCDHB7	0.478964689860835	1
COPD-CHD	ENSG00000125686	17	73	6	4E+05	0.012972	MED1	0.478964689860835	1
COPD-CHD	ENSG00000116329	1	160	18	4E+05	0.012919	OPRD1	0.478964689860835	1
COPD-CHD	ENSG00000156052	9	540	23	4E+05	0.012919	GNAQ	0.478964689860835	1
COPD-CHD	ENSG00000131148	16	87	8	4E+05	0.012866	EMC8	0.478964689860835	1
COPD-CHD	ENSG00000162777	1	44	14	4E+05	0.012836	DENND2D	0.478964689860835	1
COPD-CHD	ENSG00000185019	20	130	15	4E+05	0.01282	UBOX5	0.478964689860835	1
COPD-CHD	ENSG00000144152	2	128	18	4E+05	0.012754	FBLN7	0.478365545638945	1
COPD-CHD	ENSG0000006042	17	54	7	4E+05	0.012671	TMEM98	0.476218416666667	1
COPD-CHD	ENSG00000172409	11	14	3	4E+05	0.012611	CLP1	0.474928718940937	1
COPD-CHD	ENSG00000111271	12	65	5	4E+05	0.012606	ACAD10	0.474928718940937	1
COPD-CHD	ENSG00000249590	22	45	11	4E+05	0.012461	RP4-539M6.1	0.471199081799591	1
COPD-CHD	ENSG00000139718	12	36	5	4E+05	0.012436	SETD1B	0.471199081799591	1
COPD-CHD	ENSG00000132297	8	202	29	4E+05	0.01241	HHLA1	0.471197761806982	1
COPD-CHD	ENSG00000214413	10	42	10	4E+05	0.012357	BBIP1	0.470150796296296	1
COPD-CHD	ENSG00000116604	1	65	9	4E+05	0.01235	MEF2D	0.470150796296296	1
COPD-CHD	ENSG00000146094	5	18	6	4E+05	0.012296	DOK3	0.469763090909091	1
COPD-CHD	ENSG00000081019	1	64	12	4E+05	0.01229	RSBN1	0.469763090909091	1
COPD-CHD	ENSG00000101017	20	26	9	4E+05	0.012245	CD40	0.469755798755187	1
COPD-CHD	ENSG00000151651	10	48	5	4E+05	0.012227	ADAM8	0.469755798755187	1
COPD-CHD	ENSG00000204842	12	108	8	4E+05	0.012196	ATXN2	0.469755798755187	1
COPD-CHD	ENSG00000139209	12	207	30	4E+05	0.012185	SLC38A4	0.469755798755187	1
COPD-CHD	ENSG00000184304	14	1413	104	4E+05	0.01207	PRKD1	0.466917092050209	1
COPD-CHD	ENSG00000078804	20	10	3	4E+05	0.012049	TP53INP2	0.466917092050209	1
COPD-CHD	ENSG00000169609	15	53	9	4E+05	0.012047	C15orf40	0.466917092050209	1
COPD-CHD	ENSG00000136695	2	46	3	4E+05	0.012015	IL36RN	0.466917092050209	1
COPD-CHD	ENSG00000100296	22	119	10	4E+05	0.01201	THOC5	0.466917092050209	1
COPD-CHD	ENSG00000107014	9	8	2	4E+05	0.012005	RLN2	0.466917092050209	1

COPD-CHD	ENSG0000081026	1	569	30	4E+05	0.011925	MAGI3	0.466917092050209	1
COPD-CHD	ENSG00000162775	1	11	4	4E+05	0.011903	RBM15	0.466917092050209	1
COPD-CHD	ENSG00000204140	6	37	6	4E+05	0.011871	CLPSL1	0.466917092050209	1
COPD-CHD	ENSG00000173621	11	1	1	4E+05	0.0118	LRFN4	0.465231982942431	1
COPD-CHD	ENSG00000133114	13	114	15	4E+05	0.011753	GPALPP1	0.464369066239316	1
COPD-CHD	ENSG00000157500	3	69	9	4E+05	0.011746	APPL1	0.464369066239316	1
COPD-CHD	ENSG00000215251	20	33	7	4E+05	0.011721	FASTKD5	0.464369066239316	1
COPD-CHD	ENSG00000240682	3	34	8	4E+05	0.011592	ISY1	0.460962735483871	1
COPD-CHD	ENSG00000173641	1	47	6	4E+05	0.011557	HSPB7	0.460561394396552	1
COPD-CHD	ENSG00000099338	19	119	15	4E+05	0.011554	CATSPERG	0.460561394396552	1
COPD-CHD	ENSG00000140463	15	99	14	4E+05	0.011546	BBS4	0.460561394396552	1
COPD-CHD	ENSG00000162241	11	11	4	4E+05	0.01152	SLC25A45	0.460561394396552	1
COPD-CHD	ENSG00000108465	17	38	7	4E+05	0.0115	CDK5RAP3	0.460561394396552	1
COPD-CHD	ENSG00000135503	12	70	10	4E+05	0.01148	ACVR1B	0.460561394396552	1
COPD-CHD	ENSG00000100207	22	376	30	4E+05	0.01132	TCF20	0.457026462882096	1
COPD-CHD	ENSG00000116514	1	55	7	4E+05	0.011298	RNF19B	0.457026462882096	1
COPD-CHD	ENSG00000151617	4	112	11	4E+05	0.011261	EDNRA	0.456638489035088	1
COPD-CHD	ENSG00000269095	19	63	14	4E+05	0.011235	AC010646.3	0.456585461538462	1
COPD-CHD	ENSG00000164253	5	726	35	4E+05	0.011171	WDR41	0.454984495594714	1
COPD-CHD	ENSG00000163666	3	39	7	4E+05	0.011153	HESX1	0.454984495594714	1
COPD-CHD	ENSG00000116670	1	55	10	4E+05	0.011095	MAD2L2	0.453888595132743	1
COPD-CHD	ENSG00000134809	11	3	1	4E+05	0.011	TIMM10	0.451	1
COPD-CHD	ENSG00000173868	17	17	5	4E+05	0.010991	PHOSPHO1	0.451	1
COPD-CHD	ENSG00000196600	11	223	12	4E+05	0.010823	SLC22A25	0.445719583518931	1
COPD-CHD	ENSG00000166997	7	12	4	4E+05	0.010815	CNPY4	0.445719583518931	1
COPD-CHD	ENSG00000177548	16	33	7	4E+05	0.010758	RABEP2	0.445025006711409	1
COPD-CHD	ENSG00000131435	5	43	7	4E+05	0.010686	PDLIM4	0.443037726457399	1
COPD-CHD	ENSG00000197256	19	121	12	4E+05	0.01059	KANK2	0.440044247191011	1
COPD-CHD	ENSG00000175393	11	6	2	4E+05	0.010589	OR10A6	0.440044247191011	1
COPD-CHD	ENSG00000176209	8	44	6	4E+05	0.010581	SMIM19	0.440044247191011	1
COPD-CHD	ENSG00000089234	12	29	5	4E+05	0.010574	BRAP	0.440044247191011	1
COPD-CHD	ENSG00000081692	1	13	5	4E+05	0.01054	JMJD4	0.440044247191011	1
COPD-CHD	ENSG00000168589	16	42	5	4E+05	0.01053	DYNLRB2	0.440044247191011	1

COPD-CHD	ENSG00000249222	22	3	1	4E+05	0.01052	ATP5L2	0.440044247191011	1
COPD-CHD	ENSG00000140368	15	101	17	4E+05	0.010499	PSTPIP1	0.440044247191011	1
COPD-CHD	ENSG00000186010	19	34	4	4E+05	0.010494	NDUFA13	0.440044247191011	1
COPD-CHD	ENSG00000186063	1	69	13	4E+05	0.010365	AIDA	0.439585355504587	1
COPD-CHD	ENSG00000126062	3	3	2	4E+05	0.010355	TMEM115	0.439585355504587	1
COPD-CHD	ENSG00000150938	2	489	45	4E+05	0.01035	CRIM1	0.439585355504587	1
COPD-CHD	ENSG00000143207	1	541	19	4E+05	0.010338	RFWD2	0.439585355504587	1
COPD-CHD	ENSG00000105255	19	57	12	4E+05	0.010317	FSD1	0.439585355504587	1
COPD-CHD	ENSG00000169599	2	98	6	4E+05	0.010119	NFU1	0.43413092575406	1
COPD-CHD	ENSG00000102996	16	32	7	4E+05	0.01008	MMP15	0.433463441860465	1
COPD-CHD	ENSG00000155792	8	729	27	4E+05	0.010073	DEPTOR	0.433463441860465	1
COPD-CHD	ENSG00000161544	17	39	5	4E+05	0.010056	CYGB	0.433463441860465	1
COPD-CHD	ENSG00000131400	19	13	3	4E+05	0.010045	NAPSA	0.433463441860465	1
COPD-CHD	ENSG00000242852	19	187	10	4E+05	0.010044	ZNF709	0.433463441860465	1
COPD-CHD	ENSG00000135049	9	294	23	4E+05	0.009925	AGTPBP1	0.431819235294118	1
COPD-CHD	ENSG00000167258	17	188	10	4E+05	0.00992	CDK12	0.431819235294118	1
COPD-CHD	ENSG00000214140	17	42	5	4E+05	0.009909	PRCD	0.431819235294118	1
COPD-CHD	ENSG00000258674	19	35	4	4E+05	0.009892	CTC-260F20.1	0.431819235294118	1
COPD-CHD	ENSG00000170677	18	135	19	4E+05	0.009793	SOCS6	0.430111201187648	1
COPD-CHD	ENSG00000162419	1	64	6	4E+05	0.009725	GMEB1	0.428150299761905	1
COPD-CHD	ENSG00000173757	17	74	8	4E+05	0.009716	STAT5B	0.428150299761905	1
COPD-CHD	ENSG00000250067	19	37	4	4E+05	0.009703	YJEFN3	0.428150299761905	1
COPD-CHD	ENSG00000139433	12	67	10	4E+05	0.009672	GLTP	0.428150299761905	1
COPD-CHD	ENSG00000184117	22	65	7	4E+05	0.009661	NIPSNAP1	0.428150299761905	1
COPD-CHD	ENSG00000179295	12	89	12	4E+05	0.009576	PTPN11	0.426692078072289	1
COPD-CHD	ENSG00000164062	3	7	2	4E+05	0.00956	APEH	0.426692078072289	1
COPD-CHD	ENSG00000138182	10	250	11	4E+05	0.00954	KIF20B	0.426692078072289	1
COPD-CHD	ENSG00000159322	15	70	10	4E+05	0.009539	ADPGK	0.426692078072289	1
COPD-CHD	ENSG00000255730	19	163	8	4E+05	0.009537	CTC-435M10	0.426692078072289	1
COPD-CHD	ENSG00000091592	17	510	17	4E+05	0.009518	NLRP1	0.426692078072289	1
COPD-CHD	ENSG00000134248	1	17	4	4E+05	0.009446	LAMTOR5	0.426692078072289	1
COPD-CHD	ENSG00000185974	13	43	6	4E+05	0.009424	GRK1	0.426692078072289	1
COPD-CHD	ENSG00000162755	1	4	2	4E+05	0.009397	KLHDC9	0.426692078072289	1

COPD-CHD	ENSG00000147905	9	280	16	4E+05	0.009389	ZCCHC7	0.426692078072289	1
COPD-CHD	ENSG00000172780	3	35	7	4E+05	0.009316	RAB43	0.42535235382716	1
COPD-CHD	ENSG00000134909	11	646	22	4E+05	0.009316	ARHGAP32	0.42535235382716	1
COPD-CHD	ENSG00000099337	19	27	6	4E+05	0.009295	KCNK6	0.42535235382716	1
COPD-CHD	ENSG00000196549	3	363	43	4E+05	0.009264	MME	0.42535235382716	1
COPD-CHD	ENSG00000198646	20	186	13	4E+05	0.009249	NCOA6	0.42535235382716	1
COPD-CHD	ENSG00000197093	7	12	3	4E+05	0.009204	GAL3ST4	0.42535235382716	1
COPD-CHD	ENSG00000100604	14	43	8	4E+05	0.009121	CHGA	0.422679234586466	1
COPD-CHD	ENSG00000112273	6	8	2	4E+05	0.009098	HDGFL1	0.422679234586466	1
COPD-CHD	ENSG00000117399	1	6	3	4E+05	0.009078	CDC20	0.422679234586466	1
COPD-CHD	ENSG00000261796	3	76	11	4E+05	0.009071	ISY1-RAB43	0.422679234586466	1
COPD-CHD	ENSG00000213047	1	345	17	4E+05	0.009064	DENND1B	0.422679234586466	1
COPD-CHD	ENSG00000102908	16	280	15	4E+05	0.009045	NFAT5	0.422679234586466	1
COPD-CHD	ENSG00000055211	6	19	4	4E+05	0.009038	GINM1	0.422679234586466	1
COPD-CHD	ENSG00000138399	2	119	19	4E+05	0.009008	FASTKD1	0.422679234586466	1
COPD-CHD	ENSG00000181698	11	3	2	4E+05	0.009001	OR5T1	0.422679234586466	1
COPD-CHD	ENSG00000197408	19	102	11	4E+05	0.008998	CYP2B6	0.422679234586466	1
COPD-CHD	ENSG00000138315	10	35	5	4E+05	0.008929	OIT3	0.422679234586466	1
COPD-CHD	ENSG00000154310	3	970	94	4E+05	0.00892	TNIK	0.422679234586466	1
COPD-CHD	ENSG00000177673	2	3	2	4E+05	0.008912	C2orf57	0.422679234586466	1
COPD-CHD	ENSG00000144362	2	12	3	4E+05	0.008911	PHOSPHO2	0.422679234586466	1
COPD-CHD	ENSG00000147889	9	29	7	4E+05	0.008891	CDKN2A	0.422679234586466	1
COPD-CHD	ENSG00000148834	10	61	12	4E+05	0.008889	GSTO1	0.422679234586466	1
COPD-CHD	ENSG00000168679	1	54	9	4E+05	0.008883	SLC16A4	0.422679234586466	1
COPD-CHD	ENSG00000198046	19	95	12	4E+05	0.008861	ZNF667	0.422679234586466	1
COPD-CHD	ENSG00000160844	7	132	13	4E+05	0.008855	GATS	0.422679234586466	1
COPD-CHD	ENSG00000105341	19	16	2	4E+05	0.008764	ATP5SL	0.422679234586466	1
COPD-CHD	ENSG00000163798	2	23	7	4E+05	0.008747	SLC4A1AP	0.422679234586466	1
COPD-CHD	ENSG00000149262	11	301	15	4E+05	0.008681	INTS4	0.422679234586466	1
COPD-CHD	ENSG00000166949	15	370	51	4E+05	0.00847	SMAD3	0.415449117506631	1
COPD-CHD	ENSG00000188186	7	8	2	4E+05	0.008358	LAMTOR4	0.411036242287234	1
COPD-CHD	ENSG00000171552	20	84	6	4E+05	0.008323	BCL2L1	0.410406512266667	1
COPD-CHD	ENSG00000172159	9	1142	73	4E+05	0.008287	FRMD3	0.409709141176471	1

COPD-CHD	ENSG00000186075	17	32	3	4E+05	0.008185	ZBPB2	0.405741122252011	1
COPD-CHD	ENSG00000164077	3	22	6	4E+05	0.008178	MON1A	0.405741122252011	1
COPD-CHD	ENSG00000186207	1	4	2	4E+05	0.008162	LCE5A	0.405741122252011	1
COPD-CHD	ENSG00000059378	7	140	19	4E+05	0.008157	PARP12	0.405741122252011	1
COPD-CHD	ENSG00000106261	7	40	8	4E+05	0.008149	ZKSCAN1	0.405741122252011	1
COPD-CHD	ENSG00000162888	1	22	6	4E+05	0.008148	C1orf147	0.405741122252011	1
COPD-CHD	ENSG00000162040	16	36	4	4E+05	0.008104	HS3ST6	0.405741122252011	1
COPD-CHD	ENSG00000137575	8	49	3	4E+05	0.008102	SDCBP	0.405741122252011	1
COPD-CHD	ENSG00000117475	1	74	9	4E+05	0.008044	BLZF1	0.405741122252011	1
COPD-CHD	ENSG00000173511	11	3	1	4E+05	0.007993	VEGFB	0.405741122252011	1
COPD-CHD	ENSG00000169509	1	5	2	4E+05	0.007957	CRCT1	0.405334945454545	1
COPD-CHD	ENSG00000104941	19	59	10	4E+05	0.007922	RSPH6A	0.404646419337017	1
COPD-CHD	ENSG00000197859	9	144	17	4E+05	0.007899	ADAMTSL2	0.404599470914127	1
COPD-CHD	ENSG00000055163	5	407	21	4E+05	0.007887	CYFIP2	0.404599470914127	1
COPD-CHD	ENSG00000196141	2	387	40	4E+05	0.00788	SPATS2L	0.404599470914127	1
COPD-CHD	ENSG00000077348	19	19	2	4E+05	0.007865	EXOSC5	0.404599470914127	1
COPD-CHD	ENSG00000136688	2	16	4	4E+05	0.007726	IL36G	0.400177353221289	1
COPD-CHD	ENSG00000235750	1	108	12	4E+05	0.007664	KIAA0040	0.398096686516854	1
COPD-CHD	ENSG00000169594	15	36	6	4E+05	0.007628	BNC1	0.397311689577465	1
COPD-CHD	ENSG00000129354	19	68	6	4E+05	0.007601	AP1M2	0.397034155367232	1
COPD-CHD	ENSG00000116793	1	99	10	4E+05	0.007555	PHTF1	0.395728352974504	1
COPD-CHD	ENSG00000131507	5	165	13	4E+05	0.00753	NDFIP1	0.395534047	1
COPD-CHD	ENSG00000163431	1	113	18	4E+05	0.007517	LMOD1	0.395534047	1
COPD-CHD	ENSG00000006282	17	44	7	4E+05	0.007474	SPATA20	0.394883229714286	1
COPD-CHD	ENSG00000165813	10	102	9	4E+05	0.007438	C10orf118	0.394070231232092	1
COPD-CHD	ENSG00000105229	19	102	10	4E+05	0.007423	PIAS4	0.394070231232092	1
COPD-CHD	ENSG00000100167	22	51	9	4E+05	0.007389	SEPT3	0.393762381268012	1
COPD-CHD	ENSG00000156194	4	72	10	4E+05	0.007362	PPEF2	0.393420073988439	1
COPD-CHD	ENSG00000196296	16	29	5	4E+05	0.007358	ATP2A1	0.393420073988439	1
COPD-CHD	ENSG00000198156	16	3	1	4E+05	0.007344	NPIP6	0.393420073988439	1
COPD-CHD	ENSG00000187492	3	14	5	4E+05	0.007285	CDHR4	0.392731588921283	1
COPD-CHD	ENSG00000159788	4	296	31	4E+05	0.007273	RGS12	0.392731588921283	1
COPD-CHD	ENSG00000171956	15	117	17	4E+05	0.007255	FOXB1	0.392731588921283	1

COPD-CHD	ENSG00000138398	2	210	15	4E+05	0.007232	PPIG	0.392731588921283	1
COPD-CHD	ENSG00000095627	10	121	11	4E+05	0.007141	TDRD1	0.389516460471976	1
COPD-CHD	ENSG00000162992	2	7	2	4E+05	0.007133	NEUROD1	0.389516460471976	1
COPD-CHD	ENSG00000070444	17	45	7	4E+05	0.007112	MNT	0.389516460471976	1
COPD-CHD	ENSG00000106952	9	99	7	4E+05	0.007092	TNFSF8	0.389516460471976	1
COPD-CHD	ENSG00000145020	3	8	2	4E+05	0.007087	AMT	0.389516460471976	1
COPD-CHD	ENSG00000116824	1	30	6	4E+05	0.00707	CD2	0.389516460471976	1
COPD-CHD	ENSG00000160161	19	16	2	4E+05	0.006979	CILP2	0.387550259159159	1
COPD-CHD	ENSG00000117477	1	182	18	4E+05	0.006949	CCDC181	0.387041136144578	1
COPD-CHD	ENSG00000127616	19	275	20	4E+05	0.006858	SMARCA4	0.383126816314199	1
COPD-CHD	ENSG00000248098	19	109	4	4E+05	0.006846	BCKDHA	0.383126816314199	1
COPD-CHD	ENSG00000166444	11	494	26	4E+05	0.006814	ST5	0.382943551671733	1
COPD-CHD	ENSG00000164086	3	5	3	4E+05	0.006805	DUSP7	0.382943551671733	1
COPD-CHD	ENSG00000168610	17	143	12	4E+05	0.006789	STAT3	0.382943551671733	1
COPD-CHD	ENSG00000105705	19	89	10	4E+05	0.006693	SUGP1	0.379610020245399	1
COPD-CHD	ENSG00000175202	15	16	5	4E+05	0.006684	HIGD2B	0.379610020245399	1
COPD-CHD	ENSG00000213413	7	13	3	4E+05	0.006681	PVRIG	0.379610020245399	1
COPD-CHD	ENSG00000130598	11	6	3	4E+05	0.006655	TNNI2	0.379610020245399	1
COPD-CHD	ENSG00000134871	13	949	99	4E+05	0.006588	COL4A2	0.378341939130435	1
COPD-CHD	ENSG00000105198	19	8	4	4E+05	0.00654	LGALS13	0.376749804672897	1
COPD-CHD	ENSG00000135698	16	214	11	4E+05	0.00654	MPHOSPH6	0.376749804672897	1
COPD-CHD	ENSG00000173402	3	105	10	4E+05	0.006521	DAG1	0.376749804672897	1
COPD-CHD	ENSG00000139116	12	235	19	4E+05	0.00641	KIF21A	0.372727389937107	1
COPD-CHD	ENSG00000112182	6	727	72	4E+05	0.006389	BACH2	0.372701562776025	1
COPD-CHD	ENSG00000233538	2	1	1	4E+05	0.006333	AC017104.2	0.370557299367089	1
COPD-CHD	ENSG00000173442	11	24	7	4E+05	0.006288	EHBP1L1	0.369115580952381	1
COPD-CHD	ENSG00000170522	4	502	58	4E+05	0.006262	ELOVL6	0.36876589522293	1
COPD-CHD	ENSG00000100029	22	97	18	4E+05	0.006219	PES1	0.367421486900959	1
COPD-CHD	ENSG00000186451	3	40	8	4E+05	0.006193	SPATA12	0.36704635	1
COPD-CHD	ENSG00000172568	5	15	4	4E+05	0.006169	FNDC9	0.366805550803859	1
COPD-CHD	ENSG00000138061	2	155	19	4E+05	0.006169	CYP1B1	0.366805550803859	1
COPD-CHD	ENSG00000067560	3	82	8	4E+05	0.006158	RHOA	0.366805550803859	1
COPD-CHD	ENSG00000188816	10	4	1	4E+05	0.006124	HMX2	0.366805550803859	1

COPD-CHD ENSG0000089280	16	7	3	4E+05	0.006117	FUS	0.366805550803859	1
COPD-CHD ENSG00000137547	8	25	3	4E+05	0.00602	MRPL15	0.363771146732026	1
COPD-CHD ENSG00000153214	2	122	20	4E+05	0.006017	TMEM87B	0.363771146732026	1
COPD-CHD ENSG0000044574	9	5	2	4E+05	0.006008	HSPA5	0.363771146732026	1
COPD-CHD ENSG00000183798	20	23	6	4E+05	0.005927	EMILIN3	0.361721796369637	1
COPD-CHD ENSG0000083799	16	81	10	4E+05	0.005917	CYLD	0.361721796369637	1
COPD-CHD ENSG00000153820	2	708	27	4E+05	0.005909	SPHKAP	0.361721796369637	1
COPD-CHD ENSG00000198077	19	29	6	4E+05	0.005907	CYP2A7	0.361721796369637	1
COPD-CHD ENSG00000175489	19	23	5	4E+05	0.005833	LRRC25	0.360722922742475	1
COPD-CHD ENSG0000065621	10	55	10	4E+05	0.005793	GSTO2	0.359426568791946	1
COPD-CHD ENSG00000217236	2	15	5	4E+05	0.005783	SP9	0.359426568791946	1
COPD-CHD ENSG00000183476	15	65	15	4E+05	0.005682	SH2D7	0.354927248648649	1
COPD-CHD ENSG00000169714	3	12	5	4E+05	0.005673	CNBP	0.354927248648649	1
COPD-CHD ENSG00000197272	16	27	6	4E+05	0.005666	IL27	0.354927248648649	1
COPD-CHD ENSG00000196923	5	19	6	4E+05	0.005661	PDLIM7	0.354927248648649	1
COPD-CHD ENSG00000125901	20	4	2	4E+05	0.005529	MRPS26	0.350106820890411	1
COPD-CHD ENSG00000188786	1	76	13	4E+05	0.005503	MTF1	0.349702300343643	1
COPD-CHD ENSG00000198478	6	182	22	4E+05	0.005474	SH3BGRL2	0.349027189310345	1
COPD-CHD ENSG00000196263	19	79	9	4E+05	0.005466	ZNF471	0.349027189310345	1
COPD-CHD ENSG00000133488	22	62	9	4E+05	0.005432	SEC14L4	0.348741544097222	1
COPD-CHD ENSG00000143222	1	10	3	4E+05	0.005395	UFC1	0.347579257142857	1
COPD-CHD ENSG00000268344	13	1	1	4E+05	0.005357	AL138815.2	0.346344188461539	1
COPD-CHD ENSG00000228008	3	11	3	4E+05	0.005342	CTD-2330K9	0.346344188461539	1
COPD-CHD ENSG00000151465	10	136	16	4E+05	0.005283	CDC123	0.343945621830986	1
COPD-CHD ENSG00000158186	3	128	11	4E+05	0.005197	MRAS	0.339548338162544	1
COPD-CHD ENSG00000120471	11	25	8	4E+05	0.005097	TP53AIP1	0.334234660638298	1
COPD-CHD ENSG00000197479	5	8	3	4E+05	0.005093	PCDHB11	0.334234660638298	1
COPD-CHD ENSG00000184608	8	295	23	4E+05	0.005074	C8orf12	0.334234660638298	1
COPD-CHD ENSG00000234465	19	23	6	4E+05	0.00502	PINLYP	0.332678937634409	1
COPD-CHD ENSG00000112499	6	342	23	4E+05	0.005019	SLC22A2	0.332678937634409	1
COPD-CHD ENSG00000141744	17	3	2	4E+05	0.004906	PNMT	0.327477612635379	1
COPD-CHD ENSG00000168769	4	258	24	4E+05	0.0049	TET2	0.327477612635379	1
COPD-CHD ENSG0000048471	16	2333	105	4E+05	0.004866	SNX29	0.327183116	1

COPD-CHD	ENSG00000106290	7	20	5	4E+05	0.004864	TAF6	0.327183116	1
COPD-CHD	ENSG00000255524	16	11	3	4E+05	0.004837	NPIP8	0.327183116	1
COPD-CHD	ENSG00000162972	2	97	15	4E+05	0.004809	C2orf47	0.326937195588235	1
COPD-CHD	ENSG00000147459	8	570	49	4E+05	0.004663	DOCK5	0.318174841697417	1
COPD-CHD	ENSG00000173064	12	222	16	4E+05	0.004632	HECTD4	0.317223377777778	1
COPD-CHD	ENSG00000088298	20	338	18	4E+05	0.004627	EDEM2	0.317223377777778	1
COPD-CHD	ENSG00000008838	17	86	9	4E+05	0.004622	MED24	0.317223377777778	1
COPD-CHD	ENSG00000169194	5	8	2	4E+05	0.004574	IL13	0.316750137453184	1
COPD-CHD	ENSG00000099994	22	22	7	4E+05	0.00457	SUSD2	0.316750137453184	1
COPD-CHD	ENSG00000130513	19	55	9	4E+05	0.004532	GDF15	0.316203077735849	1
COPD-CHD	ENSG00000119397	9	203	15	4E+05	0.004524	CNTRL	0.316203077735849	1
COPD-CHD	ENSG00000139370	12	121	9	4E+05	0.004506	SLC15A4	0.316203077735849	1
COPD-CHD	ENSG00000154473	10	14	1	4E+05	0.004483	BUB3	0.316203077735849	1
COPD-CHD	ENSG00000225828	1	1	1	4E+05	0.004404	FAM229A	0.311973634099617	1
COPD-CHD	ENSG00000197520	1	15	4	4E+05	0.004379	FAM177B	0.311395551923077	1
COPD-CHD	ENSG00000181693	11	4	2	4E+05	0.004373	OR8H1	0.311395551923077	1
COPD-CHD	ENSG00000137494	11	128	15	4E+05	0.00436	ANKRD42	0.311395551923077	1
COPD-CHD	ENSG00000198380	2	118	6	4E+05	0.004343	GFPT1	0.311395551923077	1
COPD-CHD	ENSG00000176986	10	35	6	4E+05	0.004302	SEC24C	0.310742699609375	1
COPD-CHD	ENSG00000143554	1	7	4	4E+05	0.00423	SLC27A3	0.306733058823529	1
COPD-CHD	ENSG00000066923	7	114	8	4E+05	0.004179	STAG3	0.304242469291339	1
COPD-CHD	ENSG00000148842	10	399	19	4E+05	0.004113	CNNM2	0.300613960869565	1
COPD-CHD	ENSG00000172650	10	12	4	4E+05	0.004078	AGAP5	0.29920199047619	1
COPD-CHD	ENSG00000156603	11	8	3	4E+05	0.004077	MED19	0.29920199047619	1
COPD-CHD	ENSG00000198373	16	445	24	4E+05	0.004058	WWP2	0.29920199047619	1
COPD-CHD	ENSG00000001617	3	57	8	4E+05	0.004019	SEMA3F	0.298425432128514	1
COPD-CHD	ENSG00000150261	11	4	2	4E+05	0.003984	OR8K1	0.297056423790323	1
COPD-CHD	ENSG00000175445	8	148	23	4E+05	0.003979	LPL	0.297056423790323	1
COPD-CHD	ENSG00000196968	10	9	2	4E+05	0.00397	FUT11	0.297056423790323	1
COPD-CHD	ENSG00000164078	3	21	4	4E+05	0.003907	MST1R	0.294889939591837	1
COPD-CHD	ENSG00000204038	10	31	4	4E+05	0.003875	AL359195.1	0.293688612295082	1
COPD-CHD	ENSG00000164061	3	159	14	4E+05	0.003862	BSN	0.293688612295082	1
COPD-CHD	ENSG00000169682	16	14	5	4E+05	0.003855	SPNS1	0.293688612295082	1

COPD-CHD	ENSG00000196782	4	1054	101	4E+05	0.003844	MAML3	0.293688612295082	1
COPD-CHD	ENSG00000145022	3	6	2	4E+05	0.003833	TCTA	0.293688612295082	1
COPD-CHD	ENSG00000167914	17	48	7	4E+05	0.003805	GSDMA	0.293688612295082	1
COPD-CHD	ENSG00000224470	16	68	11	4E+05	0.003772	ATXNIL	0.293043503361345	1
COPD-CHD	ENSG00000142694	1	3	1	4E+05	0.003763	EVA1B	0.293043503361345	1
COPD-CHD	ENSG00000143398	1	59	7	4E+05	0.003718	PIP5K1A	0.29133510720339	1
COPD-CHD	ENSG00000131143	16	15	4	4E+05	0.003718	COX4I1	0.29133510720339	1
COPD-CHD	ENSG00000178952	16	7	2	4E+05	0.003621	TUFM	0.286136371794872	1
COPD-CHD	ENSG00000050438	12	248	19	4E+05	0.003613	SLC4A8	0.286136371794872	1
COPD-CHD	ENSG00000137571	8	423	35	4E+05	0.003609	SLCO5A1	0.286136371794872	1
COPD-CHD	ENSG00000213420	7	7	3	4E+05	0.003606	GPC2	0.286136371794872	1
COPD-CHD	ENSG00000143156	1	760	18	4E+05	0.003572	NME7	0.286136371794872	1
COPD-CHD	ENSG00000214491	22	93	10	4E+05	0.003504	SEC14L6	0.282936524017467	1
COPD-CHD	ENSG00000205730	16	5	2	4E+05	0.003499	ITPRIPL2	0.282936524017467	1
COPD-CHD	ENSG00000064199	11	9	4	4E+05	0.003474	SPA17	0.282936524017467	1
COPD-CHD	ENSG00000076685	10	236	17	4E+05	0.003416	NT5C2	0.279475919469027	1
COPD-CHD	ENSG00000235931	10	19	4	4E+05	0.003387	C10orf40	0.278375841333333	1
COPD-CHD	ENSG00000129158	11	417	38	4E+05	0.003341	SERGEF	0.275813076785714	1
COPD-CHD	ENSG00000168484	8	22	8	4E+05	0.003337	SFTPC	0.275813076785714	1
COPD-CHD	ENSG00000178149	3	4	2	4E+05	0.003316	DALRD3	0.275813076785714	1
COPD-CHD	ENSG00000213996	19	22	5	4E+05	0.003299	TM6SF2	0.275813076785714	1
COPD-CHD	ENSG00000250038	4	114	11	4E+05	0.003281	RP11-180C1.1	0.27573443	1
COPD-CHD	ENSG00000119912	10	229	25	4E+05	0.003271	IDE	0.27573443	1
COPD-CHD	ENSG00000177238	16	6	2	4E+05	0.003261	TRIM72	0.27573443	1
COPD-CHD	ENSG00000138668	4	48	5	4E+05	0.003226	HNRNPD	0.274851246543779	1
COPD-CHD	ENSG00000132376	17	93	13	4E+05	0.003174	INPP5K	0.271689290277778	1
COPD-CHD	ENSG00000221838	7	20	4	4E+05	0.003095	AP4M1	0.266175794883721	1
COPD-CHD	ENSG00000166507	10	12	3	4E+05	0.003094	NDST2	0.266175794883721	1
COPD-CHD	ENSG00000213658	16	5	2	4E+05	0.00309	LAT	0.266175794883721	1
COPD-CHD	ENSG00000164087	3	85	10	4E+05	0.003067	POC1A	0.266175794883721	1
COPD-CHD	ENSG00000130164	19	153	20	4E+05	0.003067	LDLR	0.266175794883721	1
COPD-CHD	ENSG00000179832	8	97	12	4E+05	0.003065	MROH1	0.266175794883721	1
COPD-CHD	ENSG00000213185	10	32	10	4E+05	0.003061	FAM24B	0.266175794883721	1

COPD-CHD ENSG00000183560	11	7	1	4E+05	0.003031 FOLR4	0.266175794883721	1
COPD-CHD ENSG0000010539	16	33	6	4E+05	0.00303 ZNF200	0.266175794883721	1
COPD-CHD ENSG00000166166	14	18	3	4E+05	0.003007 TRMT61A	0.266175794883721	1
COPD-CHD ENSG00000120324	5	8	3	4E+05	0.002984 PCDHB10	0.266175794883721	1
COPD-CHD ENSG00000175866	17	369	44	4E+05	0.002968 BAIAP2	0.266175794883721	1
COPD-CHD ENSG00000145029	3	7	4	4E+05	0.002956 NICN1	0.266175794883721	1
COPD-CHD ENSG00000221986	1	39	9	4E+05	0.002896 MYBPHL	0.265107847029703	1
COPD-CHD ENSG00000168488	16	29	3	4E+05	0.002894 ATXN2L	0.265107847029703	1
COPD-CHD ENSG00000136828	9	505	15	4E+05	0.002886 RALGPS1	0.265107847029703	1
COPD-CHD ENSG00000188981	4	98	9	4E+05	0.002821 MSANTD1	0.262079726130653	1
COPD-CHD ENSG00000100243	22	104	14	4E+05	0.002809 CYB5R3	0.262079726130653	1
COPD-CHD ENSG00000072682	5	248	21	4E+05	0.0028 P4HA2	0.262079726130653	1
COPD-CHD ENSG00000154305	1	116	10	4E+05	0.002793 MIA3	0.262079726130653	1
COPD-CHD ENSG00000143226	1	62	11	4E+05	0.00276 FCGR2A	0.261690321538462	1
COPD-CHD ENSG00000137500	11	65	7	4E+05	0.002753 CCDC90B	0.261690321538462	1
COPD-CHD ENSG00000138472	3	170	22	4E+05	0.00275 GUCA1C	0.261690321538462	1
COPD-CHD ENSG00000140391	15	28	6	4E+05	0.00272 TSPAN3	0.261690321538462	1
COPD-CHD ENSG00000175029	10	670	64	4E+05	0.002673 CTBP2	0.258757826178011	1
COPD-CHD ENSG00000101203	20	123	11	4E+05	0.002666 COL20A1	0.258757826178011	1
COPD-CHD ENSG00000186866	21	63	7	4E+05	0.002665 POFUT2	0.258757826178011	1
COPD-CHD ENSG00000158019	2	902	42	4E+05	0.002663 BRE	0.258757826178011	1
COPD-CHD ENSG00000203795	10	6	3	4E+05	0.00266 FAM24A	0.258757826178011	1
COPD-CHD ENSG00000135443	12	24	8	4E+05	0.002651 KRT85	0.258757826178011	1
COPD-CHD ENSG00000178188	16	41	3	4E+05	0.002643 SH2B1	0.258757826178011	1
COPD-CHD ENSG00000148660	10	67	7	4E+05	0.002617 CAMK2G	0.258757826178011	1
COPD-CHD ENSG00000167083	17	26	7	4E+05	0.002596 GNGT2	0.258757826178011	1
COPD-CHD ENSG00000268797	19	307	38	4E+05	0.002592 CTC-490E21.	0.258757826178011	1
COPD-CHD ENSG00000158793	1	9	4	4E+05	0.002592 NIT1	0.258757826178011	1
COPD-CHD ENSG00000161849	12	59	4	4E+05	0.002576 KRT84	0.258757826178011	1
COPD-CHD ENSG00000163660	3	26	4	4E+05	0.002563 CCNL1	0.258757826178011	1
COPD-CHD ENSG00000132773	1	5	3	4E+05	0.002521 TOE1	0.258757826178011	1
COPD-CHD ENSG00000204084	1	185	20	4E+05	0.002511 INPP5B	0.258757826178011	1
COPD-CHD ENSG00000102984	16	61	9	4E+05	0.00245 ZNF821	0.257382113	1

COPD-CHD	ENSG00000205089	5	7	2	4E+05	0.002422	CCNI2	0.255947138857143	1
COPD-CHD	ENSG00000198892	1	7	3	4E+05	0.002418	SHISA4	0.255947138857143	1
COPD-CHD	ENSG00000081177	14	95	10	4E+05	0.002409	EXD2	0.255947138857143	1
COPD-CHD	ENSG00000074201	11	247	19	4E+05	0.002401	CLNS1A	0.255947138857143	1
COPD-CHD	ENSG00000205334	2	13	4	4E+05	0.002383	AC074091.13	0.255947138857143	1
COPD-CHD	ENSG00000110075	11	225	11	4E+05	0.002371	PPP6R3	0.255947138857143	1
COPD-CHD	ENSG00000120992	8	109	7	4E+05	0.002305	LYPLA1	0.252155968047337	1
COPD-CHD	ENSG00000182149	16	167	15	4E+05	0.002278	IST1	0.25067412202381	1
COPD-CHD	ENSG00000166147	15	361	13	4E+05	0.002273	FBN1	0.25067412202381	1
COPD-CHD	ENSG00000107960	10	88	8	4E+05	0.002253	OBFC1	0.25067412202381	1
COPD-CHD	ENSG00000184730	16	9	2	4E+05	0.0022	APOBR	0.246513046666667	1
COPD-CHD	ENSG00000103449	16	16	6	4E+05	0.002187	SALL1	0.246513046666667	1
COPD-CHD	ENSG00000158850	1	6	2	4E+05	0.002187	B4GALT3	0.246513046666667	1
COPD-CHD	ENSG00000173208	12	138	17	4E+05	0.002186	ABCD2	0.246513046666667	1
COPD-CHD	ENSG00000198758	1	43	12	4E+05	0.002177	EPS8L3	0.246513046666667	1
COPD-CHD	ENSG00000183066	22	109	9	4E+05	0.002141	WBP2NL	0.246513046666667	1
COPD-CHD	ENSG00000136694	2	6	2	4E+05	0.002049	IL36A	0.238301308805031	1
COPD-CHD	ENSG00000142599	1	659	22	4E+05	0.001982	RERE	0.231898205696203	1
COPD-CHD	ENSG00000154102	16	215	19	4E+05	0.001961	C16orf74	0.230937278980892	1
COPD-CHD	ENSG00000178301	11	41	5	4E+05	0.00192	AQP11	0.227617098076923	1
COPD-CHD	ENSG00000136859	9	54	9	4E+05	0.001884	ANGPTL2	0.224707403870968	1
COPD-CHD	ENSG00000187664	19	16	3	4E+05	0.001873	HAPLN4	0.224707403870968	1
COPD-CHD	ENSG00000088387	13	890	29	4E+05	0.001864	DOCK9	0.224707403870968	1
COPD-CHD	ENSG00000173531	3	6	3	4E+05	0.001812	MST1	0.220395688815789	1
COPD-CHD	ENSG00000119669	14	6	2	4E+05	0.001797	IRF2BPL	0.220055145695364	1
COPD-CHD	ENSG00000131067	20	47	7	4E+05	0.001745	GGT7	0.215074984666667	1
COPD-CHD	ENSG00000176476	16	82	9	4E+05	0.001744	CCDC101	0.215074984666667	1
COPD-CHD	ENSG00000174145	4	681	56	4E+05	0.001739	KIAA1239	0.215074984666667	1
COPD-CHD	ENSG00000128285	22	7	2	4E+05	0.001725	MCHR1	0.215074984666667	1
COPD-CHD	ENSG00000136930	9	97	12	4E+05	0.001716	PSMB7	0.215074984666667	1
COPD-CHD	ENSG00000268241	2	2	1	4E+05	0.001708	AC018470.1	0.215074984666667	1
COPD-CHD	ENSG00000100711	14	43	10	4E+05	0.001704	ZFYVE21	0.215074984666667	1
COPD-CHD	ENSG00000149084	11	624	25	4E+05	0.001702	HSD17B12	0.215074984666667	1

COPD-CHD	ENSG00000158092	3	185	6	4E+05	0.001701	NCK1	0.215074984666667	1
COPD-CHD	ENSG00000272916	10	15	4	4E+05	0.001696	RP11-574K11	0.215074984666667	1
COPD-CHD	ENSG00000158796	1	11	3	4E+05	0.001682	DEDD	0.215074984666667	1
COPD-CHD	ENSG00000233276	3	3	1	4E+05	0.001644	GPX1	0.215074984666667	1
COPD-CHD	ENSG00000164068	3	45	7	4E+05	0.001629	RNF123	0.215074984666667	1
COPD-CHD	ENSG00000090104	1	12	4	4E+05	0.001619	RGS1	0.215074984666667	1
COPD-CHD	ENSG00000113161	5	45	7	4E+05	0.001611	HMGCR	0.215074984666667	1
COPD-CHD	ENSG00000162426	1	77	11	4E+05	0.001593	SLC45A1	0.215074984666667	1
COPD-CHD	ENSG00000181019	16	51	11	4E+05	0.001584	NQO1	0.215074984666667	1
COPD-CHD	ENSG00000153208	2	449	17	4E+05	0.001574	MERTK	0.215074984666667	1
COPD-CHD	ENSG00000109736	4	8	4	4E+05	0.001537	MFSD10	0.215074984666667	1
COPD-CHD	ENSG00000132793	20	49	11	4E+05	0.001506	LPIN3	0.212575923664122	1
COPD-CHD	ENSG00000067836	16	14	4	4E+05	0.001491	ROGDI	0.212134441538462	1
COPD-CHD	ENSG00000114349	3	3	1	4E+05	0.001477	GNAT1	0.211643112403101	1
COPD-CHD	ENSG00000172869	5	289	26	4E+05	0.001438	DMXL1	0.20774927421875	1
COPD-CHD	ENSG00000169900	16	1	1	4E+05	0.001429	PYDC1	0.20774927421875	1
COPD-CHD	ENSG00000179915	2	3426	115	4E+05	0.001352	NRXN1	0.198455391269841	1
COPD-CHD	ENSG00000102967	16	50	9	4E+05	0.001337	DHODH	0.197735358	1
COPD-CHD	ENSG00000198492	1	48	6	4E+05	0.001336	YTHDF2	0.197735358	1
COPD-CHD	ENSG00000178922	1	7	3	4E+05	0.001335	HYI	0.197735358	1
COPD-CHD	ENSG00000242114	22	9	4	4E+05	0.001307	MTFP1	0.197735358	1
COPD-CHD	ENSG00000048649	11	320	12	4E+05	0.001305	RSF1	0.197735358	1
COPD-CHD	ENSG00000196502	16	56	5	4E+05	0.001285	SULT1A1	0.197735358	1
COPD-CHD	ENSG00000148841	10	49	8	4E+05	0.001257	ITPRIP	0.195258744537815	1
COPD-CHD	ENSG00000185158	17	54	5	4E+05	0.001254	LRRC37B	0.195258744537815	1
COPD-CHD	ENSG00000197165	16	20	4	4E+05	0.001252	SULT1A2	0.195258744537815	1
COPD-CHD	ENSG00000164076	3	16	4	4E+05	0.001225	CAMKV	0.195258744537815	1
COPD-CHD	ENSG00000196526	4	898	36	4E+05	0.001221	AFAP1	0.195258744537815	1
COPD-CHD	ENSG00000168124	16	3	1	4E+05	0.00122	OR1F1	0.195258744537815	1
COPD-CHD	ENSG00000183763	3	37	5	4E+05	0.00122	TRAIP	0.195258744537815	1
COPD-CHD	ENSG00000087274	4	135	15	4E+05	0.001184	ADD1	0.195258744537815	1
COPD-CHD	ENSG00000119408	9	237	24	4E+05	0.00118	NEK6	0.195258744537815	1
COPD-CHD	ENSG00000143224	1	16	5	4E+05	0.001173	PPOX	0.195258744537815	1

COPD-CHD	ENSG0000073605	17	48	4	4E+05	0.001166	GSDMB	0.195258744537815	1
COPD-CHD	ENSG00000168917	3	95	4	4E+05	0.001161	SLC35G2	0.195258744537815	1
COPD-CHD	ENSG00000130202	19	170	22	4E+05	0.001154	PVRL2	0.195258744537815	1
COPD-CHD	ENSG00000089009	12	11	4	4E+05	0.001149	RPL6	0.195258744537815	1
COPD-CHD	ENSG00000164161	4	172	13	4E+05	0.001134	HHIP	0.195258744537815	1
COPD-CHD	ENSG00000138161	10	48	13	4E+05	0.001121	CUZD1	0.195258744537815	1
COPD-CHD	ENSG00000172349	15	384	25	4E+05	0.001101	IL16	0.195258744537815	1
COPD-CHD	ENSG00000143256	1	28	4	4E+05	0.001084	PFDN2	0.195258744537815	1
COPD-CHD	ENSG00000214435	10	105	11	4E+05	0.00106	AS3MT	0.194118884158416	1
COPD-CHD	ENSG00000185888	1	101	16	4E+05	0.000993	PRSS38	0.183704387	1
COPD-CHD	ENSG00000166275	10	23	6	4E+05	0.000983	C10orf32	0.183555861111111	1
COPD-CHD	ENSG00000138674	4	177	9	4E+05	0.000979	SEC31A	0.183555861111111	1
COPD-CHD	ENSG00000169783	15	607	35	4E+05	0.000978	LINGO1	0.183555861111111	1
COPD-CHD	ENSG00000198700	1	83	13	4E+05	0.000931	IPO9	0.179304916	1
COPD-CHD	ENSG00000100372	22	62	7	4E+05	0.000919	SLC25A17	0.178815755684211	1
COPD-CHD	ENSG00000264545	9	441	45	4E+05	0.000902	RP11-145E5.5	0.177464421808511	1
COPD-CHD	ENSG00000114378	3	14	5	4E+05	0.000885	HYAL1	0.176014437204301	1
COPD-CHD	ENSG00000198670	6	227	18	4E+05	0.000874	LPA	0.175616262608696	1
COPD-CHD	ENSG00000141736	17	42	7	4E+05	0.000841	ERBB2	0.170958438901099	1
COPD-CHD	ENSG00000187735	8	97	7	4E+05	0.000833	TCEA1	0.170958438901099	1
COPD-CHD	ENSG00000184983	22	9	2	4E+05	0.000816	NDUFA6	0.169533383033708	1
COPD-CHD	ENSG00000105323	19	64	6	4E+05	0.000808	HNRNPUL1	0.169533383033708	1
COPD-CHD	ENSG00000172037	3	10	6	4E+05	0.000773	LAMB2	0.164197954597701	1
COPD-CHD	ENSG00000188603	16	27	4	4E+05	0.000772	CLN3	0.164197954597701	1
COPD-CHD	ENSG00000070540	17	98	16	4E+05	0.000766	WIPI1	0.164197954597701	1
COPD-CHD	ENSG00000270316	10	139	14	4E+05	0.000756	C10orf32-AS1	0.164197954597701	1
COPD-CHD	ENSG00000172057	17	10	4	4E+05	0.00073	ORMDL3	0.162653965060241	1
COPD-CHD	ENSG00000176095	3	88	8	4E+05	0.000705	IP6K1	0.15890083	1
COPD-CHD	ENSG00000166033	10	192	26	4E+05	0.000698	HTRA1	0.15890083	1
COPD-CHD	ENSG00000140403	15	56	10	4E+05	0.000678	DNAJA4	0.156822171	1
COPD-CHD	ENSG00000261832	16	22	3	4E+05	0.000678	CLN3	0.156822171	1
COPD-CHD	ENSG00000198951	22	19	4	4E+05	0.000668	NAGA	0.156822171	1
COPD-CHD	ENSG00000148795	10	18	3	4E+05	0.000664	CYP17A1	0.156822171	1

COPD-CHD ENSG00000118900	16	131	16	4E+05	0.000617	UBN1	0.150178549342105	1
COPD-CHD ENSG00000104447	8	509	17	4E+05	0.000597	TRPS1	0.147124257866667	1
COPD-CHD ENSG00000178691	17	161	5	4E+05	0.000593	SUZ12	0.147124257866667	1
COPD-CHD ENSG00000143126	1	75	13	4E+05	0.000584	CELSR2	0.147124257866667	1
COPD-CHD ENSG00000170122	9	2	1	4E+05	0.00053	FOXD4	0.136186215	1
COPD-CHD ENSG00000256500	14	284	16	4E+05	0.000514	RP11-73M18.	0.133937344788732	1
COPD-CHD ENSG00000172548	5	47	8	4E+05	0.000494	NIPAL4	0.130520044285714	1
COPD-CHD ENSG00000183172	22	5	1	4E+05	0.000491	SMDT1	0.130520044285714	1
COPD-CHD ENSG00000167085	17	23	8	4E+05	0.000448	PHB	0.121842093676471	1
COPD-CHD ENSG00000258429	16	5	2	4E+05	0.000435	PDF	0.120031428656716	1
COPD-CHD ENSG00000126214	14	322	17	4E+05	0.000435	KLC1	0.120031428656716	1
COPD-CHD ENSG00000159479	1	4	2	4E+05	0.000414	MED8	0.117736464153846	1
COPD-CHD ENSG00000139990	14	157	18	4E+05	0.000388	DCAF5	0.1120727953125	1
COPD-CHD ENSG00000120885	8	37	6	4E+05	0.00035	CLU	0.10282757047619	1
COPD-CHD ENSG00000188266	15	51	3	4E+05	0.00035	HYKK	0.10282757047619	1
COPD-CHD ENSG00000161395	17	63	3	4E+05	0.000328	PGAP3	0.0995300809836066	1
COPD-CHD ENSG00000187555	16	185	17	4E+05	0.000327	USP7	0.0995300809836066	1
COPD-CHD ENSG00000142039	19	25	2	4E+05	0.000327	CCDC97	0.0995300809836066	1
COPD-CHD ENSG00000105329	19	94	12	4E+05	0.000323	TGFB1	0.0995300809836066	1
COPD-CHD ENSG00000141101	16	27	7	4E+05	0.000308	NOB1	0.0995300809836066	1
COPD-CHD ENSG00000224997	14	2	1	4E+05	0.000282	AL049840.1	0.0932078478571428	1
COPD-CHD ENSG00000214655	10	6	2	4E+05	0.000279	ZSWIM8	0.0932078478571428	1
COPD-CHD ENSG00000041357	15	26	3	4E+05	0.000276	PSMA4	0.0932078478571428	1
COPD-CHD ENSG00000122194	6	130	12	4E+05	0.000267	PLG	0.0930515964150944	1
COPD-CHD ENSG00000254636	10	15	3	4E+05	0.000253	ARMS2	0.0899089315384615	1
COPD-CHD ENSG00000135074	5	646	30	4E+05	0.00024	ADAM19	0.0870563531372549	1
COPD-CHD ENSG00000121797	3	18	4	4E+05	0.000223	CCRL2	0.082333027	1
COPD-CHD ENSG00000088808	14	240	12	4E+05	0.000219	PPP1R13B	0.082333027	1
COPD-CHD ENSG00000164989	9	1445	16	4E+05	0.000206	CCDC171	0.0795074477083333	1
COPD-CHD ENSG00000126215	14	32	7	4E+05	0.000202	XRCC3	0.0792831131914894	1
COPD-CHD ENSG00000177096	22	11	3	4E+05	0.000173	FAM109B	0.0694940017391304	1
COPD-CHD ENSG00000197208	5	121	10	4E+05	0.000159	SLC22A4	0.0651499566666667	1
COPD-CHD ENSG00000204764	5	857	17	4E+05	0.00014	RANBP17	0.058755153	1

COPD-CHD	ENSG00000198198	1	84	7	4E+05	0.000127	SZT2	0.054518348372093	1
COPD-CHD	ENSG00000153774	16	491	15	4E+05	0.000116	CFDP1	0.0512332778571429	1
COPD-CHD	ENSG00000120693	13	176	23	4E+05	0.000103	SMAD9	0.04625005	1
COPD-CHD	ENSG00000272617	16	13	4	4E+05	0.000102	RP11-343C2.1	0.04625005	1
COPD-CHD	ENSG00000166822	16	92	9	4E+05	9.9684e-05	TMEM170A	0.04625005	1
COPD-CHD	ENSG00000213380	16	47	7	4E+05	9.1154e-05	COG8	0.0443560161578947	1
COPD-CHD	ENSG00000132604	16	84	14	4E+05	8.8066e-05	TERF2	0.0440115785405405	1
COPD-CHD	ENSG00000197375	5	84	8	4E+05	8.4584e-05	SLC22A5	0.0434456317777778	1
COPD-CHD	ENSG00000146477	6	214	16	4E+05	8.3719e-05	SLC22A3	0.0434456317777778	1
COPD-CHD	ENSG00000138663	4	49	9	4E+05	7.8234e-05	COPS4	0.042547791	1
COPD-CHD	ENSG00000117400	1	13	3	4E+05	7.0475e-05	MPL	0.0394894916666667	1
COPD-CHD	ENSG00000261717	16	204	11	4E+05	6.9525e-05	RP11-77K12.1	0.0394894916666667	1
COPD-CHD	ENSG00000066056	1	31	4	4E+05	6.3897e-05	TIE1	0.0381135299032258	1
COPD-CHD	ENSG00000167081	9	247	17	4E+05	5.5589e-05	PBX3	0.0342632066333333	1
COPD-CHD	ENSG00000132603	16	14	5	4E+05	4.3668e-05	NIP7	0.0278436202758621	0.807464988
COPD-CHD	ENSG00000259900	16	36	8	4E+05	3.0813e-05	RP11-343C2.1	0.0203486851071429	0.569763183
COPD-CHD	ENSG00000204775	8	1	1	4E+05	3.0266e-05	KM-PA-2	0.0203486851071429	0.559648606
COPD-CHD	ENSG00000058335	15	337	51	4E+05	2.9696e-05	RASGRF1	0.0203486851071429	0.549108736
COPD-CHD	ENSG00000256053	14	108	11	4E+05	2.7492e-05	APOPT1	0.020334183	0.508354572
COPD-CHD	ENSG00000260371	16	39	10	4E+05	2.5834e-05	RP11-343C2.1	0.0199040205833333	0.477696494
COPD-CHD	ENSG00000157315	16	19	7	4E+05	2.4691e-05	TMED6	0.0198504904782609	0.456561281
COPD-CHD	ENSG00000262039	17	253	36	4E+05	2.1939e-05	RP11-81K2.1	0.01843973	0.405674049
COPD-CHD	ENSG00000189308	4	209	9	4E+05	2.1573e-05	LIN54	0.01843973	0.398906343
COPD-CHD	ENSG00000169684	15	37	5	4E+05	2.0476e-05	CHRNA5	0.01843973	0.378621716
COPD-CHD	ENSG00000197536	5	185	18	4E+05	1.44e-05	C5orf56	0.0140142315789474	0.2662704
COPD-CHD	ENSG00000080644	15	44	4	4E+05	1.3801e-05	CHRNA3	0.0140142315789474	0.255194291
COPD-CHD	ENSG00000168152	4	37	4	4E+05	1.3254e-05	THAP9	0.0140142315789474	0.245079714
COPD-CHD	ENSG00000168802	16	29	10	4E+05	9.4108e-06	CHTF8	0.010875944	0.174015103
COPD-CHD	ENSG00000136378	15	104	15	4E+05	7.8011e-06	ADAMTS7	0.00961667600666667	0.14425014
COPD-CHD	ENSG00000166170	14	10	2	4E+05	6.6018e-06	BAG5	0.00871956312857143	0.122073884
COPD-CHD	ENSG00000101204	20	188	33	4E+05	2.5133e-06	CHRNA4	0.00357487925384615	0.04647343
COPD-CHD	ENSG00000130208	19	12	5	4E+05	2.2231e-06	APOC1	0.00342561184166667	0.041107342
COPD-CHD	ENSG00000168807	16	229	21	4E+05	1.5852e-06	SNTB2	0.002664721	0.029311933

COPD-CHD	ENSG00000132612	16	37	7	4E+05	1.5684e-06	VPS4A	0.002664721	0.029001284
COPD-CHD	ENSG00000141076	16	172	21	4E+05	1.3979e-06	CIRH1A	0.002664721	0.025848569
COPD-CHD	ENSG00000130204	19	50	10	4E+05	1.0888e-06	TOMM40	0.002516625	0.020133001
COPD-CHD	ENSG00000260914	16	39	6	4E+05	8.4901e-07	RP11-343C2.10	0.00224272055857143	0.015699044
COPD-CHD	ENSG00000168487	8	140	20	4E+05	2.3328e-07	BMP1	0.00071893	0.00431358
COPD-CHD	ENSG00000117971	15	174	20	4E+05	4.4206e-08	CHRN4	0.0001634826292	0.000817413
COPD-CHD	ENSG00000198740	17	154	13	4E+05	4.3905e-08	ZNF652	0.0001634826292	0.000811847
COPD-CHD	ENSG00000130203	19	5	2	4E+05	6.985e-09	APOE	4.30532116666667e-05	0.00012916
COPD-CHD	ENSG00000136381	15	63	10	4E+05	5.9374e-09	IREB2	4.30532116666667e-05	0.0001097884634
COPD-CHD	ENSG00000185787	15	343	16	4E+05	9.3726e-10	MORF4L1	1.733087466e-05	1.733087466e-05
COPD-HTN	ENSG0000007129	19	47	7	5E+05	0.049955	CEACAM21	0.535473852515905	1
COPD-HTN	ENSG00000113851	3	92	14	5E+05	0.049818	CRBN	0.534825389633081	1
COPD-HTN	ENSG00000221914	8	166	24	5E+05	0.049767	PPP2R2A	0.534589225524476	1
COPD-HTN	ENSG00000100325	22	126	14	5E+05	0.049748	ASCC2	0.534589225524476	1
COPD-HTN	ENSG00000135972	2	206	7	5E+05	0.049686	MRPS9	0.534341912485414	1
COPD-HTN	ENSG00000100523	14	154	10	5E+05	0.049576	DDHD1	0.533470173963806	1
COPD-HTN	ENSG00000156282	21	1	1	5E+05	0.049569	CLDN17	0.533470173963806	1
COPD-HTN	ENSG00000115556	2	42	5	5E+05	0.049508	PLCD4	0.533361171244886	1
COPD-HTN	ENSG00000205531	11	150	15	5E+05	0.049427	NAP1L4	0.53279993625731	1
COPD-HTN	ENSG00000250067	19	35	3	5E+05	0.049426	YJEFN3	0.53279993625731	1
COPD-HTN	ENSG00000080823	14	188	16	5E+05	0.049414	MOK	0.53279993625731	1
COPD-HTN	ENSG00000120318	5	74	16	5E+05	0.049376	ARAP3	0.53279993625731	1
COPD-HTN	ENSG00000169855	3	2245	84	5E+05	0.049365	ROBO1	0.53279993625731	1
COPD-HTN	ENSG00000110321	11	23	5	5E+05	0.049334	EIF4G2	0.53279993625731	1
COPD-HTN	ENSG00000187323	18	4020	98	5E+05	0.049304	DCC	0.53279993625731	1
COPD-HTN	ENSG00000186453	2	72	11	5E+05	0.049266	FAM228A	0.53279993625731	1
COPD-HTN	ENSG00000091129	7	985	46	5E+05	0.049204	NRCAM	0.53279993625731	1
COPD-HTN	ENSG00000231880	11	1	1	5E+05	0.049195	KBTBD4	0.53279993625731	1
COPD-HTN	ENSG00000243232	5	49	11	5E+05	0.049188	PCDHAC2	0.53279993625731	1
COPD-HTN	ENSG00000184497	13	150	14	5E+05	0.049184	TMEM255B	0.53279993625731	1
COPD-HTN	ENSG00000176444	1	15	3	5E+05	0.049157	CLK2	0.53279993625731	1
COPD-HTN	ENSG00000153563	2	67	6	5E+05	0.04915	CD8A	0.53279993625731	1
COPD-HTN	ENSG00000181656	1	8	3	5E+05	0.049145	GPR88	0.53279993625731	1

COPD-HTN	ENSG0000064607	19	75	8	5E+05	0.049118	SUGP2	0.53279993625731	1
COPD-HTN	ENSG00000162039	16	318	6	5E+05	0.049096	MEIOB	0.53279993625731	1
COPD-HTN	ENSG00000170185	4	75	6	5E+05	0.049086	USP38	0.53279993625731	1
COPD-HTN	ENSG00000161016	8	4	2	5E+05	0.049035	RPL8	0.53279993625731	1
COPD-HTN	ENSG00000111885	6	616	25	5E+05	0.048953	MAN1A1	0.53279993625731	1
COPD-HTN	ENSG00000172375	11	41	8	5E+05	0.048945	C2CD2L	0.53279993625731	1
COPD-HTN	ENSG0000016082	5	18	7	5E+05	0.048925	ISL1	0.53279993625731	1
COPD-HTN	ENSG00000174442	15	129	15	5E+05	0.048911	ZWILCH	0.53279993625731	1
COPD-HTN	ENSG00000140263	15	50	10	5E+05	0.04889	SORD	0.53279993625731	1
COPD-HTN	ENSG00000035681	8	130	11	5E+05	0.048869	NSMAF	0.53279993625731	1
COPD-HTN	ENSG00000072134	17	63	9	5E+05	0.048795	EPN2	0.53279993625731	1
COPD-HTN	ENSG00000173421	3	67	8	5E+05	0.048757	CCDC36	0.53279993625731	1
COPD-HTN	ENSG00000138777	4	360	17	5E+05	0.048674	PPA2	0.53279993625731	1
COPD-HTN	ENSG00000139970	14	451	22	5E+05	0.048642	RTN1	0.53279993625731	1
COPD-HTN	ENSG00000003756	3	28	6	5E+05	0.04859	RBM5	0.53279993625731	1
COPD-HTN	ENSG00000068784	2	608	26	5E+05	0.048551	SRBD1	0.53270272797619	1
COPD-HTN	ENSG00000114302	3	64	9	5E+05	0.048457	PRKAR2A	0.531988017272186	1
COPD-HTN	ENSG00000162413	1	42	9	5E+05	0.048445	KLHL21	0.531988017272186	1
COPD-HTN	ENSG00000183765	22	118	17	5E+05	0.048441	CHEK2	0.531988017272186	1
COPD-HTN	ENSG00000198398	3	66	14	5E+05	0.048435	TMEM207	0.531988017272186	1
COPD-HTN	ENSG00000125538	2	14	4	5E+05	0.048221	IL1B	0.530661309253731	1
COPD-HTN	ENSG00000109680	4	162	8	5E+05	0.048216	TBC1D19	0.530661309253731	1
COPD-HTN	ENSG00000257767	12	23	3	5E+05	0.048136	RP11-162P23	0.530359167961745	1
COPD-HTN	ENSG00000182326	12	124	11	5E+05	0.048012	C1S	0.529309327751196	1
COPD-HTN	ENSG00000205436	14	25	5	5E+05	0.047916	EXOC3L4	0.528567102333932	1
COPD-HTN	ENSG00000159761	16	1	1	5E+05	0.04791	C16orf86	0.528567102333932	1
COPD-HTN	ENSG00000197016	19	62	6	5E+05	0.047905	ZNF470	0.528567102333932	1
COPD-HTN	ENSG00000146374	6	130	10	5E+05	0.047866	RSPO3	0.528567102333932	1
COPD-HTN	ENSG00000143994	2	8	2	5E+05	0.047856	ABHD1	0.528567102333932	1
COPD-HTN	ENSG00000255582	14	2	1	5E+05	0.047815	OR10G2	0.528567102333932	1
COPD-HTN	ENSG00000180113	6	11	5	5E+05	0.047793	TDRD6	0.528567102333932	1
COPD-HTN	ENSG00000189079	12	122	16	5E+05	0.047779	ARID2	0.528567102333932	1
COPD-HTN	ENSG00000078304	14	394	38	5E+05	0.047761	PPP2R5C	0.528567102333932	1

COPD-HTN	ENSG00000138399	2	109	17	5E+05	0.047755	FASTKD1	0.528567102333932	1
COPD-HTN	ENSG00000259164	14	370	37	5E+05	0.047732	RP11-463C8.4	0.528567102333932	1
COPD-HTN	ENSG00000244537	17	5	2	5E+05	0.047698	KRTAP4-2	0.528567102333932	1
COPD-HTN	ENSG00000136816	9	15	3	5E+05	0.047663	TOR1B	0.528567102333932	1
COPD-HTN	ENSG00000123178	13	40	6	5E+05	0.047608	SPRYD7	0.528567102333932	1
COPD-HTN	ENSG00000188580	6	2555	186	5E+05	0.047591	NKAIN2	0.528567102333932	1
COPD-HTN	ENSG00000168116	6	6	2	5E+05	0.04752	KIAA1586	0.528567102333932	1
COPD-HTN	ENSG00000135913	2	184	9	5E+05	0.047518	USP37	0.528567102333932	1
COPD-HTN	ENSG00000081818	5	10	3	5E+05	0.047517	PCDHB4	0.528567102333932	1
COPD-HTN	ENSG00000196683	7	61	8	5E+05	0.04745	TOMM7	0.528567102333932	1
COPD-HTN	ENSG00000196381	19	53	9	5E+05	0.047395	ZNF781	0.528567102333932	1
COPD-HTN	ENSG00000248487	3	10	6	5E+05	0.047378	ABHD14A	0.528567102333932	1
COPD-HTN	ENSG00000070540	17	93	16	5E+05	0.04727	WIPI1	0.528077521212121	1
COPD-HTN	ENSG00000072571	5	69	9	5E+05	0.04726	HMMR	0.528077521212121	1
COPD-HTN	ENSG00000198556	7	36	10	5E+05	0.047226	ZNF789	0.528077521212121	1
COPD-HTN	ENSG00000060642	1	12	4	5E+05	0.047168	PIGV	0.52789784092289	1
COPD-HTN	ENSG00000000971	1	208	14	5E+05	0.047152	CFH	0.52789784092289	1
COPD-HTN	ENSG00000116521	1	6	1	5E+05	0.047034	SCAMP3	0.52703812887538	1
COPD-HTN	ENSG00000139718	12	34	5	5E+05	0.047008	SETD1B	0.52703812887538	1
COPD-HTN	ENSG00000102901	16	18	3	5E+05	0.047008	CENPT	0.52703812887538	1
COPD-HTN	ENSG00000006788	17	238	29	5E+05	0.046891	MYH13	0.526395738733252	1
COPD-HTN	ENSG00000106799	9	82	9	5E+05	0.046881	TGFBR1	0.526395738733252	1
COPD-HTN	ENSG00000184076	22	5	2	5E+05	0.046748	UQCR10	0.525430417073171	1
COPD-HTN	ENSG00000128250	22	11	2	5E+05	0.046716	RFPL1	0.525391109212935	1
COPD-HTN	ENSG00000157741	7	107	12	5E+05	0.046704	UBN2	0.525391109212935	1
COPD-HTN	ENSG00000188321	19	55	5	5E+05	0.046585	ZNF559	0.52455791386683	1
COPD-HTN	ENSG00000166188	16	12	4	5E+05	0.046543	ZNF319	0.524405329462103	1
COPD-HTN	ENSG00000188322	16	35	11	5E+05	0.046518	SBK1	0.524405329462103	1
COPD-HTN	ENSG00000181371	11	1	1	5E+05	0.046472	OR5M8	0.524246252141983	1
COPD-HTN	ENSG00000196345	3	59	6	5E+05	0.046412	ZKSCAN7	0.523890015921617	1
COPD-HTN	ENSG00000162241	11	10	4	5E+05	0.046292	SLC25A45	0.522855659313725	1
COPD-HTN	ENSG00000139410	12	21	3	5E+05	0.046231	SDSL	0.522486832004905	1
COPD-HTN	ENSG00000129347	19	50	8	5E+05	0.046215	KRI1	0.522486832004905	1

COPD-HTN	ENSG00000179965	16	19	6	5E+05	0.046179	ZNF771	0.522486832004905	1
COPD-HTN	ENSG00000108582	17	94	8	5E+05	0.046152	CPD	0.522486832004905	1
COPD-HTN	ENSG00000174173	3	12	5	5E+05	0.046026	TRMT10C	0.52144883712354	1
COPD-HTN	ENSG00000143476	1	216	23	5E+05	0.046025	DTL	0.52144883712354	1
COPD-HTN	ENSG00000206181	18	9	3	5E+05	0.045941	TCEB3B	0.521126432615385	1
COPD-HTN	ENSG00000245680	19	49	10	5E+05	0.04593	ZNF585B	0.521126432615385	1
COPD-HTN	ENSG00000105879	7	28	4	5E+05	0.045916	CBLL1	0.521126432615385	1
COPD-HTN	ENSG00000176208	17	120	6	5E+05	0.045803	ATAD5	0.520522009247842	1
COPD-HTN	ENSG00000273303	3	49	5	5E+05	0.045799	RP11-944L7.5	0.520522009247842	1
COPD-HTN	ENSG00000103769	15	295	20	5E+05	0.045777	RAB11A	0.520522009247842	1
COPD-HTN	ENSG00000262601	16	58	14	5E+05	0.045708	CTC-786C10	0.520404919085856	1
COPD-HTN	ENSG00000148600	10	79	12	5E+05	0.045683	CDHR1	0.520404919085856	1
COPD-HTN	ENSG00000172489	11	1	1	5E+05	0.045683	OR5T3	0.520404919085856	1
COPD-HTN	ENSG00000101546	18	40	5	5E+05	0.045627	RBFA	0.520404919085856	1
COPD-HTN	ENSG00000181785	11	5	1	5E+05	0.045622	OR5AS1	0.520404919085856	1
COPD-HTN	ENSG00000162148	11	13	4	5E+05	0.045603	PPP1R32	0.520404919085856	1
COPD-HTN	ENSG00000135973	2	1	1	5E+05	0.045506	GPR45	0.520032298822071	1
COPD-HTN	ENSG00000130589	20	65	14	5E+05	0.04547	HELZ2	0.519943244416874	1
COPD-HTN	ENSG00000112667	6	5	3	5E+05	0.045346	DNPH1	0.518847186840472	1
COPD-HTN	ENSG00000064933	2	169	17	5E+05	0.045344	PMS1	0.518847186840472	1
COPD-HTN	ENSG00000255394	8	11	4	5E+05	0.045272	C8orf49	0.518644360472343	1
COPD-HTN	ENSG00000164694	6	345	14	5E+05	0.045247	FNDC1	0.518644360472343	1
COPD-HTN	ENSG00000154856	18	115	16	5E+05	0.045219	APCDD1	0.518644360472343	1
COPD-HTN	ENSG00000228259	5	2	1	5E+05	0.045177	AC136604.1	0.518522815068493	1
COPD-HTN	ENSG00000100170	22	166	9	5E+05	0.045176	SLC5A1	0.518522815068493	1
COPD-HTN	ENSG00000073861	17	39	8	5E+05	0.045102	TBX21	0.518307460099751	1
COPD-HTN	ENSG00000162676	1	20	5	5E+05	0.044966	GFI1	0.517066923268871	1
COPD-HTN	ENSG00000137812	15	125	11	5E+05	0.044957	CASC5	0.517066923268871	1
COPD-HTN	ENSG00000174939	16	20	5	5E+05	0.044926	ASPHD1	0.517066923268871	1
COPD-HTN	ENSG00000151838	14	227	17	5E+05	0.044857	CCDC175	0.516780676	1
COPD-HTN	ENSG00000064886	1	134	18	5E+05	0.044806	CHI3L2	0.516515946216385	1
COPD-HTN	ENSG00000116209	1	29	6	5E+05	0.044803	TMEM59	0.516515946216385	1
COPD-HTN	ENSG00000170946	11	81	9	5E+05	0.044779	DNAJC24	0.516515946216385	1

COPD-HTN	ENSG00000204021	10	146	8	5E+05	0.044705	LIPK	0.516320341478697	1
COPD-HTN	ENSG00000157330	1	32	7	5E+05	0.044573	C1orf158	0.515118563636364	1
COPD-HTN	ENSG00000023572	1	12	4	5E+05	0.044552	GLRX2	0.515118563636364	1
COPD-HTN	ENSG00000157119	3	8	3	5E+05	0.044538	KLHL40	0.515118563636364	1
COPD-HTN	ENSG00000144560	3	535	39	5E+05	0.04452	VGLL4	0.515118563636364	1
COPD-HTN	ENSG00000115042	2	6	3	5E+05	0.044511	FAHD2A	0.515118563636364	1
COPD-HTN	ENSG00000102871	16	3	1	5E+05	0.044504	TRADD	0.515118563636364	1
COPD-HTN	ENSG00000180340	17	1	1	5E+05	0.0444	FZD2	0.515056765261171	1
COPD-HTN	ENSG00000254440	6	10	2	5E+05	0.044262	PBOV1	0.513779248110831	1
COPD-HTN	ENSG00000113525	5	12	2	5E+05	0.044254	IL5	0.513779248110831	1
COPD-HTN	ENSG00000151148	12	145	17	5E+05	0.044217	UBE3B	0.513779248110831	1
COPD-HTN	ENSG00000129235	17	16	4	5E+05	0.044184	TXNDC17	0.513779248110831	1
COPD-HTN	ENSG00000174444	15	79	12	5E+05	0.04418	RPL4	0.513779248110831	1
COPD-HTN	ENSG00000137494	11	119	13	5E+05	0.043936	ANKRD42	0.511605993682881	1
COPD-HTN	ENSG00000112658	6	11	3	5E+05	0.043926	SRF	0.511605993682881	1
COPD-HTN	ENSG00000236609	7	22	5	5E+05	0.043864	ZNF853	0.511413733080329	1
COPD-HTN	ENSG00000140374	15	178	12	5E+05	0.043673	ETFPA	0.509509119620253	1
COPD-HTN	ENSG00000112659	6	79	10	5E+05	0.043621	CUL9	0.509224758074731	1
COPD-HTN	ENSG00000183090	4	207	18	5E+05	0.043611	FREM3	0.509224758074731	1
COPD-HTN	ENSG00000125459	1	99	13	5E+05	0.043455	MSTO1	0.507930256816741	1
COPD-HTN	ENSG00000144580	2	46	4	5E+05	0.043451	RQCD1	0.507930256816741	1
COPD-HTN	ENSG00000110906	12	119	10	5E+05	0.043379	KCTD10	0.507685782222222	1
COPD-HTN	ENSG00000270011	19	117	6	5E+05	0.043319	ZNF559-ZNF10	0.507305671537484	1
COPD-HTN	ENSG00000109519	4	23	3	5E+05	0.043247	GRPEL1	0.506784457088366	1
COPD-HTN	ENSG00000184056	15	69	10	5E+05	0.043234	VPS33B	0.506784457088366	1
COPD-HTN	ENSG00000181761	11	13	3	5E+05	0.043182	OR8H3	0.506666967536601	1
COPD-HTN	ENSG00000170848	19	55	8	5E+05	0.043173	PSG6	0.506666967536601	1
COPD-HTN	ENSG00000188629	19	115	6	5E+05	0.043165	ZNF177	0.506666967536601	1
COPD-HTN	ENSG00000105329	19	91	12	5E+05	0.043125	TGFB1	0.506666967536601	1
COPD-HTN	ENSG00000105676	19	53	8	5E+05	0.043065	ARMC6	0.506584010848756	1
COPD-HTN	ENSG00000156671	10	150	15	5E+05	0.04306	SAMD8	0.506584010848756	1
COPD-HTN	ENSG00000109458	4	221	26	5E+05	0.042999	GAB1	0.506454036421725	1
COPD-HTN	ENSG00000143167	1	106	17	5E+05	0.042985	GPA33	0.506454036421725	1

COPD-HTN	ENSG00000108244	17	52	7	5E+05	0.042949	KRT23	0.506454036421725	1
COPD-HTN	ENSG00000075213	7	1503	65	5E+05	0.042906	SEMA3A	0.506329256081946	1
COPD-HTN	ENSG00000130307	19	100	16	5E+05	0.042864	USHBP1	0.506157663036515	1
COPD-HTN	ENSG00000214367	4	32	4	5E+05	0.042818	HAUS3	0.505938585897436	1
COPD-HTN	ENSG00000253293	7	9	3	5E+05	0.042817	HOXA10	0.505938585897436	1
COPD-HTN	ENSG00000079435	19	11	4	5E+05	0.042813	LIPE	0.505938585897436	1
COPD-HTN	ENSG00000178966	9	32	5	5E+05	0.042726	RMI1	0.505824250481696	1
COPD-HTN	ENSG00000124467	19	265	14	5E+05	0.04271	PSG8	0.505824250481696	1
COPD-HTN	ENSG00000136738	10	292	15	5E+05	0.042705	STAM	0.505824250481696	1
COPD-HTN	ENSG00000131504	5	154	23	5E+05	0.04262	DIAPH1	0.505543410553411	1
COPD-HTN	ENSG00000179761	17	165	32	5E+05	0.042512	PIPOX	0.504587054732775	1
COPD-HTN	ENSG00000180479	19	77	10	5E+05	0.042436	ZNF571	0.504009528350515	1
COPD-HTN	ENSG00000198169	8	37	10	5E+05	0.042386	ZNF251	0.50374025660864	1
COPD-HTN	ENSG00000132801	20	66	7	5E+05	0.042369	ZSWIM3	0.50374025660864	1
COPD-HTN	ENSG00000075884	2	1387	80	5E+05	0.042357	ARHGAP15	0.50374025660864	1
COPD-HTN	ENSG00000241058	10	344	16	5E+05	0.04231	NSUN6	0.50374025660864	1
COPD-HTN	ENSG00000076513	12	69	12	5E+05	0.04226	ANKRD13A	0.503541422107305	1
COPD-HTN	ENSG00000189320	7	50	9	5E+05	0.042232	FAM180A	0.503533283311772	1
COPD-HTN	ENSG00000051825	12	213	9	5E+05	0.04218	MPHOSPH9	0.503238796116505	1
COPD-HTN	ENSG00000181752	11	1	1	5E+05	0.042117	OR8K5	0.502812604274611	1
COPD-HTN	ENSG00000134987	5	100	11	5E+05	0.042116	WDR36	0.502812604274611	1
COPD-HTN	ENSG00000172171	17	19	2	5E+05	0.042075	TEFM	0.502812604274611	1
COPD-HTN	ENSG00000160917	7	37	6	5E+05	0.041996	CPSF4	0.5023441064244	1
COPD-HTN	ENSG00000149925	16	10	4	5E+05	0.041935	ALDOA	0.501940165584416	1
COPD-HTN	ENSG00000180185	16	116	3	5E+05	0.041876	FAHD1	0.501559654320988	1
COPD-HTN	ENSG00000131951	14	237	12	5E+05	0.041865	LRRC9	0.501559654320988	1
COPD-HTN	ENSG00000197714	19	39	7	5E+05	0.041853	ZNF460	0.501559654320988	1
COPD-HTN	ENSG00000225828	1	1	1	5E+05	0.041829	FAM229A	0.501559654320988	1
COPD-HTN	ENSG00000126602	16	177	27	5E+05	0.041819	TRAP1	0.501559654320988	1
COPD-HTN	ENSG00000169504	1	80	8	5E+05	0.041818	CLIC4	0.501559654320988	1
COPD-HTN	ENSG00000038274	5	34	7	5E+05	0.041761	MAT2B	0.501559654320988	1
COPD-HTN	ENSG00000186866	21	52	5	5E+05	0.041742	POFUT2	0.501559654320988	1
COPD-HTN	ENSG00000099377	16	7	2	5E+05	0.041709	HSD3B7	0.501559654320988	1

COPD-HTN	ENSG00000147955	9	6	3	5E+05	0.0417	SIGMAR1	0.501559654320988	1
COPD-HTN	ENSG00000149654	20	269	33	5E+05	0.04166	CDH22	0.501559654320988	1
COPD-HTN	ENSG00000132911	5	143	6	5E+05	0.041657	NMUR2	0.501559654320988	1
COPD-HTN	ENSG00000100151	22	32	7	5E+05	0.041631	PICK1	0.501559654320988	1
COPD-HTN	ENSG00000153561	2	60	7	5E+05	0.041579	RMND5A	0.501559654320988	1
COPD-HTN	ENSG00000122194	6	118	11	5E+05	0.041548	PLG	0.501559654320988	1
COPD-HTN	ENSG00000160307	21	27	6	5E+05	0.041548	S100B	0.501559654320988	1
COPD-HTN	ENSG00000179292	11	6	3	5E+05	0.041419	TMEM151A	0.501297719632305	1
COPD-HTN	ENSG00000100197	22	10	5	5E+05	0.041399	CYP2D6	0.501297719632305	1
COPD-HTN	ENSG00000165699	9	94	12	5E+05	0.041388	TSC1	0.501297719632305	1
COPD-HTN	ENSG00000126773	14	174	6	5E+05	0.041376	PCNXL4	0.501297719632305	1
COPD-HTN	ENSG00000130775	1	46	9	5E+05	0.04137	THEMIS2	0.501297719632305	1
COPD-HTN	ENSG00000170266	3	306	26	5E+05	0.041365	GLB1	0.501297719632305	1
COPD-HTN	ENSG00000141696	17	24	4	5E+05	0.041186	LEPREL4	0.500449266974291	1
COPD-HTN	ENSG00000177875	12	4	2	5E+05	0.041168	C12orf68	0.500449266974291	1
COPD-HTN	ENSG00000103740	15	227	41	5E+05	0.041113	ACSBG1	0.500221735313531	1
COPD-HTN	ENSG00000177125	9	25	7	5E+05	0.041077	ZBTB34	0.500113831571995	1
COPD-HTN	ENSG00000134884	13	25	7	5E+05	0.041017	ARGLU1	0.499713391275611	1
COPD-HTN	ENSG00000061918	4	114	21	5E+05	0.041005	GUCY1B3	0.499713391275611	1
COPD-HTN	ENSG00000120616	10	242	17	5E+05	0.040983	EPC1	0.499713391275611	1
COPD-HTN	ENSG00000186174	11	44	13	5E+05	0.040974	BCL9L	0.499713391275611	1
COPD-HTN	ENSG00000149923	16	10	3	5E+05	0.040941	PPP4C	0.499713391275611	1
COPD-HTN	ENSG00000152133	2	32	5	5E+05	0.040883	GPATCH11	0.499713391275611	1
COPD-HTN	ENSG00000144452	2	354	39	5E+05	0.040706	ABCA12	0.497898936960849	1
COPD-HTN	ENSG00000137817	15	39	5	5E+05	0.040698	PARP6	0.497898936960849	1
COPD-HTN	ENSG00000175294	11	21	4	5E+05	0.040618	CATSPER1	0.497482786710964	1
COPD-HTN	ENSG00000163909	1	36	13	5E+05	0.040545	HEYL	0.496918873005319	1
COPD-HTN	ENSG00000143153	1	89	16	5E+05	0.040522	ATP1B1	0.496918873005319	1
COPD-HTN	ENSG00000196233	10	157	10	5E+05	0.040518	LCOR	0.496918873005319	1
COPD-HTN	ENSG00000136688	2	16	4	5E+05	0.040467	IL36G	0.496918873005319	1
COPD-HTN	ENSG00000176697	11	85	10	5E+05	0.040428	BDNF	0.496806216	1
COPD-HTN	ENSG00000111077	12	40	10	5E+05	0.040425	TENC1	0.496806216	1
COPD-HTN	ENSG00000159556	15	14	4	5E+05	0.040381	ISL2	0.496806216	1

COPD-HTN	ENSG0000078804	20	8	2	5E+05	0.040371	TP53INP2	0.496806216	1
COPD-HTN	ENSG00000160113	19	32	11	5E+05	0.040362	NR2F6	0.496806216	1
COPD-HTN	ENSG00000255150	12	2	1	5E+05	0.040341	EID3	0.496806216	1
COPD-HTN	ENSG00000138085	2	11	3	5E+05	0.040302	ATRAID	0.496806216	1
COPD-HTN	ENSG00000010244	17	47	9	5E+05	0.040266	ZNF207	0.496806216	1
COPD-HTN	ENSG00000162545	1	3	2	5E+05	0.040254	CAMK2N1	0.496806216	1
COPD-HTN	ENSG00000143469	1	313	15	5E+05	0.040247	SYT14	0.496806216	1
COPD-HTN	ENSG00000132170	3	315	22	5E+05	0.040245	PPARG	0.496806216	1
COPD-HTN	ENSG00000182257	22	12	3	5E+05	0.040193	C22orf26	0.496806216	1
COPD-HTN	ENSG00000157613	11	70	13	5E+05	0.040134	CREB3L1	0.496806216	1
COPD-HTN	ENSG00000125901	20	4	2	5E+05	0.040077	MRPS26	0.496798480833894	1
COPD-HTN	ENSG00000169220	5	17	4	5E+05	0.039919	RGS14	0.495172898384926	1
COPD-HTN	ENSG00000138448	2	117	15	5E+05	0.039906	ITGAV	0.495172898384926	1
COPD-HTN	ENSG00000174851	11	6	2	5E+05	0.039898	YIF1A	0.495172898384926	1
COPD-HTN	ENSG00000119318	9	154	17	5E+05	0.039895	RAD23B	0.495172898384926	1
COPD-HTN	ENSG00000071991	18	203	23	5E+05	0.039893	CDH19	0.495172898384926	1
COPD-HTN	ENSG00000168038	3	1955	38	5E+05	0.039889	ULK4	0.495172898384926	1
COPD-HTN	ENSG00000163581	3	73	6	5E+05	0.039889	SLC2A2	0.495172898384926	1
COPD-HTN	ENSG00000267318	17	42	7	5E+05	0.039876	RP11-178C3.10	0.495172898384926	1
COPD-HTN	ENSG00000090273	1	61	9	5E+05	0.039821	NUDC	0.495172898384926	1
COPD-HTN	ENSG00000142039	19	26	3	5E+05	0.039784	CCDC97	0.495172898384926	1
COPD-HTN	ENSG00000143627	1	12	2	5E+05	0.039777	PKLR	0.495172898384926	1
COPD-HTN	ENSG00000141639	18	373	46	5E+05	0.039687	MAPK4	0.495172898384926	1
COPD-HTN	ENSG00000173511	11	2	1	5E+05	0.039573	VEGFB	0.494877278833107	1
COPD-HTN	ENSG00000135094	12	70	4	5E+05	0.039417	SDS	0.493261073319756	1
COPD-HTN	ENSG00000198054	21	119	13	5E+05	0.039376	DSCR8	0.49308275	1
COPD-HTN	ENSG00000160791	3	16	3	5E+05	0.039344	CCR5	0.493016962610469	1
COPD-HTN	ENSG00000116539	1	136	15	5E+05	0.039252	ASH1L	0.492198718367347	1
COPD-HTN	ENSG00000181619	14	105	12	5E+05	0.039188	GPR135	0.491730703880191	1
COPD-HTN	ENSG00000162302	11	22	3	5E+05	0.039151	RPS6KA4	0.491601078337875	1
COPD-HTN	ENSG00000136754	10	326	17	5E+05	0.03915	ABI1	0.491601078337875	1
COPD-HTN	ENSG00000139218	12	74	11	5E+05	0.039148	SCAF11	0.491601078337875	1
COPD-HTN	ENSG00000127831	2	37	4	5E+05	0.039096	VIL1	0.491601078337875	1

COPD-HTN	ENSG00000104320	8	144	7	5E+05	0.039091	NBN	0.491601078337875	1
COPD-HTN	ENSG00000204913	17	8	3	5E+05	0.03894	LRRC3C	0.490622706766917	1
COPD-HTN	ENSG00000100413	22	28	3	5E+05	0.038921	POLR3H	0.490622706766917	1
COPD-HTN	ENSG00000085721	16	52	11	5E+05	0.038846	RRN3	0.490108362765229	1
COPD-HTN	ENSG00000177181	1	125	8	5E+05	0.038844	RIMKLA	0.490108362765229	1
COPD-HTN	ENSG00000145246	4	345	31	5E+05	0.038837	ATP10D	0.490108362765229	1
COPD-HTN	ENSG00000203910	1	17	4	5E+05	0.038811	C1orf146	0.490108362765229	1
COPD-HTN	ENSG00000089876	10	58	10	5E+05	0.038798	DHX32	0.490108362765229	1
COPD-HTN	ENSG00000108375	17	103	14	5E+05	0.038764	RNF43	0.490108362765229	1
COPD-HTN	ENSG00000214944	5	858	60	5E+05	0.038652	ARHGEF28	0.489671694845361	1
COPD-HTN	ENSG00000185009	10	51	6	5E+05	0.038625	AP3M1	0.489666179504814	1
COPD-HTN	ENSG00000171703	20	59	13	5E+05	0.038596	TCEA2	0.489635284239505	1
COPD-HTN	ENSG00000173557	2	40	7	5E+05	0.038571	C2orf70	0.489635284239505	1
COPD-HTN	ENSG00000163633	4	114	13	5E+05	0.038568	C4orf36	0.489635284239505	1
COPD-HTN	ENSG00000174970	11	11	1	5E+05	0.038531	OR10AG1	0.489635284239505	1
COPD-HTN	ENSG00000153820	2	621	25	5E+05	0.038455	SPHKAP	0.489193247066943	1
COPD-HTN	ENSG00000159640	17	92	9	5E+05	0.038406	ACE	0.488907319060774	1
COPD-HTN	ENSG00000012223	3	158	19	5E+05	0.038367	LTF	0.488748383552177	1
COPD-HTN	ENSG00000168159	1	23	7	5E+05	0.038235	RNF187	0.487403703319502	1
COPD-HTN	ENSG00000144161	2	44	7	5E+05	0.038212	ZC3H8	0.487403703319502	1
COPD-HTN	ENSG00000144048	2	11	3	5E+05	0.038204	DUSP11	0.487403703319502	1
COPD-HTN	ENSG00000101444	20	31	2	5E+05	0.038198	AHCY	0.487403703319502	1
COPD-HTN	ENSG00000188921	9	123	14	5E+05	0.038161	PTPLAD2	0.487403703319502	1
COPD-HTN	ENSG00000161203	3	21	6	5E+05	0.038077	AP2M1	0.48707379666898	1
COPD-HTN	ENSG00000116161	1	16	5	5E+05	0.038058	CACYBP	0.48707379666898	1
COPD-HTN	ENSG00000137500	11	60	6	5E+05	0.037985	CCDC90B	0.486572275886032	1
COPD-HTN	ENSG00000069812	1	37	7	5E+05	0.037971	HES2	0.486572275886032	1
COPD-HTN	ENSG00000148019	9	88	14	5E+05	0.037858	CEP78	0.485620399443285	1
COPD-HTN	ENSG00000167578	19	61	12	5E+05	0.037845	RAB4B	0.485620399443285	1
COPD-HTN	ENSG00000196141	2	365	38	5E+05	0.037823	SPATS2L	0.485620399443285	1
COPD-HTN	ENSG00000168795	9	42	12	5E+05	0.037818	ZBTB5	0.485620399443285	1
COPD-HTN	ENSG00000103599	15	372	19	5E+05	0.03775	IQCH	0.485586706210747	1
COPD-HTN	ENSG00000125779	20	78	9	5E+05	0.037703	PANK2	0.485320809357542	1

COPD-HTN	ENSG00000128713	2	10	3	5E+05	0.037692	HOXD11	0.485320809357542	1
COPD-HTN	ENSG00000211450	11	3	1	5E+05	0.037682	C11orf31	0.485320809357542	1
COPD-HTN	ENSG00000186432	3	86	9	5E+05	0.037662	KPNA4	0.485320809357542	1
COPD-HTN	ENSG00000150051	10	150	16	5E+05	0.037655	MKX	0.485320809357542	1
COPD-HTN	ENSG00000169826	10	103	12	5E+05	0.037646	CSGALNACT10	0.485320809357542	1
COPD-HTN	ENSG00000164008	1	41	8	5E+05	0.037632	C1orf50	0.485320809357542	1
COPD-HTN	ENSG00000165637	10	37	8	5E+05	0.037601	VDAC2	0.485320809357542	1
COPD-HTN	ENSG00000111912	6	242	25	5E+05	0.037534	NCOA7	0.485320809357542	1
COPD-HTN	ENSG00000113758	5	32	5	5E+05	0.037511	DBN1	0.485320809357542	1
COPD-HTN	ENSG00000157500	3	59	9	5E+05	0.037219	APPL1	0.48245979395218	1
COPD-HTN	ENSG00000134253	1	38	7	5E+05	0.037174	TRIM45	0.482215581984518	1
COPD-HTN	ENSG00000103047	16	458	26	5E+05	0.037166	TANGO6	0.482215581984518	1
COPD-HTN	ENSG00000255046	8	28	8	5E+05	0.037133	RP11-297N6.2	0.482215581984518	1
COPD-HTN	ENSG00000104228	8	39	6	5E+05	0.037085	TRIM35	0.48207884696756	1
COPD-HTN	ENSG00000117305	1	41	4	5E+05	0.037042	HMGCL	0.481859693719125	1
COPD-HTN	ENSG00000139644	12	150	11	5E+05	0.036934	TMBIM6	0.480794083333333	1
COPD-HTN	ENSG00000028528	15	85	10	5E+05	0.036893	SNX1	0.480599766077739	1
COPD-HTN	ENSG00000196378	8	27	2	5E+05	0.036831	ZNF34	0.480131416548798	1
COPD-HTN	ENSG00000175920	4	245	31	5E+05	0.036829	DOK7	0.480131416548798	1
COPD-HTN	ENSG00000170423	12	20	5	5E+05	0.036816	KRT78	0.480131416548798	1
COPD-HTN	ENSG00000141431	18	344	23	5E+05	0.036806	ASXL3	0.480131416548798	1
COPD-HTN	ENSG00000129465	14	16	2	5E+05	0.036801	RIPK3	0.480131416548798	1
COPD-HTN	ENSG00000084112	12	97	17	5E+05	0.036797	SSH1	0.480131416548798	1
COPD-HTN	ENSG00000151687	2	135	15	5E+05	0.036743	ANKAR	0.480131416548798	1
COPD-HTN	ENSG00000120885	8	37	6	5E+05	0.036703	CLU	0.480131416548798	1
COPD-HTN	ENSG00000134909	11	582	21	5E+05	0.036547	ARHGAP32	0.479140007823613	1
COPD-HTN	ENSG00000131188	5	11	3	5E+05	0.036533	PRR7	0.479140007823613	1
COPD-HTN	ENSG00000179295	12	79	12	5E+05	0.036524	PTPN11	0.479140007823613	1
COPD-HTN	ENSG00000168872	16	22	7	5E+05	0.036507	DDX19A	0.479140007823613	1
COPD-HTN	ENSG00000144369	2	107	14	5E+05	0.036491	FAM171B	0.479140007823613	1
COPD-HTN	ENSG00000152404	11	402	23	5E+05	0.03645	CWF19L2	0.479140007823613	1
COPD-HTN	ENSG00000130299	19	26	5	5E+05	0.036372	GTPBP3	0.47888934	1
COPD-HTN	ENSG00000181291	17	121	25	5E+05	0.036362	TMEM132E	0.47888934	1

COPD-HTN	ENSG0000067225	15	35	7	5E+05	0.036181	PKM	0.477056060801144	1
COPD-HTN	ENSG00000102904	16	27	6	5E+05	0.036165	TSNAXIP1	0.477056060801144	1
COPD-HTN	ENSG00000138109	10	159	15	5E+05	0.036156	CYP2C9	0.477056060801144	1
COPD-HTN	ENSG00000170677	18	121	18	5E+05	0.036114	SOCS6	0.477056060801144	1
COPD-HTN	ENSG00000148700	10	163	16	5E+05	0.036063	ADD3	0.476864619081779	1
COPD-HTN	ENSG00000103657	15	519	17	5E+05	0.036029	HERC1	0.476757040201005	1
COPD-HTN	ENSG00000198625	1	113	9	5E+05	0.035983	MDM4	0.47649040158046	1
COPD-HTN	ENSG00000116205	1	104	11	5E+05	0.035969	TCEANC2	0.47649040158046	1
COPD-HTN	ENSG00000197457	20	28	6	5E+05	0.035938	STMN3	0.47649040158046	1
COPD-HTN	ENSG00000171136	19	9	3	5E+05	0.03591	RLN3	0.47649040158046	1
COPD-HTN	ENSG00000162927	2	120	20	5E+05	0.035907	PUS10	0.47649040158046	1
COPD-HTN	ENSG00000253304	1	9	3	5E+05	0.035906	TMEM200B	0.47649040158046	1
COPD-HTN	ENSG00000052723	1	3	1	5E+05	0.035793	SIKE1	0.47602624025974	1
COPD-HTN	ENSG00000139405	12	10	2	5E+05	0.035739	RITA1	0.475651254151625	1
COPD-HTN	ENSG00000110148	11	51	8	5E+05	0.035734	CCKBR	0.475651254151625	1
COPD-HTN	ENSG00000105088	19	191	21	5E+05	0.035685	OLFM2	0.475619381778742	1
COPD-HTN	ENSG00000077380	2	103	14	5E+05	0.035575	DYNC112	0.474496363965268	1
COPD-HTN	ENSG00000166260	17	61	6	5E+05	0.035484	COX11	0.473625323678494	1
COPD-HTN	ENSG00000213494	17	76	10	5E+05	0.035479	CCL14	0.473625323678494	1
COPD-HTN	ENSG00000123064	12	43	4	5E+05	0.035423	DDX54	0.473496852066715	1
COPD-HTN	ENSG00000100625	14	11	3	5E+05	0.03542	SIX4	0.473496852066715	1
COPD-HTN	ENSG00000149743	11	4	2	5E+05	0.035334	TRPT1	0.472993189542484	1
COPD-HTN	ENSG00000009830	14	143	24	5E+05	0.035283	POMT2	0.472653734738372	1
COPD-HTN	ENSG00000163374	1	20	5	5E+05	0.035223	YY1AP1	0.472193133818182	1
COPD-HTN	ENSG00000231924	19	56	6	5E+05	0.035185	PSG1	0.472027005094614	1
COPD-HTN	ENSG00000154310	3	919	92	5E+05	0.035097	TNIK	0.471189367079388	1
COPD-HTN	ENSG00000240771	12	18	6	5E+05	0.035074	ARHGEF25	0.471189367079388	1
COPD-HTN	ENSG00000147535	8	7	3	5E+05	0.03504	PPAPDC1B	0.471110371991247	1
COPD-HTN	ENSG00000175318	15	38	7	5E+05	0.034839	GRAMD2	0.468749844525548	1
COPD-HTN	ENSG00000198844	17	39	10	5E+05	0.03482	ARHGEF15	0.468749844525548	1
COPD-HTN	ENSG00000123473	1	139	8	5E+05	0.034766	STIL	0.468451519005848	1
COPD-HTN	ENSG00000180346	4	4	1	5E+05	0.034731	TIGD2	0.468322255303584	1
COPD-HTN	ENSG00000013275	19	24	5	5E+05	0.034697	PSMC4	0.468206296486091	1

COPD-HTN	ENSG00000100319	22	103	9	5E+05	0.034658	ZMAT5	0.468022647619048	1
COPD-HTN	ENSG00000147697	8	100	16	5E+05	0.034657	GSDMC	0.468022647619048	1
COPD-HTN	ENSG00000101166	20	13	4	5E+05	0.034652	SLMO2	0.468022647619048	1
COPD-HTN	ENSG00000119801	2	26	9	5E+05	0.034624	YPEL5	0.468022647619048	1
COPD-HTN	ENSG00000186446	3	15	4	5E+05	0.034604	ZNF501	0.468022647619048	1
COPD-HTN	ENSG00000161574	17	72	9	5E+05	0.034567	CCL15-CCL1	0.468022647619048	1
COPD-HTN	ENSG00000107949	10	41	7	5E+05	0.034477	BCCIP	0.467633952170714	1
COPD-HTN	ENSG00000163666	3	37	7	5E+05	0.034435	HESX1	0.467408214285714	1
COPD-HTN	ENSG00000120729	5	11	3	5E+05	0.034425	MYOT	0.467408214285714	1
COPD-HTN	ENSG00000089169	12	537	47	5E+05	0.03435	RPH3A	0.466942146017699	1
COPD-HTN	ENSG00000126500	11	46	9	5E+05	0.03433	FLRT1	0.466942146017699	1
COPD-HTN	ENSG00000158092	3	168	6	5E+05	0.034293	NCK1	0.466855885524372	1
COPD-HTN	ENSG00000163875	1	64	11	5E+05	0.034256	MEAF6	0.466696857354028	1
COPD-HTN	ENSG00000165841	10	402	15	5E+05	0.034252	CYP2C19	0.466696857354028	1
COPD-HTN	ENSG00000119326	9	193	20	5E+05	0.034208	CTNNAL1	0.466696857354028	1
COPD-HTN	ENSG00000135148	12	22	5	5E+05	0.034176	TRAFD1	0.4666416355555556	1
COPD-HTN	ENSG00000111684	12	41	5	5E+05	0.034173	LPCAT3	0.4666416355555556	1
COPD-HTN	ENSG00000173068	9	1327	74	5E+05	0.034152	BNC2	0.4666416355555556	1
COPD-HTN	ENSG00000137831	15	147	12	5E+05	0.03413	UACA	0.4666416355555556	1
COPD-HTN	ENSG00000010282	3	18	4	5E+05	0.034044	HHATL	0.466220692421991	1
COPD-HTN	ENSG00000172057	17	10	4	5E+05	0.034019	ORMDL3	0.466220692421991	1
COPD-HTN	ENSG00000221909	7	9	3	5E+05	0.033998	FAM200A	0.466220692421991	1
COPD-HTN	ENSG00000010319	3	14	6	5E+05	0.033945	SEMA3G	0.465903339538347	1
COPD-HTN	ENSG00000105982	7	79	9	5E+05	0.033939	RNF32	0.465903339538347	1
COPD-HTN	ENSG00000165644	10	1	1	5E+05	0.033908	COMTD1	0.465903339538347	1
COPD-HTN	ENSG00000173598	12	57	8	5E+05	0.033863	NUDT4	0.465818417164179	1
COPD-HTN	ENSG00000186583	8	17	5	5E+05	0.033858	SPATC1	0.465818417164179	1
COPD-HTN	ENSG00000091009	5	222	14	5E+05	0.033765	RBM27	0.465164607623318	1
COPD-HTN	ENSG00000058091	7	1915	65	5E+05	0.033711	CDK14	0.464768035153328	1
COPD-HTN	ENSG00000111271	12	55	5	5E+05	0.033699	ACAD10	0.464768035153328	1
COPD-HTN	ENSG00000168917	3	87	4	5E+05	0.033684	SLC35G2	0.464768035153328	1
COPD-HTN	ENSG00000177096	22	11	3	5E+05	0.033673	FAM109B	0.464768035153328	1
COPD-HTN	ENSG00000186566	17	140	10	5E+05	0.033549	GPATCH8	0.463922518379595	1

COPD-HTN	ENSG00000213930	9	18	5	5E+05	0.033506	GALT	0.463675749249249	1
COPD-HTN	ENSG00000108671	17	36	8	5E+05	0.033482	PSMD11	0.463675749249249	1
COPD-HTN	ENSG00000128487	17	653	18	5E+05	0.033409	SPECC1	0.463028644360902	1
COPD-HTN	ENSG00000124767	6	63	11	5E+05	0.033347	GLO1	0.462517118886381	1
COPD-HTN	ENSG00000113396	5	1781	42	5E+05	0.033315	SLC27A6	0.462421231174699	1
COPD-HTN	ENSG00000182896	17	3	1	5E+05	0.033172	TMEM95	0.460783327807084	1
COPD-HTN	ENSG00000111300	12	72	11	5E+05	0.03313	NAA25	0.46054697586727	1
COPD-HTN	ENSG00000110536	11	5	2	5E+05	0.033124	PTPMT1	0.46054697586727	1
COPD-HTN	ENSG00000183888	1	16	5	5E+05	0.033106	C1orf64	0.46054697586727	1
COPD-HTN	ENSG00000186710	12	14	1	5E+05	0.033097	CCDC42B	0.46054697586727	1
COPD-HTN	ENSG0000020633	1	119	24	5E+05	0.03306	RUNX3	0.46054697586727	1
COPD-HTN	ENSG00000105229	19	92	9	5E+05	0.032995	PIAS4	0.460406385314156	1
COPD-HTN	ENSG00000081014	15	213	15	5E+05	0.032977	AP4E1	0.460406385314156	1
COPD-HTN	ENSG00000113742	5	173	17	5E+05	0.03296	CPEB4	0.460406385314156	1
COPD-HTN	ENSG00000123119	8	308	11	5E+05	0.032946	NECAB1	0.460406385314156	1
COPD-HTN	ENSG00000160570	19	18	2	5E+05	0.032915	DEDD2	0.460406385314156	1
COPD-HTN	ENSG00000137571	8	396	36	5E+05	0.0329	SLCO5A1	0.460406385314156	1
COPD-HTN	ENSG00000164347	5	81	9	5E+05	0.032885	GFM2	0.460406385314156	1
COPD-HTN	ENSG00000126749	12	36	6	5E+05	0.032867	EMG1	0.460406385314156	1
COPD-HTN	ENSG00000174776	3	253	26	5E+05	0.032864	WDR49	0.460406385314156	1
COPD-HTN	ENSG00000119401	9	25	6	5E+05	0.032854	TRIM32	0.460406385314156	1
COPD-HTN	ENSG00000167104	20	36	6	5E+05	0.032769	BPIFB6	0.460406385314156	1
COPD-HTN	ENSG00000108439	17	16	6	5E+05	0.032676	PNPO	0.459783746564885	1
COPD-HTN	ENSG00000160161	19	16	2	5E+05	0.032632	CILP2	0.459515398013751	1
COPD-HTN	ENSG00000006047	17	8	2	5E+05	0.032591	YBX2	0.459288916666667	1
COPD-HTN	ENSG00000109189	4	77	6	5E+05	0.032581	USP46	0.459288916666667	1
COPD-HTN	ENSG00000105251	19	26	5	5E+05	0.032576	SHD	0.459288916666667	1
COPD-HTN	ENSG00000162642	1	23	8	5E+05	0.032552	C1orf52	0.459288916666667	1
COPD-HTN	ENSG00000082497	1	13	5	5E+05	0.03251	SERTAD4	0.459288916666667	1
COPD-HTN	ENSG00000114861	3	1172	104	5E+05	0.032476	FOXP1	0.459288916666667	1
COPD-HTN	ENSG00000109618	4	67	12	5E+05	0.032465	SEPSECS	0.459288916666667	1
COPD-HTN	ENSG00000165120	7	16	4	5E+05	0.032452	SSMEM1	0.459288916666667	1
COPD-HTN	ENSG00000112208	6	18	4	5E+05	0.032413	BAG2	0.459288916666667	1

COPD-HTN	ENSG00000181754	1	9	4	5E+05	0.03238	AMIGO1	0.459288916666667	1
COPD-HTN	ENSG00000074266	11	72	9	5E+05	0.032269	EED	0.458254604776579	1
COPD-HTN	ENSG00000119328	9	41	8	5E+05	0.032237	FAM206A	0.458153138781804	1
COPD-HTN	ENSG00000023191	11	54	8	5E+05	0.032076	RNH1	0.45621675	1
COPD-HTN	ENSG00000243943	2	98	10	5E+05	0.03202	ZNF512	0.455771938223938	1
COPD-HTN	ENSG00000117500	1	54	9	5E+05	0.032019	TMED5	0.455771938223938	1
COPD-HTN	ENSG00000203859	1	15	2	5E+05	0.031995	HSD3B2	0.455771938223938	1
COPD-HTN	ENSG00000122483	1	202	15	5E+05	0.031943	CCDC18	0.455731671052632	1
COPD-HTN	ENSG00000121621	11	96	12	5E+05	0.031915	KIF18A	0.455684891556933	1
COPD-HTN	ENSG00000197562	16	103	7	5E+05	0.031845	RAB40C	0.455037895348837	1
COPD-HTN	ENSG00000135213	7	71	12	5E+05	0.031828	POM121C	0.455037895348837	1
COPD-HTN	ENSG00000164932	8	36	7	5E+05	0.031827	CTHRC1	0.455037895348837	1
COPD-HTN	ENSG00000114383	3	3	2	5E+05	0.03179	TUSC2	0.455037895348837	1
COPD-HTN	ENSG00000147432	8	176	6	5E+05	0.03176	CHRN3	0.455037895348837	1
COPD-HTN	ENSG00000131981	14	37	4	5E+05	0.031734	LGALS3	0.455037895348837	1
COPD-HTN	ENSG00000112183	6	18	5	5E+05	0.031659	RBM24	0.454494039719626	1
COPD-HTN	ENSG00000047365	4	728	52	5E+05	0.031604	ARAP2	0.454058091971941	1
COPD-HTN	ENSG00000173486	11	3	2	5E+05	0.031577	FKBP2	0.454024056942278	1
COPD-HTN	ENSG00000198276	20	30	10	5E+05	0.031526	UCKL1	0.453644619828259	1
COPD-HTN	ENSG00000108423	17	56	8	5E+05	0.031462	TUBD1	0.4530773796875	1
COPD-HTN	ENSG00000149043	11	35	8	5E+05	0.031415	SYT8	0.452754257232213	1
COPD-HTN	ENSG00000076382	17	13	8	5E+05	0.031376	SPAG5	0.452546015649452	1
COPD-HTN	ENSG00000145075	3	546	32	5E+05	0.031315	CCDC39	0.452019886452623	1
COPD-HTN	ENSG00000043514	1	107	12	5E+05	0.031293	TRIT1	0.452019886452623	1
COPD-HTN	ENSG00000166323	11	222	12	5E+05	0.031249	C11orf65	0.451774758431373	1
COPD-HTN	ENSG00000181649	11	2	1	5E+05	0.031148	PHLDA2	0.450668040816327	1
COPD-HTN	ENSG00000215114	8	69	10	5E+05	0.031134	UBXN2B	0.450668040816327	1
COPD-HTN	ENSG00000106125	7	394	26	5E+05	0.031114	FAM188B	0.450668040816327	1
COPD-HTN	ENSG00000144736	3	147	9	5E+05	0.03108	SHQ1	0.450668040816327	1
COPD-HTN	ENSG00000089639	19	21	6	5E+05	0.031065	GMIP	0.450668040816327	1
COPD-HTN	ENSG00000268412	2	1	1	5E+05	0.030816	AC013449.1	0.447621219858156	1
COPD-HTN	ENSG00000101337	20	98	8	5E+05	0.030686	TM9SF4	0.446084414826499	1
COPD-HTN	ENSG00000187871	6	364	23	5E+05	0.030682	GFRAL	0.446084414826499	1

COPD-HTN	ENSG00000164221	5	51	9	5E+05	0.030677	CCDC112	0.446084414826499	1
COPD-HTN	ENSG00000137936	1	826	29	5E+05	0.030671	BCAR3	0.446084414826499	1
COPD-HTN	ENSG00000185666	22	1535	102	5E+05	0.030637	SYN3	0.446084414826499	1
COPD-HTN	ENSG00000043143	5	134	22	5E+05	0.030613	JADE2	0.446084414826499	1
COPD-HTN	ENSG00000196526	4	845	36	5E+05	0.03061	AFAP1	0.446084414826499	1
COPD-HTN	ENSG00000103044	16	22	8	5E+05	0.030606	HAS3	0.446084414826499	1
COPD-HTN	ENSG00000205147	19	9	4	5E+05	0.0306	AC016586.1	0.446084414826499	1
COPD-HTN	ENSG00000179094	17	31	8	5E+05	0.030545	PER1	0.446084414826499	1
COPD-HTN	ENSG00000255223	11	6	2	5E+05	0.03045	OR5M11	0.446084414826499	1
COPD-HTN	ENSG00000075043	20	248	30	5E+05	0.030345	KCNQ2	0.444987577565632	1
COPD-HTN	ENSG00000176920	19	35	4	5E+05	0.030327	FUT2	0.444987577565632	1
COPD-HTN	ENSG00000168924	4	21	12	5E+05	0.030299	LETM1	0.444987577565632	1
COPD-HTN	ENSG00000109182	4	114	9	5E+05	0.030285	CWH43	0.444987577565632	1
COPD-HTN	ENSG00000146232	6	15	6	5E+05	0.030193	NFKBIE	0.444172042298484	1
COPD-HTN	ENSG00000164093	4	37	7	5E+05	0.030168	PITX2	0.444158741214058	1
COPD-HTN	ENSG00000139445	12	57	10	5E+05	0.030067	FOXN4	0.443025588329337	1
COPD-HTN	ENSG00000099381	16	27	3	5E+05	0.030031	SETD1A	0.442849138	1
COPD-HTN	ENSG00000183196	16	28	12	5E+05	0.030023	CHST6	0.442849138	1
COPD-HTN	ENSG00000169964	3	2	1	5E+05	0.030021	TMEM42	0.442849138	1
COPD-HTN	ENSG00000165702	9	160	37	5E+05	0.030001	GFI1B	0.442849138	1
COPD-HTN	ENSG00000185129	5	3	2	5E+05	0.029969	PURA	0.442849138	1
COPD-HTN	ENSG00000181322	3	49	15	5E+05	0.029964	NME9	0.442849138	1
COPD-HTN	ENSG00000204020	10	67	12	5E+05	0.029907	LIPN	0.442849138	1
COPD-HTN	ENSG00000114166	3	443	28	5E+05	0.029905	KAT2B	0.442849138	1
COPD-HTN	ENSG00000269795	1	11	4	5E+05	0.029865	AC092782.1	0.442849138	1
COPD-HTN	ENSG00000111530	12	153	13	5E+05	0.029858	CAND1	0.442849138	1
COPD-HTN	ENSG00000151465	10	127	15	5E+05	0.029812	CDC123	0.442849138	1
COPD-HTN	ENSG00000197851	7	42	9	5E+05	0.029809	C7orf76	0.442849138	1
COPD-HTN	ENSG00000067208	1	508	10	5E+05	0.029766	EVI5	0.442849138	1
COPD-HTN	ENSG00000120696	13	4	1	5E+05	0.029722	KBTBD7	0.442849138	1
COPD-HTN	ENSG00000084733	2	169	7	5E+05	0.029655	RAB10	0.442257779126214	1
COPD-HTN	ENSG00000171492	1	156	32	5E+05	0.029642	LRRRC8D	0.442257779126214	1
COPD-HTN	ENSG00000106526	7	144	15	5E+05	0.029595	ACTR3C	0.442078310372771	1

COPD-HTN	ENSG00000159176	1	91	12	5E+05	0.029591	CSRP1	0.442078310372771	1
COPD-HTN	ENSG00000167258	17	171	10	5E+05	0.029561	CDK12	0.442078310372771	1
COPD-HTN	ENSG00000253426	8	21	3	5E+05	0.029521	RP11-10A14.4	0.442047597887896	1
COPD-HTN	ENSG00000170915	6	157	31	5E+05	0.029455	PAQR8	0.441417898373984	1
COPD-HTN	ENSG00000106460	7	182	9	5E+05	0.02944	TMEM106B	0.441417898373984	1
COPD-HTN	ENSG00000118971	12	59	15	5E+05	0.029425	CCND2	0.441417898373984	1
COPD-HTN	ENSG00000206260	3	3	2	5E+05	0.029402	PRR23A	0.441417898373984	1
COPD-HTN	ENSG00000139428	12	88	13	5E+05	0.029358	MMAB	0.441399685154976	1
COPD-HTN	ENSG00000134242	1	89	13	5E+05	0.029247	PTPN22	0.440089755918367	1
COPD-HTN	ENSG00000125686	17	68	6	5E+05	0.029246	MED1	0.440089755918367	1
COPD-HTN	ENSG00000050130	14	70	8	5E+05	0.029234	JKAMP	0.440089755918367	1
COPD-HTN	ENSG00000178053	3	102	12	5E+05	0.029227	MLF1	0.440089755918367	1
COPD-HTN	ENSG00000106113	7	105	18	5E+05	0.029144	CRHR2	0.439976537264537	1
COPD-HTN	ENSG00000071082	2	49	7	5E+05	0.02905	RPL31	0.438916926229508	1
COPD-HTN	ENSG00000164744	7	76	6	5E+05	0.02902	SUN3	0.438823347005742	1
COPD-HTN	ENSG00000104129	15	49	6	5E+05	0.028972	DNAJC17	0.438457205254516	1
COPD-HTN	ENSG00000164967	9	2	1	5E+05	0.028916	RPP25L	0.437969291700904	1
COPD-HTN	ENSG00000254959	7	459	31	5E+05	0.028849	INMT-FAM180	0.437313829769737	1
COPD-HTN	ENSG00000149781	11	29	7	5E+05	0.028823	FERMT3	0.43727930781893	1
COPD-HTN	ENSG00000196263	19	69	9	5E+05	0.028748	ZNF471	0.436500728171334	1
COPD-HTN	ENSG00000079462	19	4	1	5E+05	0.02872	PAFAH1B3	0.436435086562242	1
COPD-HTN	ENSG00000084764	2	55	4	5E+05	0.0287	MAPRE3	0.436435086562242	1
COPD-HTN	ENSG00000157150	3	16	5	5E+05	0.028687	TIMP4	0.436435086562242	1
COPD-HTN	ENSG00000133789	11	265	10	5E+05	0.028604	SWAP70	0.435750026446281	1
COPD-HTN	ENSG00000139437	12	164	16	5E+05	0.028519	TCHP	0.434814497105045	1
COPD-HTN	ENSG00000249590	22	44	11	5E+05	0.028486	RP4-539M6.1	0.434670892384106	1
COPD-HTN	ENSG00000138795	4	191	17	5E+05	0.028455	LEF1	0.434557593206297	1
COPD-HTN	ENSG00000226887	4	37	3	5E+05	0.028413	ERVMER34-10	0.43427597761194	1
COPD-HTN	ENSG00000110921	12	63	11	5E+05	0.028354	MVK	0.433733843983403	1
COPD-HTN	ENSG00000008130	1	65	8	5E+05	0.028353	NADK	0.433733843983403	1
COPD-HTN	ENSG00000113248	5	5	3	5E+05	0.028329	PCDHB15	0.433733843983403	1
COPD-HTN	ENSG00000163935	3	251	18	5E+05	0.028325	SFMBT1	0.433733843983403	1
COPD-HTN	ENSG00000110955	12	7	1	5E+05	0.028266	ATP5B	0.433733843983403	1

COPD-HTN	ENSG0000021776	15	233	18	5E+05	0.028244	AQR	0.433733843983403	1
COPD-HTN	ENSG00000204991	16	142	14	5E+05	0.028199	SPIRE2	0.433521407005838	1
COPD-HTN	ENSG00000100285	22	27	6	5E+05	0.028139	NEFH	0.432960089315526	1
COPD-HTN	ENSG00000168374	3	68	9	5E+05	0.028135	ARF4	0.432960089315526	1
COPD-HTN	ENSG00000205212	17	78	15	5E+05	0.02808	CCDC144NL	0.432774782608696	1
COPD-HTN	ENSG00000203993	9	1	1	5E+05	0.028072	C9orf37	0.432774782608696	1
COPD-HTN	ENSG00000099849	11	11	5	5E+05	0.028047	RASSF7	0.432774782608696	1
COPD-HTN	ENSG00000156603	11	7	3	5E+05	0.028	MED19	0.432626990779547	1
COPD-HTN	ENSG00000159023	1	347	19	5E+05	0.027986	EPB41	0.432626990779547	1
COPD-HTN	ENSG00000163629	4	535	12	5E+05	0.027875	PTPN13	0.431418870696893	1
COPD-HTN	ENSG00000132698	1	5	3	5E+05	0.027867	RAB25	0.431418870696893	1
COPD-HTN	ENSG00000130758	19	31	8	5E+05	0.027812	MAP3K10	0.431167868797309	1
COPD-HTN	ENSG00000126464	19	77	9	5E+05	0.027789	PRR12	0.431167868797309	1
COPD-HTN	ENSG00000125447	17	39	5	5E+05	0.027711	GGA3	0.430325916596462	1
COPD-HTN	ENSG00000153832	2	116	17	5E+05	0.027703	FBXO36	0.430325916596462	1
COPD-HTN	ENSG00000064999	6	152	17	5E+05	0.027647	ANKS1A	0.430056667510549	1
COPD-HTN	ENSG00000115318	2	16	4	5E+05	0.027602	LOXL3	0.429719313	1
COPD-HTN	ENSG00000128928	15	78	8	5E+05	0.027562	IVD	0.42945929501268	1
COPD-HTN	ENSG00000125378	14	15	3	5E+05	0.027559	BMP4	0.42945929501268	1
COPD-HTN	ENSG00000117479	1	31	9	5E+05	0.027542	SLC19A2	0.42945929501268	1
COPD-HTN	ENSG00000129245	17	33	8	5E+05	0.027513	FXR2	0.42945929501268	1
COPD-HTN	ENSG00000148180	9	225	20	5E+05	0.027512	GSN	0.42945929501268	1
COPD-HTN	ENSG00000118402	6	105	10	5E+05	0.027464	ELOVL4	0.42945929501268	1
COPD-HTN	ENSG00000242852	19	153	10	5E+05	0.027426	ZNF709	0.42945929501268	1
COPD-HTN	ENSG00000118849	3	104	12	5E+05	0.027392	RARRES1	0.429350965986395	1
COPD-HTN	ENSG00000165806	10	144	16	5E+05	0.027335	CASP7	0.428822174468085	1
COPD-HTN	ENSG00000136731	2	230	16	5E+05	0.027295	UGGT1	0.428559399488927	1
COPD-HTN	ENSG00000139977	14	19	4	5E+05	0.027295	NAA30	0.428559399488927	1
COPD-HTN	ENSG00000141720	17	59	11	5E+05	0.027275	PIP4K2B	0.428559399488927	1
COPD-HTN	ENSG00000161791	12	95	9	5E+05	0.027271	FMNL3	0.428559399488927	1
COPD-HTN	ENSG00000205517	19	78	8	5E+05	0.027251	RGL3	0.428559399488927	1
COPD-HTN	ENSG00000181718	11	12	4	5E+05	0.027226	OR5T2	0.428559399488927	1
COPD-HTN	ENSG00000115602	2	146	13	5E+05	0.027222	IL1RL1	0.428559399488927	1

COPD-HTN	ENSG00000130703	20	147	15	5E+05	0.027211	OSBPL2	0.428559399488927	1
COPD-HTN	ENSG00000166529	7	16	3	5E+05	0.027208	ZSCAN21	0.428559399488927	1
COPD-HTN	ENSG00000166813	15	89	10	5E+05	0.027201	KIF7	0.428559399488927	1
COPD-HTN	ENSG00000147874	9	209	17	5E+05	0.02715	HAUS6	0.428559399488927	1
COPD-HTN	ENSG00000143217	1	36	9	5E+05	0.026979	PVRL4	0.427604391229579	1
COPD-HTN	ENSG00000116809	1	49	10	5E+05	0.026952	ZBTB17	0.427544075731498	1
COPD-HTN	ENSG00000047849	3	188	11	5E+05	0.026952	MAP4	0.427544075731498	1
COPD-HTN	ENSG00000128510	7	86	12	5E+05	0.026942	CPA4	0.427544075731498	1
COPD-HTN	ENSG00000107438	10	169	23	5E+05	0.026865	PDLIM1	0.427267079378775	1
COPD-HTN	ENSG00000163872	3	182	13	5E+05	0.026857	YEATS2	0.427267079378775	1
COPD-HTN	ENSG00000169760	3	2213	125	5E+05	0.026809	NLGN1	0.427113480553155	1
COPD-HTN	ENSG00000205189	8	71	11	5E+05	0.0268	ZBTB10	0.427113480553155	1
COPD-HTN	ENSG00000106246	7	91	11	5E+05	0.026741	PTCD1	0.426767838095238	1
COPD-HTN	ENSG00000110367	11	71	9	5E+05	0.026706	DDX6	0.426578594454073	1
COPD-HTN	ENSG00000140391	15	26	5	5E+05	0.026676	TSPAN3	0.426468957502168	1
COPD-HTN	ENSG00000136444	17	11	3	5E+05	0.026646	RSAD1	0.426359130208333	1
COPD-HTN	ENSG00000122779	7	167	18	5E+05	0.026525	TRIM24	0.424791768027802	1
COPD-HTN	ENSG00000166143	15	17	4	5E+05	0.026471	PPP1R14D	0.424295602608696	1
COPD-HTN	ENSG00000173039	11	11	4	5E+05	0.026424	RELA	0.423910872062663	1
COPD-HTN	ENSG00000198646	20	173	12	5E+05	0.026418	NCOA6	0.423910872062663	1
COPD-HTN	ENSG00000091592	17	469	18	5E+05	0.026395	NLRP1	0.423910872062663	1
COPD-HTN	ENSG00000139436	12	115	15	5E+05	0.026345	GIT2	0.42374989965096	1
COPD-HTN	ENSG00000165124	9	741	59	5E+05	0.026336	SVEP1	0.42374989965096	1
COPD-HTN	ENSG00000108829	17	42	7	5E+05	0.026319	LRRC59	0.42374989965096	1
COPD-HTN	ENSG00000126790	14	71	9	5E+05	0.026306	L3HYPDH	0.42374989965096	1
COPD-HTN	ENSG00000165868	10	241	21	5E+05	0.02625	HSPA12A	0.423700744308231	1
COPD-HTN	ENSG00000133805	11	721	66	5E+05	0.026227	AMPD3	0.423700517966696	1
COPD-HTN	ENSG00000113389	5	261	25	5E+05	0.026188	NPR3	0.42344158245614	1
COPD-HTN	ENSG00000163618	3	1683	98	5E+05	0.026156	CADPS	0.423295476733977	1
COPD-HTN	ENSG00000115607	2	133	12	5E+05	0.026144	IL18RAP	0.423295476733977	1
COPD-HTN	ENSG00000091138	7	88	20	5E+05	0.026143	SLC26A3	0.423295476733977	1
COPD-HTN	ENSG00000178295	2	71	12	5E+05	0.026135	GEN1	0.423295476733977	1
COPD-HTN	ENSG00000142867	1	33	10	5E+05	0.026126	BCL10	0.423295476733977	1

COPD-HTN	ENSG00000117475	1	68	9	5E+05	0.026114	BLZF1	0.423295476733977	1
COPD-HTN	ENSG00000105427	19	3	1	5E+05	0.026079	CNFN	0.423295476733977	1
COPD-HTN	ENSG00000132510	17	18	5	5E+05	0.026063	KDM6B	0.423295476733977	1
COPD-HTN	ENSG00000171700	20	11	4	5E+05	0.026033	RGS19	0.423295476733977	1
COPD-HTN	ENSG00000180116	12	583	24	5E+05	0.026003	C12orf40	0.423295476733977	1
COPD-HTN	ENSG00000129965	11	74	16	5E+05	0.025996	INS-IGF2	0.423295476733977	1
COPD-HTN	ENSG00000035403	10	172	21	5E+05	0.025955	VCL	0.423295476733977	1
COPD-HTN	ENSG00000174943	16	34	5	5E+05	0.025938	KCTD13	0.423295476733977	1
COPD-HTN	ENSG00000196653	3	11	4	5E+05	0.025859	ZNF502	0.423295476733977	1
COPD-HTN	ENSG00000255073	11	70	11	5E+05	0.025802	ZFP91-CNTF	0.422762903111111	1
COPD-HTN	ENSG00000173264	11	21	8	5E+05	0.025782	GPR137	0.422762903111111	1
COPD-HTN	ENSG00000139514	13	213	19	5E+05	0.025769	SLC7A1	0.422762903111111	1
COPD-HTN	ENSG00000117748	1	48	4	5E+05	0.025765	RPA2	0.422762903111111	1
COPD-HTN	ENSG00000197343	7	29	8	5E+05	0.025745	ZNF655	0.422762903111111	1
COPD-HTN	ENSG00000119559	19	27	5	5E+05	0.025687	C19orf25	0.422757563392857	1
COPD-HTN	ENSG00000101440	20	94	5	5E+05	0.025565	ASIP	0.421125688114388	1
COPD-HTN	ENSG00000160472	19	1	1	5E+05	0.025452	TMEM190	0.419639280858676	1
COPD-HTN	ENSG00000196586	6	271	16	5E+05	0.025423	MYO6	0.419536400179051	1
COPD-HTN	ENSG00000203883	20	1	1	5E+05	0.025394	SOX18	0.419433335125448	1
COPD-HTN	ENSG00000170927	6	1380	51	5E+05	0.025376	PKHD1	0.419433335125448	1
COPD-HTN	ENSG00000019995	10	74	7	5E+05	0.025331	ZRANB1	0.419143916517056	1
COPD-HTN	ENSG00000181333	11	166	14	5E+05	0.02528	HEPHL1	0.418675867026056	1
COPD-HTN	ENSG00000064601	20	16	3	5E+05	0.025229	CTSA	0.418206975719424	1
COPD-HTN	ENSG00000080709	5	281	31	5E+05	0.025161	KCNN2	0.417455187218722	1
COPD-HTN	ENSG00000179751	19	1	1	5E+05	0.025143	SYCN	0.417455187218722	1
COPD-HTN	ENSG00000149260	11	151	28	5E+05	0.025114	CAPN5	0.417426836789901	1
COPD-HTN	ENSG00000049449	11	652	59	5E+05	0.025093	RCN1	0.417426836789901	1
COPD-HTN	ENSG00000166140	15	14	2	5E+05	0.025092	ZFYVE19	0.417426836789901	1
COPD-HTN	ENSG00000161956	17	20	7	5E+05	0.025072	SENP3	0.417426836789901	1
COPD-HTN	ENSG00000214954	8	262	11	5E+05	0.025061	LRRC69	0.417426836789901	1
COPD-HTN	ENSG00000160752	1	11	2	5E+05	0.025052	FDPS	0.417426836789901	1
COPD-HTN	ENSG00000259030	1	601	45	5E+05	0.024995	FPGT-TNNI3	0.417426836789901	1
COPD-HTN	ENSG00000116783	1	601	45	5E+05	0.024995	TNNI3K	0.417426836789901	1

COPD-HTN	ENSG00000268656	2	8	3	5E+05	0.024952	AC110084.1	0.417426836789901	1
COPD-HTN	ENSG00000118557	16	136	14	5E+05	0.024906	PMFBP1	0.417356634545455	1
COPD-HTN	ENSG00000167531	12	3	2	5E+05	0.024902	LALBA	0.417356634545455	1
COPD-HTN	ENSG00000217236	2	14	5	5E+05	0.024887	SP9	0.417356634545455	1
COPD-HTN	ENSG00000165997	10	57	10	5E+05	0.024822	ARL5B	0.417086532360985	1
COPD-HTN	ENSG00000161328	11	83	14	5E+05	0.024815	LRRC56	0.417086532360985	1
COPD-HTN	ENSG00000178971	17	50	9	5E+05	0.024804	CTC1	0.417086532360985	1
COPD-HTN	ENSG00000163508	3	7	3	5E+05	0.024764	EOMES	0.417086532360985	1
COPD-HTN	ENSG00000169519	11	274	14	5E+05	0.024709	METTL15	0.416707225068619	1
COPD-HTN	ENSG00000139370	12	117	9	5E+05	0.024655	SLC15A4	0.416177303113553	1
COPD-HTN	ENSG00000160767	1	16	1	5E+05	0.02464	FAM189B	0.416177303113553	1
COPD-HTN	ENSG00000213445	11	20	7	5E+05	0.024605	SIPA1	0.416095380733945	1
COPD-HTN	ENSG00000136828	9	447	17	5E+05	0.024557	RALGPS1	0.415664996326905	1
COPD-HTN	ENSG00000248919	7	80	9	5E+05	0.024527	ATP5J2-PTCI	0.415538778492647	1
COPD-HTN	ENSG00000100884	14	11	5	5E+05	0.024525	CPNE6	0.415538778492647	1
COPD-HTN	ENSG00000266118	2	205	22	5E+05	0.024386	RP11-507M3	0.413910808471455	1
COPD-HTN	ENSG00000183657	3	57	7	5E+05	0.024374	PP13439	0.413910808471455	1
COPD-HTN	ENSG00000168490	8	36	12	5E+05	0.024254	PHYHIP	0.412429872693727	1
COPD-HTN	ENSG00000197361	15	10	4	5E+05	0.024191	FBXL22	0.411738414589104	1
COPD-HTN	ENSG00000134571	11	41	11	5E+05	0.02417	MYBPC3	0.411738414589104	1
COPD-HTN	ENSG00000136694	2	6	2	5E+05	0.024037	IL36A	0.409874209990749	1
COPD-HTN	ENSG00000117676	1	89	11	5E+05	0.02402	RPS6KA1	0.409874209990749	1
COPD-HTN	ENSG00000253729	8	131	17	5E+05	0.023975	PRKDC	0.409574768303985	1
COPD-HTN	ENSG00000171017	19	35	6	5E+05	0.023965	LRRC8E	0.409574768303985	1
COPD-HTN	ENSG00000167658	19	25	7	5E+05	0.023937	EEF2	0.409574768303985	1
COPD-HTN	ENSG00000244694	6	500	39	5E+05	0.023896	PTCHD4	0.409363353159851	1
COPD-HTN	ENSG00000268863	16	2	1	5E+05	0.02381	AC135048.1	0.40826951627907	1
COPD-HTN	ENSG00000156284	21	4	2	5E+05	0.023734	CLDN8	0.407345271880819	1
COPD-HTN	ENSG00000092439	15	379	15	5E+05	0.023596	TRPM7	0.405354210624418	1
COPD-HTN	ENSG00000109180	4	45	6	5E+05	0.023546	OCIAD1	0.40487259141791	1
COPD-HTN	ENSG00000142655	1	339	23	5E+05	0.023509	PEX14	0.404613816059757	1
COPD-HTN	ENSG00000169992	17	34	14	5E+05	0.023505	NLGN2	0.404613816059757	1
COPD-HTN	ENSG00000108094	10	168	8	5E+05	0.023464	CUL2	0.404594866230122	1

COPD-HTN	ENSG00000120656	1	54	8	5E+05	0.023435	TAF12	0.404473178838951	1
COPD-HTN	ENSG00000164626	6	129	23	5E+05	0.023358	KCNK5	0.403522037488285	1
COPD-HTN	ENSG00000178718	15	1	1	5E+05	0.023347	RPP25	0.403522037488285	1
COPD-HTN	ENSG00000168779	3	26	4	5E+05	0.023272	SHOX2	0.402791338967136	1
COPD-HTN	ENSG00000165102	8	65	14	5E+05	0.023157	HGSNAT	0.401177613721805	1
COPD-HTN	ENSG00000164346	5	20	4	5E+05	0.023067	NSA2	0.399994365945437	1
COPD-HTN	ENSG00000268821	2	8	3	5E+05	0.022999	AC068039.1	0.399190741054614	1
COPD-HTN	ENSG00000108306	17	261	9	5E+05	0.022975	FBXL20	0.399150023562677	1
COPD-HTN	ENSG00000001617	3	57	8	5E+05	0.022943	SEMA3F	0.398970112264151	1
COPD-HTN	ENSG00000119979	10	71	3	5E+05	0.022908	FAM45A	0.39873764305949	1
COPD-HTN	ENSG00000233438	2	43	6	5E+05	0.022879	AC109829.1	0.398609269376181	1
COPD-HTN	ENSG00000063046	12	95	6	5E+05	0.022818	EIF4B	0.397922605487228	1
COPD-HTN	ENSG00000075131	15	116	18	5E+05	0.022812	TIPIN	0.397922605487228	1
COPD-HTN	ENSG00000169951	16	4	2	5E+05	0.022786	ZNF764	0.397922605487228	1
COPD-HTN	ENSG00000138073	2	8	3	5E+05	0.022758	PREB	0.397922605487228	1
COPD-HTN	ENSG00000116396	1	190	20	5E+05	0.022691	KCNC4	0.397211018993352	1
COPD-HTN	ENSG00000117834	1	42	9	5E+05	0.022674	SLC5A9	0.397211018993352	1
COPD-HTN	ENSG00000212670	1	3	1	5E+05	0.022657	AL161915.1	0.397211018993352	1
COPD-HTN	ENSG00000145700	5	393	13	5E+05	0.022622	ANKRD31	0.397134596190476	1
COPD-HTN	ENSG00000095794	10	167	7	5E+05	0.02261	CREM	0.397134596190476	1
COPD-HTN	ENSG00000196826	19	226	21	5E+05	0.022593	ZNF709	0.397134596190476	1
COPD-HTN	ENSG00000123352	12	301	18	5E+05	0.02258	SPATS2	0.397134596190476	1
COPD-HTN	ENSG00000127995	7	80	9	5E+05	0.022568	CASD1	0.397134596190476	1
COPD-HTN	ENSG00000189050	17	21	5	5E+05	0.022549	RNFT1	0.397134596190476	1
COPD-HTN	ENSG00000174236	12	2	1	5E+05	0.022536	REP15	0.397134596190476	1
COPD-HTN	ENSG00000241468	7	36	6	5E+05	0.022498	ATP5J2	0.397134596190476	1
COPD-HTN	ENSG00000131061	20	78	11	5E+05	0.022496	ZNF341	0.397134596190476	1
COPD-HTN	ENSG00000213516	1	12	6	5E+05	0.022467	RBMXL1	0.397134596190476	1
COPD-HTN	ENSG00000064932	19	206	27	5E+05	0.022278	SBNO2	0.394856128846154	1
COPD-HTN	ENSG00000171695	20	3	1	5E+05	0.022145	C20orf201	0.392876597690087	1
COPD-HTN	ENSG00000081019	1	60	11	5E+05	0.022089	RSBN1	0.392260632947977	1
COPD-HTN	ENSG00000204876	7	7	2	5E+05	0.022065	AC021218.2	0.392212290260366	1
COPD-HTN	ENSG00000079432	19	22	3	5E+05	0.022051	CIC	0.392212290260366	1

COPD-HTN	ENSG00000253250	8	40	6	5E+05	0.022023	C8orf88	0.392212290260366	1
COPD-HTN	ENSG00000173641	1	46	5	5E+05	0.021971	HSPB7	0.39167450967118	1
COPD-HTN	ENSG00000187187	19	54	4	5E+05	0.02197	ZNF546	0.39167450967118	1
COPD-HTN	ENSG00000066382	11	471	34	5E+05	0.021913	MPED2	0.391397605620155	1
COPD-HTN	ENSG00000137154	9	10	3	5E+05	0.021907	RPS6	0.391397605620155	1
COPD-HTN	ENSG00000148204	9	68	12	5E+05	0.021862	CRB2	0.391244899029126	1
COPD-HTN	ENSG00000186094	1	1933	51	5E+05	0.021846	AGBL4	0.391244899029126	1
COPD-HTN	ENSG00000250038	4	103	11	5E+05	0.021831	RP11-180C1.10	0.391244899029126	1
COPD-HTN	ENSG00000166106	11	59	12	5E+05	0.021806	ADAMTS15	0.391244899029126	1
COPD-HTN	ENSG00000143207	1	448	21	5E+05	0.021795	RFWD2	0.391244899029126	1
COPD-HTN	ENSG00000100249	22	7	4	5E+05	0.021794	C22orf31	0.391244899029126	1
COPD-HTN	ENSG00000115977	2	228	19	5E+05	0.021687	AAK1	0.390387178710938	1
COPD-HTN	ENSG00000151422	5	1453	45	5E+05	0.021658	FER	0.390246250244379	1
COPD-HTN	ENSG00000153165	2	8	4	5E+05	0.021657	RGPD3	0.390246250244379	1
COPD-HTN	ENSG00000111642	12	70	8	5E+05	0.021604	CHD4	0.390035780607248	1
COPD-HTN	ENSG00000115252	2	901	40	5E+05	0.021565	PDE1A	0.38971337745098	1
COPD-HTN	ENSG00000179909	19	31	7	5E+05	0.021532	ZNF154	0.389498877330716	1
COPD-HTN	ENSG00000257138	7	3	1	5E+05	0.021518	TAS2R38	0.389498877330716	1
COPD-HTN	ENSG00000186193	9	22	4	5E+05	0.021482	SAPCD2	0.389358609636185	1
COPD-HTN	ENSG00000130734	19	22	6	5E+05	0.021476	ATG4D	0.389358609636185	1
COPD-HTN	ENSG00000154127	11	475	68	5E+05	0.02145	UBASH3B	0.389358609636185	1
COPD-HTN	ENSG00000137575	8	43	3	5E+05	0.021398	SDCBP	0.388983564102564	1
COPD-HTN	ENSG00000180347	7	404	29	5E+05	0.021357	CCDC129	0.38862150148075	1
COPD-HTN	ENSG00000136381	15	57	9	5E+05	0.021357	IREB2	0.38862150148075	1
COPD-HTN	ENSG00000116871	1	27	5	5E+05	0.021341	MAP7D1	0.38862150148075	1
COPD-HTN	ENSG00000061794	12	83	11	5E+05	0.021314	MRPS35	0.38862150148075	1
COPD-HTN	ENSG00000124203	20	141	25	5E+05	0.021297	ZNF831	0.38862150148075	1
COPD-HTN	ENSG00000212734	17	4	1	5E+05	0.021245	C17orf100	0.388501076388889	1
COPD-HTN	ENSG00000272647	7	75	11	5E+05	0.021195	GS1-259H13.10	0.387971633565045	1
COPD-HTN	ENSG00000186660	11	66	11	5E+05	0.021168	ZFP91	0.387862568588469	1
COPD-HTN	ENSG00000222022	2	2	1	5E+05	0.021142	AC112721.1	0.387771627860697	1
COPD-HTN	ENSG00000174279	2	8	3	5E+05	0.021127	EVX2	0.387771627860697	1
COPD-HTN	ENSG00000088305	20	122	9	5E+05	0.021122	DNMT3B	0.387771627860697	1

COPD-HTN	ENSG00000147684	8	118	18	5E+05	0.02106	NDUFB9	0.387424131736527	1
COPD-HTN	ENSG00000135547	6	22	3	5E+05	0.021047	HEY2	0.387424131736527	1
COPD-HTN	ENSG00000180929	3	3	2	5E+05	0.021042	GPR62	0.387424131736527	1
COPD-HTN	ENSG00000023892	6	40	7	5E+05	0.021036	DEF6	0.387424131736527	1
COPD-HTN	ENSG00000157404	4	174	23	5E+05	0.02101	KIT	0.387424131736527	1
COPD-HTN	ENSG00000187017	1	100	11	5E+05	0.021004	ESPN	0.387424131736527	1
COPD-HTN	ENSG00000065308	6	302	26	5E+05	0.020988	TRAM2	0.387424131736527	1
COPD-HTN	ENSG00000100461	14	43	5	5E+05	0.020962	RBM23	0.387424131736527	1
COPD-HTN	ENSG00000164933	8	53	7	5E+05	0.020925	SLC25A32	0.387424131736527	1
COPD-HTN	ENSG00000136944	9	229	34	5E+05	0.020918	LMX1B	0.387424131736527	1
COPD-HTN	ENSG00000165553	14	8	4	5E+05	0.020878	NGB	0.387424131736527	1
COPD-HTN	ENSG00000108786	17	12	2	5E+05	0.020839	HSD17B1	0.387424131736527	1
COPD-HTN	ENSG00000103479	16	97	6	5E+05	0.020819	RBL2	0.387424131736527	1
COPD-HTN	ENSG00000110075	11	211	11	5E+05	0.020798	PPP6R3	0.387424131736527	1
COPD-HTN	ENSG00000119689	14	49	7	5E+05	0.02074	DLST	0.386943744939271	1
COPD-HTN	ENSG00000183379	14	52	7	5E+05	0.020719	SYNDIGIL	0.386943593718338	1
COPD-HTN	ENSG00000164934	8	68	8	5E+05	0.020682	DCAF13	0.386644326572008	1
COPD-HTN	ENSG00000127616	19	266	19	5E+05	0.02066	SMARCA4	0.386625157360406	1
COPD-HTN	ENSG00000101470	20	26	5	5E+05	0.020635	TNNC2	0.38654975101626	1
COPD-HTN	ENSG00000111252	12	34	4	5E+05	0.020633	SH2B3	0.38654975101626	1
COPD-HTN	ENSG00000166797	15	49	6	5E+05	0.020603	FAM96A	0.38654975101626	1
COPD-HTN	ENSG00000204764	5	754	16	5E+05	0.020593	RANBP17	0.38654975101626	1
COPD-HTN	ENSG00000172992	17	89	12	5E+05	0.020589	DCAKD	0.38654975101626	1
COPD-HTN	ENSG00000140534	15	119	10	5E+05	0.020355	TICRR	0.383252007150153	1
COPD-HTN	ENSG00000114554	3	135	16	5E+05	0.020342	PLXNA1	0.383252007150153	1
COPD-HTN	ENSG00000084234	11	214	14	5E+05	0.020302	APLP2	0.383036607983623	1
COPD-HTN	ENSG00000198522	2	40	6	5E+05	0.020269	GPN1	0.382805816598361	1
COPD-HTN	ENSG00000178209	8	142	7	5E+05	0.020046	PLEC	0.37898248	1
COPD-HTN	ENSG00000173064	12	202	15	5E+05	0.019991	HECTD4	0.378330701232033	1
COPD-HTN	ENSG00000160145	3	1754	87	5E+05	0.019959	KALRN	0.37811330626927	1
COPD-HTN	ENSG00000257184	7	23	7	5E+05	0.019907	RP1-170O19.2	0.377516184156379	1
COPD-HTN	ENSG00000084676	2	574	24	5E+05	0.019797	NCOA1	0.37581678784758	1
COPD-HTN	ENSG00000188368	19	5	1	5E+05	0.019786	PRR19	0.37581678784758	1

COPD-HTN	ENSG00000158792	16	15	4	5E+05	0.019757	SPATA2L	0.37581678784758	1
COPD-HTN	ENSG00000160097	1	10	3	5E+05	0.019747	FNDC5	0.37581678784758	1
COPD-HTN	ENSG00000135549	6	561	34	5E+05	0.019704	PKIB	0.375598585315408	1
COPD-HTN	ENSG00000078399	7	16	6	5E+05	0.019628	HOXA9	0.374537188405797	1
COPD-HTN	ENSG00000177479	3	55	8	5E+05	0.019613	ARIH2	0.374537188405797	1
COPD-HTN	ENSG00000269242	19	2	1	5E+05	0.019574	CTD-2192J16	0.374281682572614	1
COPD-HTN	ENSG00000176022	1	7	2	5E+05	0.019512	B3GALT6	0.373483588785047	1
COPD-HTN	ENSG00000163154	1	3	1	5E+05	0.019496	TNFAIP8L2	0.373483588785047	1
COPD-HTN	ENSG00000134201	1	140	22	5E+05	0.019482	GSTM5	0.373483588785047	1
COPD-HTN	ENSG00000143033	1	85	10	5E+05	0.019479	MTF2	0.373483588785047	1
COPD-HTN	ENSG00000136541	2	5	3	5E+05	0.019402	ERMN	0.372927076120959	1
COPD-HTN	ENSG00000176160	17	79	12	5E+05	0.019355	HSF5	0.372412019832985	1
COPD-HTN	ENSG00000173545	5	26	5	5E+05	0.019336	ZNF622	0.372412019832985	1
COPD-HTN	ENSG00000125820	20	5	2	5E+05	0.019245	NKX2-2	0.371070172594142	1
COPD-HTN	ENSG00000103966	15	194	26	5E+05	0.019239	EHD4	0.371070172594142	1
COPD-HTN	ENSG00000253368	1	5	2	5E+05	0.019236	TRNP1	0.371070172594142	1
COPD-HTN	ENSG00000128694	2	19	5	5E+05	0.019222	OSGEPL1	0.371070172594142	1
COPD-HTN	ENSG00000251493	5	3	2	5E+05	0.019204	FOXD1	0.371070172594142	1
COPD-HTN	ENSG00000186766	10	6	1	5E+05	0.019196	FOXI2	0.371070172594142	1
COPD-HTN	ENSG00000153904	1	637	54	5E+05	0.019193	DDAH1	0.371070172594142	1
COPD-HTN	ENSG00000185313	3	294	25	5E+05	0.019175	SCN10A	0.371070172594142	1
COPD-HTN	ENSG00000159708	16	96	10	5E+05	0.019132	LRRC36	0.371070172594142	1
COPD-HTN	ENSG00000180329	17	14	5	5E+05	0.019131	CCDC43	0.371070172594142	1
COPD-HTN	ENSG00000172269	11	28	5	5E+05	0.019123	DPAGT1	0.371070172594142	1
COPD-HTN	ENSG00000143702	1	139	13	5E+05	0.019116	CEP170	0.371070172594142	1
COPD-HTN	ENSG00000113318	5	573	23	5E+05	0.019114	MSH3	0.371070172594142	1
COPD-HTN	ENSG00000154511	1	145	6	5E+05	0.019098	FAM69A	0.371070172594142	1
COPD-HTN	ENSG00000166526	7	32	9	5E+05	0.019004	ZNF3	0.371070172594142	1
COPD-HTN	ENSG00000198836	3	236	14	5E+05	0.018992	OPA1	0.371070172594142	1
COPD-HTN	ENSG00000168228	4	148	17	5E+05	0.018909	ZCCHC4	0.370797443617021	1
COPD-HTN	ENSG00000178467	3	11	3	5E+05	0.01885	P4HTM	0.370034132055378	1
COPD-HTN	ENSG00000125899	20	3	2	5E+05	0.018794	C20orf187	0.369328147121535	1
COPD-HTN	ENSG00000125743	19	6	2	5E+05	0.018783	SNRPD2	0.369328147121535	1

COPD-HTN	ENSG00000180828	8	4	2	5E+05	0.01875	BHLHE22	0.369250801282051	1
COPD-HTN	ENSG00000068001	3	1	1	5E+05	0.01872	HYAL2	0.369054288770053	1
COPD-HTN	ENSG00000182631	5	2	1	5E+05	0.018708	RXFP3	0.369054288770053	1
COPD-HTN	ENSG00000103064	16	53	8	5E+05	0.018614	SLC7A6	0.367751191854234	1
COPD-HTN	ENSG00000175115	11	263	13	5E+05	0.01852	PACS1	0.366286652360515	1
COPD-HTN	ENSG00000137760	11	182	18	5E+05	0.018499	ALKBH8	0.366264303974221	1
COPD-HTN	ENSG00000173875	19	36	4	5E+05	0.018478	ZNF791	0.366241907526882	1
COPD-HTN	ENSG00000184599	1	16	4	5E+05	0.018444	FAM19A3	0.365961519913886	1
COPD-HTN	ENSG00000100401	22	78	10	5E+05	0.018424	RANGAP1	0.365958612068966	1
COPD-HTN	ENSG00000175193	3	157	16	5E+05	0.018385	PARL	0.365577891046386	1
COPD-HTN	ENSG00000138138	10	139	8	5E+05	0.018303	ATAD1	0.364340387688985	1
COPD-HTN	ENSG00000137880	15	2	1	5E+05	0.018278	GCHFR	0.36423608	1
COPD-HTN	ENSG00000166508	7	21	4	5E+05	0.018231	MCM7	0.363692665584416	1
COPD-HTN	ENSG00000141002	16	95	5	5E+05	0.018207	TCF25	0.363607400866739	1
COPD-HTN	ENSG00000165813	10	93	9	5E+05	0.01815	C10orf118	0.362862201735358	1
COPD-HTN	ENSG00000070961	12	175	19	5E+05	0.018141	ATP2B1	0.362862201735358	1
COPD-HTN	ENSG00000132793	20	48	11	5E+05	0.01813	LPIN3	0.362862201735358	1
COPD-HTN	ENSG00000114670	3	607	28	5E+05	0.018111	NEK11	0.362862201735358	1
COPD-HTN	ENSG00000092969	1	191	33	5E+05	0.018026	TGFB2	0.361953440087146	1
COPD-HTN	ENSG00000204604	19	75	9	5E+05	0.018025	ZNF468	0.361953440087146	1
COPD-HTN	ENSG00000152527	2	462	38	5E+05	0.018	PLEKHH2	0.361953440087146	1
COPD-HTN	ENSG00000196652	7	39	8	5E+05	0.017985	ZKSCAN5	0.361953440087146	1
COPD-HTN	ENSG00000184178	4	885	53	5E+05	0.017956	SCFD2	0.361953440087146	1
COPD-HTN	ENSG00000136448	17	164	16	5E+05	0.01794	NMT1	0.361953440087146	1
COPD-HTN	ENSG00000235750	1	100	11	5E+05	0.017929	KIAA0040	0.361953440087146	1
COPD-HTN	ENSG00000196693	10	90	9	5E+05	0.017927	ZNF33B	0.361953440087146	1
COPD-HTN	ENSG00000178882	12	936	75	5E+05	0.017925	FAM101A	0.361953440087146	1
COPD-HTN	ENSG00000174684	11	1	1	5E+05	0.017898	B3GNT1	0.361953440087146	1
COPD-HTN	ENSG00000149262	11	240	17	5E+05	0.017878	INTS4	0.361953440087146	1
COPD-HTN	ENSG00000116604	1	60	8	5E+05	0.017829	MEF2D	0.361953440087146	1
COPD-HTN	ENSG00000128699	2	30	5	5E+05	0.017812	ORMDL1	0.361953440087146	1
COPD-HTN	ENSG00000051382	3	211	9	5E+05	0.01776	PIK3CB	0.361734895027624	1
COPD-HTN	ENSG00000185290	7	1	1	5E+05	0.017697	NUPR1L	0.360850443584071	1

COPD-HTN	ENSG0000048471	16	2174	101	5E+05	0.017605	SNX29	0.359372054263566	1
COPD-HTN	ENSG00000130368	6	1	1	5E+05	0.017592	MAS1	0.359372054263566	1
COPD-HTN	ENSG00000109184	4	80	9	5E+05	0.017523	DCUN1D4	0.358492185349612	1
COPD-HTN	ENSG00000173153	11	9	4	5E+05	0.017516	ESRRA	0.358492185349612	1
COPD-HTN	ENSG00000143365	1	55	11	5E+05	0.01749	RORC	0.358492185349612	1
COPD-HTN	ENSG00000099625	19	18	5	5E+05	0.017439	C19orf26	0.357965575723831	1
COPD-HTN	ENSG00000166971	16	16	3	5E+05	0.017436	AKTIP	0.357965575723831	1
COPD-HTN	ENSG00000133056	1	154	15	5E+05	0.017389	PIK3C2B	0.357735978794643	1
COPD-HTN	ENSG00000266956	17	20	3	5E+05	0.017367	CTB-186H2.3	0.357682582122905	1
COPD-HTN	ENSG00000173113	11	3	1	5E+05	0.017341	TRMT112	0.357546591722595	1
COPD-HTN	ENSG00000155099	8	77	10	5E+05	0.017324	TMEM55A	0.357546591722595	1
COPD-HTN	ENSG00000016391	3	92	19	5E+05	0.017317	CHDH	0.357546591722595	1
COPD-HTN	ENSG00000213413	7	9	3	5E+05	0.017245	PVRIG	0.356764405162739	1
COPD-HTN	ENSG00000102970	16	42	11	5E+05	0.017238	CCL17	0.356764405162739	1
COPD-HTN	ENSG00000234560	11	1	1	5E+05	0.017124	OR10G8	0.355058146231721	1
COPD-HTN	ENSG00000163792	2	5	2	5E+05	0.017043	TCF23	0.353776597972973	1
COPD-HTN	ENSG00000197261	6	47	6	5E+05	0.016971	C6orf141	0.352679191657272	1
COPD-HTN	ENSG00000173250	5	4	2	5E+05	0.016867	GPR151	0.350913556433409	1
COPD-HTN	ENSG00000151617	4	107	11	5E+05	0.016849	EDNRA	0.350913556433409	1
COPD-HTN	ENSG00000168071	11	39	8	5E+05	0.016786	CCDC88B	0.350018481900452	1
COPD-HTN	ENSG00000174804	11	8	4	5E+05	0.016742	FZD4	0.3494963601359	1
COPD-HTN	ENSG00000198146	15	10	4	5E+05	0.016726	ZNF770	0.3494963601359	1
COPD-HTN	ENSG00000140153	14	135	14	5E+05	0.016725	WDR20	0.3494963601359	1
COPD-HTN	ENSG00000128944	15	31	5	5E+05	0.016719	KNSTRN	0.3494963601359	1
COPD-HTN	ENSG00000105429	19	53	3	5E+05	0.01667	MEGF8	0.3494963601359	1
COPD-HTN	ENSG00000184117	22	63	7	5E+05	0.016624	NIPSNAP1	0.349009330296128	1
COPD-HTN	ENSG00000112200	6	90	8	5E+05	0.016596	ZNF451	0.348818777651083	1
COPD-HTN	ENSG00000122574	7	340	30	5E+05	0.01656	WIPF3	0.348459452054795	1
COPD-HTN	ENSG00000267981	11	32	4	5E+05	0.01652	AP003041.2	0.34801504	1
COPD-HTN	ENSG00000101199	20	42	4	5E+05	0.016441	ARFGAP1	0.346747085812357	1
COPD-HTN	ENSG00000177311	3	225	25	5E+05	0.016414	ZBTB38	0.34657418327606	1
COPD-HTN	ENSG00000163217	2	11	3	5E+05	0.016377	BMP10	0.346189496559633	1
COPD-HTN	ENSG00000242265	7	12	4	5E+05	0.016374	PEG10	0.346189496559633	1

COPD-HTN	ENSG0000011114	14	250	18	5E+05	0.016326	BTBD7	0.345904779310345	1
COPD-HTN	ENSG0000100003	22	67	12	5E+05	0.016309	SEC14L2	0.345904779310345	1
COPD-HTN	ENSG00000115325	2	7	2	5E+05	0.016287	DOK1	0.345873584101382	1
COPD-HTN	ENSG00000224470	16	63	10	5E+05	0.016286	ATXNL	0.345873584101382	1
COPD-HTN	ENSG00000091164	18	83	7	5E+05	0.016256	TXNL1	0.345873584101382	1
COPD-HTN	ENSG00000214113	6	484	35	5E+05	0.016235	LYRM4	0.345873584101382	1
COPD-HTN	ENSG00000077809	7	50	16	5E+05	0.016226	GTF2I	0.345873584101382	1
COPD-HTN	ENSG00000130208	19	8	4	5E+05	0.016211	APOC1	0.345873584101382	1
COPD-HTN	ENSG00000151176	12	53	6	5E+05	0.016111	PLBD2	0.344517474477958	1
COPD-HTN	ENSG00000205856	22	31	7	5E+05	0.016091	C22orf42	0.34448943437863	1
COPD-HTN	ENSG00000164219	5	106	16	5E+05	0.01605	PGGT1B	0.344011220930233	1
COPD-HTN	ENSG00000089280	16	7	3	5E+05	0.016021	FUS	0.343789398137369	1
COPD-HTN	ENSG00000183023	2	1686	100	5E+05	0.016006	SLC8A1	0.343789398137369	1
COPD-HTN	ENSG00000160844	7	115	13	5E+05	0.016002	GATS	0.343789398137369	1
COPD-HTN	ENSG00000068078	4	32	7	5E+05	0.015999	FGFR3	0.343789398137369	1
COPD-HTN	ENSG00000176046	16	4	2	5E+05	0.015999	NUPR1	0.343789398137369	1
COPD-HTN	ENSG00000138381	2	20	5	5E+05	0.015993	ASNSD1	0.343789398137369	1
COPD-HTN	ENSG00000203876	10	21	3	5E+05	0.015964	RP11-451M15	0.343789398137369	1
COPD-HTN	ENSG00000169885	1	11	3	5E+05	0.015949	CALML6	0.343789398137369	1
COPD-HTN	ENSG00000102921	16	142	7	5E+05	0.015949	N4BP1	0.343789398137369	1
COPD-HTN	ENSG00000136859	9	52	10	5E+05	0.015943	ANGPTL2	0.343789398137369	1
COPD-HTN	ENSG00000070193	5	129	8	5E+05	0.015917	FGF10	0.343789398137369	1
COPD-HTN	ENSG00000186472	7	963	39	5E+05	0.015868	PCLO	0.343789398137369	1
COPD-HTN	ENSG00000169228	5	5	3	5E+05	0.015794	RAB24	0.343719955135773	1
COPD-HTN	ENSG00000215021	12	7	3	5E+05	0.015766	PHB2	0.3435161678487	1
COPD-HTN	ENSG00000198933	17	33	8	5E+05	0.015719	TBKBP1	0.342897428402367	1
COPD-HTN	ENSG00000146477	6	209	16	5E+05	0.01571	SLC22A3	0.342897428402367	1
COPD-HTN	ENSG00000140995	16	76	11	5E+05	0.015688	DEF8	0.342897428402367	1
COPD-HTN	ENSG00000198894	14	34	7	5E+05	0.015657	CIPC	0.34276185391924	1
COPD-HTN	ENSG00000168827	3	162	8	5E+05	0.015642	GFM1	0.34276185391924	1
COPD-HTN	ENSG00000087884	11	143	12	5E+05	0.01556	AAMDC	0.341449380952381	1
COPD-HTN	ENSG00000124104	20	22	6	5E+05	0.01555	SNX21	0.341449380952381	1
COPD-HTN	ENSG00000165046	8	27	4	5E+05	0.015518	LETM2	0.341340446300716	1

COPD-HTN	ENSG00000137221	6	29	6	5E+05	0.015499	TJAP1	0.341329829151732	1
COPD-HTN	ENSG00000271810	1	19	6	5E+05	0.015462	RP11-426L16	0.340922303827751	1
COPD-HTN	ENSG00000066933	15	344	13	5E+05	0.015435	MYO9A	0.340734556886228	1
COPD-HTN	ENSG00000100462	14	14	3	5E+05	0.015427	PRMT5	0.340734556886228	1
COPD-HTN	ENSG00000101400	20	45	6	5E+05	0.015409	SNTA1	0.340734556886228	1
COPD-HTN	ENSG00000110693	11	1196	50	5E+05	0.015362	SOX6	0.340345848557692	1
COPD-HTN	ENSG00000183798	20	20	5	5E+05	0.015348	EMILIN3	0.340345848557692	1
COPD-HTN	ENSG00000174963	3	29	8	5E+05	0.015347	ZIC4	0.340345848557692	1
COPD-HTN	ENSG00000100167	22	48	8	5E+05	0.015337	SEPT3	0.340345848557692	1
COPD-HTN	ENSG00000103310	16	39	9	5E+05	0.015293	ZP2	0.340345848557692	1
COPD-HTN	ENSG00000100296	22	104	10	5E+05	0.015259	THOC5	0.340107795646917	1
COPD-HTN	ENSG00000067533	1	81	5	5E+05	0.015216	RRP15	0.33955996125908	1
COPD-HTN	ENSG00000129158	11	402	38	5E+05	0.015188	SERGEF	0.339345944242424	1
COPD-HTN	ENSG00000214556	17	20	6	5E+05	0.015095	C17orf98	0.337677348300971	1
COPD-HTN	ENSG00000065526	1	129	15	5E+05	0.015029	SPEN	0.33660942527339	1
COPD-HTN	ENSG00000108443	17	83	11	5E+05	0.015025	RPS6KB1	0.33660942527339	1
COPD-HTN	ENSG00000145777	5	14	4	5E+05	0.014962	TSLP	0.335925147381242	1
COPD-HTN	ENSG00000251283	4	21	6	5E+05	0.014961	RP11-171N4.1	0.335925147381242	1
COPD-HTN	ENSG00000116668	1	132	11	5E+05	0.014929	SWT1	0.335925147381242	1
COPD-HTN	ENSG00000204140	6	31	6	5E+05	0.014916	CLPSL1	0.335925147381242	1
COPD-HTN	ENSG00000168589	16	41	5	5E+05	0.014895	DYNLRB2	0.335925147381242	1
COPD-HTN	ENSG00000242612	16	18	4	5E+05	0.014885	DECR2	0.335925147381242	1
COPD-HTN	ENSG00000131351	19	82	11	5E+05	0.01488	HAUS8	0.335925147381242	1
COPD-HTN	ENSG00000148399	9	23	5	5E+05	0.014865	DPH7	0.335925147381242	1
COPD-HTN	ENSG00000104047	15	30	7	5E+05	0.014848	DTWD1	0.335925147381242	1
COPD-HTN	ENSG00000141744	17	3	2	5E+05	0.014816	PNMT	0.335925147381242	1
COPD-HTN	ENSG00000162630	1	9	3	5E+05	0.014805	B3GALT2	0.335925147381242	1
COPD-HTN	ENSG00000168612	20	6	2	5E+05	0.014773	ZSWIM1	0.335925147381242	1
COPD-HTN	ENSG00000072756	3	75	10	5E+05	0.014771	TRNT1	0.335925147381242	1
COPD-HTN	ENSG00000163877	1	40	8	5E+05	0.014748	SNIP1	0.335925147381242	1
COPD-HTN	ENSG00000196323	11	91	11	5E+05	0.014741	ZBTB44	0.335925147381242	1
COPD-HTN	ENSG00000197386	4	326	19	5E+05	0.014729	HTT	0.335925147381242	1
COPD-HTN	ENSG00000152977	3	241	22	5E+05	0.014651	ZIC1	0.3354806	1

COPD-HTN	ENSG00000134917	11	69	17	5E+05	0.014597	ADAMTS8	0.334659827114428	1
COPD-HTN	ENSG00000149926	16	41	6	5E+05	0.014589	FAM57B	0.334659827114428	1
COPD-HTN	ENSG00000167528	12	36	7	5E+05	0.014559	ZNF641	0.334621006234414	1
COPD-HTN	ENSG00000243789	15	35	6	5E+05	0.014551	JMJD7	0.334621006234414	1
COPD-HTN	ENSG00000163681	3	219	19	5E+05	0.014539	SLMAP	0.334621006234414	1
COPD-HTN	ENSG00000063015	17	56	9	5E+05	0.014531	SEZ6	0.334621006234414	1
COPD-HTN	ENSG00000132394	3	448	16	5E+05	0.01453	EEFSEC	0.334621006234414	1
COPD-HTN	ENSG00000005249	7	235	22	5E+05	0.014503	PRKAR2B	0.334621006234414	1
COPD-HTN	ENSG00000132185	1	29	6	5E+05	0.014411	FCRLA	0.333716033919598	1
COPD-HTN	ENSG00000159723	16	3	1	5E+05	0.014366	AGRP	0.333092425157233	1
COPD-HTN	ENSG00000089234	12	29	5	5E+05	0.014315	BRAP	0.332327953400504	1
COPD-HTN	ENSG00000138061	2	132	18	5E+05	0.014202	CYP1B1	0.330120385876419	1
COPD-HTN	ENSG00000115970	2	967	36	5E+05	0.014201	THADA	0.330120385876419	1
COPD-HTN	ENSG00000124257	20	3	1	5E+05	0.014185	NEURL2	0.330120385876419	1
COPD-HTN	ENSG00000147548	8	122	9	5E+05	0.014178	WHSC1L1	0.330120385876419	1
COPD-HTN	ENSG00000143793	1	5	3	5E+05	0.014125	C1orf35	0.329995088719899	1
COPD-HTN	ENSG00000178226	16	8	3	5E+05	0.01411	PRSS36	0.329995088719899	1
COPD-HTN	ENSG00000183346	10	340	21	5E+05	0.014107	C10orf107	0.329995088719899	1
COPD-HTN	ENSG00000108344	17	56	6	5E+05	0.014093	PSMD3	0.329995088719899	1
COPD-HTN	ENSG00000165816	10	124	19	5E+05	0.013991	VWA2	0.328530067515924	1
COPD-HTN	ENSG00000182319	8	252	25	5E+05	0.013926	SGK223	0.327420864795918	1
COPD-HTN	ENSG00000143801	1	72	8	5E+05	0.013924	PSEN2	0.327420864795918	1
COPD-HTN	ENSG00000108278	17	18	5	5E+05	0.013908	ZNHIT3	0.327420864795918	1
COPD-HTN	ENSG00000173457	11	4	1	5E+05	0.013901	PPP1R14B	0.327420864795918	1
COPD-HTN	ENSG00000062716	17	188	17	5E+05	0.013895	VMP1	0.327420864795918	1
COPD-HTN	ENSG00000101473	20	35	10	5E+05	0.013875	ACOT8	0.327420864795918	1
COPD-HTN	ENSG00000163071	4	83	9	5E+05	0.013873	SPATA18	0.327420864795918	1
COPD-HTN	ENSG00000082898	2	93	9	5E+05	0.013863	XPO1	0.327420864795918	1
COPD-HTN	ENSG00000204842	12	101	7	5E+05	0.013828	ATXN2	0.327420864795918	1
COPD-HTN	ENSG00000163947	3	984	86	5E+05	0.013797	ARHGEF3	0.327420864795918	1
COPD-HTN	ENSG00000130270	19	81	18	5E+05	0.013788	ATP8B3	0.327420864795918	1
COPD-HTN	ENSG00000159714	16	32	6	5E+05	0.013757	ZDHHC1	0.327420864795918	1
COPD-HTN	ENSG00000169599	2	88	6	5E+05	0.013751	NFU1	0.327420864795918	1

COPD-HTN	ENSG00000164087	3	85	10	5E+05	0.01366	POC1A	0.326582075226978	1
COPD-HTN	ENSG00000170923	19	4	1	5E+05	0.013644	OR7G2	0.326582075226978	1
COPD-HTN	ENSG00000271786	10	34	5	5E+05	0.013626	RP11-139J15	0.326582075226978	1
COPD-HTN	ENSG00000236980	3	19	4	5E+05	0.013546	C3orf84	0.325121638020833	1
COPD-HTN	ENSG00000120899	8	352	18	5E+05	0.013527	PTK2B	0.325088906127771	1
COPD-HTN	ENSG00000165724	9	12	2	5E+05	0.013514	ZMYND19	0.325088906127771	1
COPD-HTN	ENSG00000170571	5	74	7	5E+05	0.013481	EMB	0.324830422222222	1
COPD-HTN	ENSG00000100207	22	350	30	5E+05	0.013466	TCF20	0.324830422222222	1
COPD-HTN	ENSG00000079257	3	88	7	5E+05	0.013412	LXN	0.324014935779817	1
COPD-HTN	ENSG00000243708	15	68	9	5E+05	0.013408	PLA2G4B	0.324014935779817	1
COPD-HTN	ENSG00000168970	15	68	9	5E+05	0.013408	JMJD7-PLA2	0.324014935779817	1
COPD-HTN	ENSG00000134533	12	422	28	5E+05	0.013406	RERG	0.324014935779817	1
COPD-HTN	ENSG00000240583	7	187	34	5E+05	0.013391	AQP1	0.324014935779817	1
COPD-HTN	ENSG00000116983	1	67	12	5E+05	0.013365	HPCAL4	0.324014935779817	1
COPD-HTN	ENSG00000160716	1	17	6	5E+05	0.013361	CHRNA2	0.324014935779817	1
COPD-HTN	ENSG00000164746	7	71	8	5E+05	0.01335	C7orf57	0.324014935779817	1
COPD-HTN	ENSG00000168758	2	6	3	5E+05	0.013334	SEMA4C	0.324014935779817	1
COPD-HTN	ENSG00000099999	22	113	17	5E+05	0.013321	RNF215	0.324014935779817	1
COPD-HTN	ENSG00000179941	12	4	2	5E+05	0.01332	BBS10	0.324014935779817	1
COPD-HTN	ENSG00000142694	1	3	1	5E+05	0.013312	EVA1B	0.324014935779817	1
COPD-HTN	ENSG00000118900	16	124	16	5E+05	0.013307	UBN1	0.324014935779817	1
COPD-HTN	ENSG00000250424	7	182	33	5E+05	0.013268	AQP1	0.324014935779817	1
COPD-HTN	ENSG00000174840	3	19	5	5E+05	0.013241	PDE12	0.324014935779817	1
COPD-HTN	ENSG00000254647	11	6	2	5E+05	0.013218	INS	0.324014935779817	1
COPD-HTN	ENSG00000174233	12	38	4	5E+05	0.013214	ADCY6	0.324014935779817	1
COPD-HTN	ENSG00000127152	14	249	40	5E+05	0.013149	BCL11B	0.324014935779817	1
COPD-HTN	ENSG00000184574	12	27	9	5E+05	0.013114	LPAR5	0.324014935779817	1
COPD-HTN	ENSG00000116497	1	54	8	5E+05	0.01309	S100PBP	0.324014935779817	1
COPD-HTN	ENSG00000138778	4	152	10	5E+05	0.013058	CENPE	0.323954393001346	1
COPD-HTN	ENSG00000128989	15	62	7	5E+05	0.01303	ARPP19	0.323695404312669	1
COPD-HTN	ENSG00000268217	5	11	4	5E+05	0.012945	AC008387.1	0.322017793522267	1
COPD-HTN	ENSG00000174844	3	617	22	5E+05	0.01293	DNAH12	0.322017793522267	1
COPD-HTN	ENSG00000198218	3	46	8	5E+05	0.012911	QRICH1	0.322017793522267	1

COPD-HTN	ENSG0000081177	14	90	9	5E+05	0.012905	EXD2	0.322017793522267	1
COPD-HTN	ENSG0000073060	12	312	48	5E+05	0.012884	SCARB1	0.322017793522267	1
COPD-HTN	ENSG0000070366	17	524	20	5E+05	0.012863	SMG6	0.322017793522267	1
COPD-HTN	ENSG00000110011	11	7	3	5E+05	0.012761	DNAJC4	0.320031990476191	1
COPD-HTN	ENSG00000101074	20	52	4	5E+05	0.012735	R3HDML	0.319815061307902	1
COPD-HTN	ENSG00000107581	10	60	7	5E+05	0.01271	EIF3A	0.319622687585266	1
COPD-HTN	ENSG00000243130	19	62	6	5E+05	0.012572	PSG11	0.316584256830601	1
COPD-HTN	ENSG00000187513	1	10	3	5E+05	0.012537	GJA4	0.316134775649795	1
COPD-HTN	ENSG00000198650	16	21	7	5E+05	0.012524	TAT	0.316134775649795	1
COPD-HTN	ENSG00000179958	16	4	2	5E+05	0.012481	DCTPP1	0.315586108367627	1
COPD-HTN	ENSG00000070759	1	203	15	5E+05	0.012324	TESK2	0.312044357142857	1
COPD-HTN	ENSG00000135436	12	32	7	5E+05	0.012317	FAM186B	0.312044357142857	1
COPD-HTN	ENSG00000187266	19	4	2	5E+05	0.012312	EPOR	0.312044357142857	1
COPD-HTN	ENSG00000116793	1	92	10	5E+05	0.012291	PHTF1	0.312044357142857	1
COPD-HTN	ENSG00000107789	10	77	13	5E+05	0.012267	MINPP1	0.312044357142857	1
COPD-HTN	ENSG00000170209	11	38	6	5E+05	0.012235	ANKK1	0.311933271092669	1
COPD-HTN	ENSG00000228716	5	122	5	5E+05	0.012234	DHFR	0.311933271092669	1
COPD-HTN	ENSG00000128298	22	49	6	5E+05	0.012165	BAIAP2L2	0.311008938973648	1
COPD-HTN	ENSG00000213420	7	8	3	5E+05	0.012142	GPC2	0.310852063888889	1
COPD-HTN	ENSG00000074855	19	24	7	5E+05	0.0121	ANO8	0.310207649513213	1
COPD-HTN	ENSG00000182177	2	266	14	5E+05	0.012045	ASB18	0.309227694986072	1
COPD-HTN	ENSG00000197093	7	11	3	5E+05	0.011973	GAL3ST4	0.307807962343096	1
COPD-HTN	ENSG00000186314	5	820	30	5E+05	0.011899	PRELID2	0.306332775139665	1
COPD-HTN	ENSG00000162522	1	51	13	5E+05	0.011847	KIAA1522	0.305420630769231	1
COPD-HTN	ENSG00000167202	15	209	21	5E+05	0.011794	TBC1D2B	0.304480114845938	1
COPD-HTN	ENSG00000130598	11	6	3	5E+05	0.01176	TNNI2	0.304028162692847	1
COPD-HTN	ENSG00000140983	16	20	4	5E+05	0.011669	RHOT2	0.302099265449438	1
COPD-HTN	ENSG00000145283	4	26	7	5E+05	0.011661	SLC10A6	0.302099265449438	1
COPD-HTN	ENSG00000176390	17	158	4	5E+05	0.011655	CRLF3	0.302099265449438	1
COPD-HTN	ENSG00000115233	2	139	14	5E+05	0.011651	PSMD14	0.302099265449438	1
COPD-HTN	ENSG00000167914	17	44	7	5E+05	0.011629	GSDMA	0.302099265449438	1
COPD-HTN	ENSG00000119760	2	8	3	5E+05	0.011628	SUPT7L	0.302099265449438	1
COPD-HTN	ENSG00000172426	6	73	8	5E+05	0.011619	RSPH9	0.302099265449438	1

COPD-HTN	ENSG00000148814	10	181	17	5E+05	0.011539	LRRC27	0.301699839716312	1
COPD-HTN	ENSG00000166747	16	160	15	5E+05	0.011501	APIG1	0.301133427556818	1
COPD-HTN	ENSG00000135842	1	340	22	5E+05	0.011477	FAM129A	0.300932490753912	1
COPD-HTN	ENSG00000161992	16	17	7	5E+05	0.011475	C16orf11	0.300932490753912	1
COPD-HTN	ENSG00000103275	16	111	9	5E+05	0.011466	UBE2I	0.300932490753912	1
COPD-HTN	ENSG00000118046	19	96	19	5E+05	0.01145	STK11	0.300932490753912	1
COPD-HTN	ENSG00000179832	8	86	11	5E+05	0.011441	MROH1	0.300932490753912	1
COPD-HTN	ENSG00000162419	1	58	5	5E+05	0.011421	GMEB1	0.300932490753912	1
COPD-HTN	ENSG00000182149	16	150	14	5E+05	0.011418	IST1	0.300932490753912	1
COPD-HTN	ENSG00000153827	2	169	18	5E+05	0.011413	TRIP12	0.300932490753912	1
COPD-HTN	ENSG00000176020	3	3	2	5E+05	0.011402	AMIGO3	0.300932490753912	1
COPD-HTN	ENSG00000173540	3	3	2	5E+05	0.011402	GMPPB	0.300932490753912	1
COPD-HTN	ENSG00000101049	20	73	17	5E+05	0.011384	SGK2	0.300932490753912	1
COPD-HTN	ENSG00000134684	1	65	9	5E+05	0.011376	YARS	0.300932490753912	1
COPD-HTN	ENSG00000108294	17	25	8	5E+05	0.011268	PSMB3	0.300583276410999	1
COPD-HTN	ENSG00000108424	17	38	7	5E+05	0.011258	KPNB1	0.300583276410999	1
COPD-HTN	ENSG00000236287	11	123	11	5E+05	0.011235	ZBED5	0.30057293904209	1
COPD-HTN	ENSG00000127081	9	65	9	5E+05	0.011156	ZNF484	0.298893238372093	1
COPD-HTN	ENSG00000060237	12	323	21	5E+05	0.011139	WNK1	0.298872179039301	1
COPD-HTN	ENSG00000163879	1	26	6	5E+05	0.011124	DNALI1	0.298872179039301	1
COPD-HTN	ENSG00000186451	3	39	8	5E+05	0.011112	SPATA12	0.298872179039301	1
COPD-HTN	ENSG00000079102	8	161	7	5E+05	0.011076	RUNX1T1	0.298485245614035	1
COPD-HTN	ENSG00000113645	5	549	68	5E+05	0.011066	WWC1	0.298485245614035	1
COPD-HTN	ENSG00000188186	7	8	2	5E+05	0.011022	LAMTOR4	0.297901064516129	1
COPD-HTN	ENSG00000164162	4	110	16	5E+05	0.010937	ANAPC10	0.296037769456681	1
COPD-HTN	ENSG00000137513	11	314	6	5E+05	0.010877	NARS2	0.294846677941176	1
COPD-HTN	ENSG00000066923	7	100	8	5E+05	0.010864	STAG3	0.294846677941176	1
COPD-HTN	ENSG00000183762	22	270	24	5E+05	0.010858	KREMEN1	0.294846677941176	1
COPD-HTN	ENSG00000164451	6	63	8	5E+05	0.010827	FAM26D	0.294791862629247	1
COPD-HTN	ENSG00000184349	5	687	85	5E+05	0.010802	EFNA5	0.29454625147929	1
COPD-HTN	ENSG00000130177	13	85	10	5E+05	0.010775	CDC16	0.294245296296296	1
COPD-HTN	ENSG00000146197	6	54	9	5E+05	0.010769	SCUBE3	0.294245296296296	1
COPD-HTN	ENSG00000134461	10	118	13	5E+05	0.010766	ANKRD16	0.294245296296296	1

COPD-HTN	ENSG00000178821	1	6	2	5E+05	0.010761	TMEM52	0.294245296296296	1
COPD-HTN	ENSG00000072364	5	167	11	5E+05	0.010745	AFF4	0.294245296296296	1
COPD-HTN	ENSG00000198055	5	63	16	5E+05	0.010601	GRK6	0.291654079104478	1
COPD-HTN	ENSG00000129255	17	12	5	5E+05	0.010598	MPDU1	0.291654079104478	1
COPD-HTN	ENSG00000129911	19	23	3	5E+05	0.010487	KLF16	0.289381543413174	1
COPD-HTN	ENSG00000198356	19	4	2	5E+05	0.010476	ASNA1	0.289381543413174	1
COPD-HTN	ENSG00000125450	17	43	6	5E+05	0.010468	NUP85	0.289381543413174	1
COPD-HTN	ENSG00000269693	19	82	14	5E+05	0.010459	CTD-2192J16	0.289381543413174	1
COPD-HTN	ENSG00000174791	11	18	5	5E+05	0.010458	RIN1	0.289381543413174	1
COPD-HTN	ENSG00000065413	2	829	53	5E+05	0.01038	ANKRD44	0.288589049773756	1
COPD-HTN	ENSG00000099814	14	102	11	5E+05	0.010372	CEP170B	0.288589049773756	1
COPD-HTN	ENSG00000054392	1	1221	95	5E+05	0.010362	HHAT	0.288589049773756	1
COPD-HTN	ENSG00000062524	15	26	7	5E+05	0.010321	LTK	0.28825301969697	1
COPD-HTN	ENSG00000115841	2	403	22	5E+05	0.010269	RMDN2	0.287235928679818	1
COPD-HTN	ENSG00000078142	18	174	13	5E+05	0.010249	PIK3C3	0.287112183890578	1
COPD-HTN	ENSG00000147676	8	240	28	5E+05	0.010223	MAL2	0.286819724505327	1
COPD-HTN	ENSG00000111897	6	64	10	5E+05	0.010177	SERINC1	0.285964391768293	1
COPD-HTN	ENSG00000065029	6	74	9	5E+05	0.010167	ZNF76	0.285964391768293	1
COPD-HTN	ENSG00000101391	20	37	7	5E+05	0.010155	CDK5RAP1	0.285964391768293	1
COPD-HTN	ENSG00000128573	7	797	42	5E+05	0.010072	FOXP2	0.284314205206738	1
COPD-HTN	ENSG00000125445	17	8	1	5E+05	0.010072	MRPS7	0.284314205206738	1
COPD-HTN	ENSG00000187801	1	45	14	5E+05	0.010048	ZFP69B	0.284314205206738	1
COPD-HTN	ENSG00000140382	15	107	10	5E+05	0.009985	HMG20A	0.283164910153846	1
COPD-HTN	ENSG00000110844	12	90	10	5E+05	0.009954	PRPF40B	0.28271223220339	1
COPD-HTN	ENSG00000182901	1	1732	145	5E+05	0.009923	RGS7	0.282272380092593	1
COPD-HTN	ENSG00000225968	7	121	15	5E+05	0.009914	ELFN1	0.282272380092593	1
COPD-HTN	ENSG00000156735	8	47	3	5E+05	0.009885	BAG4	0.2820562874613	1
COPD-HTN	ENSG00000025156	6	62	7	5E+05	0.009842	HSF2	0.281273290852713	1
COPD-HTN	ENSG00000085276	3	1500	106	5E+05	0.009741	MECOM	0.278819160869565	1
COPD-HTN	ENSG00000182986	19	125	15	5E+05	0.009661	ZNF320	0.276939341368585	1
COPD-HTN	ENSG00000164402	5	78	7	5E+05	0.00966	SEPT8	0.276939341368585	1
COPD-HTN	ENSG00000153208	2	414	16	5E+05	0.009653	MERTK	0.276939341368585	1
COPD-HTN	ENSG00000155100	8	23	4	5E+05	0.009621	OTUD6B	0.276939341368585	1

COPD-HTN	ENSG0000072135	2	21	3	5E+05	0.009599	PTPN18	0.276910391549296	1
COPD-HTN	ENSG00000184863	7	347	11	5E+05	0.009581	RBM33	0.276809921159875	1
COPD-HTN	ENSG00000155366	1	14	4	5E+05	0.009559	RHOC	0.276610748822606	1
COPD-HTN	ENSG00000166949	15	357	46	5E+05	0.009546	SMAD3	0.276610748822606	1
COPD-HTN	ENSG00000068697	2	41	7	5E+05	0.009506	LAPTM4A	0.27593185007874	1
COPD-HTN	ENSG00000167619	19	6	1	5E+05	0.009502	TMEM145	0.27593185007874	1
COPD-HTN	ENSG00000160321	19	257	11	5E+05	0.0095	ZNF208	0.27593185007874	1
COPD-HTN	ENSG00000149927	16	27	4	5E+05	0.009475	DOC2A	0.27593185007874	1
COPD-HTN	ENSG00000172922	11	14	4	5E+05	0.009406	RNASEH2C	0.274762706973059	1
COPD-HTN	ENSG00000254685	1	90	7	5E+05	0.009381	FPGT	0.274461518253968	1
COPD-HTN	ENSG00000102984	16	58	8	5E+05	0.009327	ZNF821	0.273321241812401	1
COPD-HTN	ENSG00000175745	5	6	2	5E+05	0.009223	NR2F1	0.270712673566879	1
COPD-HTN	ENSG00000175202	15	16	5	5E+05	0.009163	HIGD2B	0.269389328389155	1
COPD-HTN	ENSG00000101150	20	62	10	5E+05	0.009155	TPD52L2	0.269389328389155	1
COPD-HTN	ENSG00000133639	12	9	4	5E+05	0.009112	BTG1	0.268741343	1
COPD-HTN	ENSG00000131771	17	18	4	5E+05	0.009067	PPP1R1B	0.267827945192308	1
COPD-HTN	ENSG00000166183	14	72	12	5E+05	0.009059	ASPG	0.267827945192308	1
COPD-HTN	ENSG00000085788	8	43	5	5E+05	0.008991	DDHD2	0.266457609163987	1
COPD-HTN	ENSG00000160208	21	43	4	5E+05	0.008986	RRP1B	0.266457609163987	1
COPD-HTN	ENSG00000145879	5	10	2	5E+05	0.008968	SPINK7	0.266457609163987	1
COPD-HTN	ENSG00000171680	1	126	21	5E+05	0.008956	PLEKHG5	0.266457609163987	1
COPD-HTN	ENSG00000179029	17	13	3	5E+05	0.008954	TMEM107	0.266457609163987	1
COPD-HTN	ENSG00000131437	5	76	5	5E+05	0.008904	KIF3A	0.26600581636953	1
COPD-HTN	ENSG00000188033	19	94	5	5E+05	0.008887	ZNF490	0.265931933441558	1
COPD-HTN	ENSG00000108826	17	9	2	5E+05	0.00886	MRPL27	0.265543100487805	1
COPD-HTN	ENSG00000156218	15	912	37	5E+05	0.008845	ADAMTSL3	0.265537271986971	1
COPD-HTN	ENSG00000175229	11	13	3	5E+05	0.008837	GAL3ST3	0.265537271986971	1
COPD-HTN	ENSG00000040199	16	168	16	5E+05	0.008819	PHLPP2	0.265537271986971	1
COPD-HTN	ENSG00000170382	1	166	22	5E+05	0.008806	LRRN2	0.265537271986971	1
COPD-HTN	ENSG00000005339	16	96	29	5E+05	0.00876	CREBBP	0.264694858196721	1
COPD-HTN	ENSG00000166275	10	22	6	5E+05	0.008638	C10orf32	0.26146408407225	1
COPD-HTN	ENSG00000178202	11	35	6	5E+05	0.008619	KDELC2	0.261296870230263	1
COPD-HTN	ENSG00000188486	11	4	1	5E+05	0.008614	H2AFX	0.261296870230263	1

COPD-HTN	ENSG00000213246	17	20	5	5E+05	0.008607	SUPT4H1	0.261296870230263	1
COPD-HTN	ENSG00000107864	10	283	15	5E+05	0.008589	CPEB3	0.261296870230263	1
COPD-HTN	ENSG00000170236	15	141	14	5E+05	0.008506	USP50	0.259584858774834	1
COPD-HTN	ENSG00000139734	13	1043	28	5E+05	0.008445	DIAPH3	0.258165933996683	1
COPD-HTN	ENSG00000059691	4	191	9	5E+05	0.008442	PET112	0.258165933996683	1
COPD-HTN	ENSG00000010327	3	40	10	5E+05	0.008434	STAB1	0.258165933996683	1
COPD-HTN	ENSG00000153214	2	117	19	5E+05	0.008414	TMEM87B	0.258165933996683	1
COPD-HTN	ENSG00000121552	3	42	8	5E+05	0.008352	CSTA	0.257018796828047	1
COPD-HTN	ENSG00000261459	16	5	3	5E+05	0.008329	ZNF747	0.256727302842809	1
COPD-HTN	ENSG00000134697	1	60	10	5E+05	0.008326	GNL2	0.256727302842809	1
COPD-HTN	ENSG00000176387	16	9	4	5E+05	0.008278	HSD11B2	0.256011483389262	1
COPD-HTN	ENSG00000188266	15	46	3	5E+05	0.008252	HYKK	0.25565176907563	1
COPD-HTN	ENSG00000121057	17	107	21	5E+05	0.008217	AKAP1	0.254977420538721	1
COPD-HTN	ENSG00000106031	7	11	4	5E+05	0.008207	HOXA13	0.254977420538721	1
COPD-HTN	ENSG00000131507	5	157	12	5E+05	0.008191	NDFIP1	0.254977420538721	1
COPD-HTN	ENSG00000141279	17	93	10	5E+05	0.008156	NPEPPS	0.254378518950931	1
COPD-HTN	ENSG00000188993	4	24	7	5E+05	0.008114	LRRC66	0.253506862033898	1
COPD-HTN	ENSG00000268861	19	347	16	5E+05	0.008098	CTD-2207O2	0.253430278438031	1
COPD-HTN	ENSG00000177238	16	6	2	5E+05	0.008089	TRIM72	0.253430278438031	1
COPD-HTN	ENSG00000169957	16	3	2	5E+05	0.008039	ZNF768	0.252425333049404	1
COPD-HTN	ENSG00000221843	2	7	3	5E+05	0.007999	C2orf16	0.25161988668942	1
COPD-HTN	ENSG00000140750	16	147	11	5E+05	0.007976	ARHGAP17	0.251318988034188	1
COPD-HTN	ENSG00000139990	14	149	17	5E+05	0.007945	DCAF5	0.250758239383562	1
COPD-HTN	ENSG00000149557	11	97	13	5E+05	0.007906	FEZ1	0.24996792109777	1
COPD-HTN	ENSG00000127990	7	87	8	5E+05	0.007906	SGCE	0.24996792109777	1
COPD-HTN	ENSG00000095627	10	116	11	5E+05	0.007899	TDRD1	0.24996792109777	1
COPD-HTN	ENSG00000166997	7	7	3	5E+05	0.007874	CNPY4	0.24996792109777	1
COPD-HTN	ENSG00000168802	16	25	9	5E+05	0.007839	CHTF8	0.249574542659758	1
COPD-HTN	ENSG00000011304	19	50	10	5E+05	0.007835	PTBP1	0.249574542659758	1
COPD-HTN	ENSG00000219435	11	5	2	5E+05	0.007814	TEX40	0.249574542659758	1
COPD-HTN	ENSG00000169247	5	341	29	5E+05	0.007806	SH3TC2	0.249574542659758	1
COPD-HTN	ENSG00000160207	21	140	11	5E+05	0.007792	HSF2BP	0.249574542659758	1
COPD-HTN	ENSG00000066405	3	67	9	5E+05	0.00777	CLDN18	0.249519878048781	1

COPD-HTN	ENSG00000204909	5	25	2	5E+05	0.007768	SPINK9	0.249519878048781	1
COPD-HTN	ENSG00000162004	16	11	3	5E+05	0.007754	CCDC78	0.249519878048781	1
COPD-HTN	ENSG00000144824	3	814	43	5E+05	0.007715	PHLDB2	0.249052104553415	1
COPD-HTN	ENSG00000105426	19	569	73	5E+05	0.007687	PTPRS	0.248599726666667	1
COPD-HTN	ENSG00000187957	2	1171	93	5E+05	0.007673	DNER	0.248579857469244	1
COPD-HTN	ENSG00000169126	10	463	23	5E+05	0.007616	ARMC4	0.24714499084507	1
COPD-HTN	ENSG00000159322	15	66	10	5E+05	0.007572	ADPGK	0.246156947795414	1
COPD-HTN	ENSG00000061987	12	284	18	5E+05	0.007567	MON2	0.246156947795414	1
COPD-HTN	ENSG00000159720	16	45	9	5E+05	0.007557	ATP6V0D1	0.246156947795414	1
COPD-HTN	ENSG00000132591	17	13	1	5E+05	0.007554	ERAL1	0.246156947795414	1
COPD-HTN	ENSG00000196604	2	5	2	5E+05	0.007547	POTEF	0.246156947795414	1
COPD-HTN	ENSG00000104327	8	55	8	5E+05	0.007523	CALB1	0.246156947795414	1
COPD-HTN	ENSG00000260869	16	26	8	5E+05	0.007523	AC002310.13	0.246156947795414	1
COPD-HTN	ENSG00000068137	17	7	3	5E+05	0.007501	PLEKHH3	0.246156947795414	1
COPD-HTN	ENSG00000162910	1	1	1	5E+05	0.007474	MRPL55	0.246156947795414	1
COPD-HTN	ENSG00000169592	16	25	5	5E+05	0.007456	INO80E	0.246156947795414	1
COPD-HTN	ENSG00000162620	1	263	13	5E+05	0.00744	LRRIQ3	0.246156947795414	1
COPD-HTN	ENSG00000183011	17	54	10	5E+05	0.007433	LSMD1	0.246156947795414	1
COPD-HTN	ENSG00000115648	2	329	16	5E+05	0.007425	MLPH	0.246156947795414	1
COPD-HTN	ENSG00000188501	15	46	9	5E+05	0.007419	LCTL	0.246156947795414	1
COPD-HTN	ENSG00000166689	11	701	42	5E+05	0.0074	PLEKHA7	0.246156947795414	1
COPD-HTN	ENSG00000150756	5	123	20	5E+05	0.007395	FAM173B	0.246156947795414	1
COPD-HTN	ENSG00000117528	1	101	12	5E+05	0.007373	ABCD3	0.246156947795414	1
COPD-HTN	ENSG00000090382	12	19	6	5E+05	0.007349	LYZ	0.246156947795414	1
COPD-HTN	ENSG00000198780	5	162	10	5E+05	0.007343	FAM169A	0.246156947795414	1
COPD-HTN	ENSG00000101203	20	115	11	5E+05	0.007339	COL20A1	0.246156947795414	1
COPD-HTN	ENSG00000171055	2	281	18	5E+05	0.007334	FEZ2	0.246156947795414	1
COPD-HTN	ENSG00000072163	2	153	27	5E+05	0.00731	LIMS2	0.246156947795414	1
COPD-HTN	ENSG00000269095	19	55	13	5E+05	0.007281	AC010646.3	0.246156947795414	1
COPD-HTN	ENSG00000113205	5	8	3	5E+05	0.007267	PCDHB3	0.246156947795414	1
COPD-HTN	ENSG00000221986	1	39	9	5E+05	0.007226	MYBPHL	0.245284502394107	1
COPD-HTN	ENSG00000176349	7	62	8	5E+05	0.007201	AC110781.3	0.24489362804428	1
COPD-HTN	ENSG00000173442	11	24	7	5E+05	0.007156	EHBP1L1	0.243816459704251	1

COPD-HTN	ENSG00000173065	17	125	6	5E+05	0.007101	FAM222B	0.242400777037037	1
COPD-HTN	ENSG00000140830	16	114	12	5E+05	0.007004	TXNL4B	0.239519564749536	1
COPD-HTN	ENSG00000184304	14	1312	100	5E+05	0.00697	PRKD1	0.23881698866171	1
COPD-HTN	ENSG00000183066	22	106	9	5E+05	0.006933	WBP2NL	0.237967627188082	1
COPD-HTN	ENSG00000182511	15	32	6	5E+05	0.006917	FES	0.237857918843284	1
COPD-HTN	ENSG00000165511	10	4	2	5E+05	0.006903	C10orf25	0.237823599626168	1
COPD-HTN	ENSG00000268126	5	1	1	5E+05	0.006871	AC091948.1	0.237174718539326	1
COPD-HTN	ENSG00000106952	9	90	6	5E+05	0.006859	TNFSF8	0.237174718539326	1
COPD-HTN	ENSG00000087460	20	155	31	5E+05	0.006858	GNAS	0.237174718539326	1
COPD-HTN	ENSG00000257017	16	6	2	5E+05	0.006836	HP	0.237174718539326	1
COPD-HTN	ENSG00000145743	5	1110	40	5E+05	0.006833	FBXL17	0.237174718539326	1
COPD-HTN	ENSG00000172733	8	49	9	5E+05	0.006824	PURG	0.237174718539326	1
COPD-HTN	ENSG00000166938	15	92	16	5E+05	0.006814	DIS3L	0.237174718539326	1
COPD-HTN	ENSG00000172201	6	12	5	5E+05	0.006811	ID4	0.237174718539326	1
COPD-HTN	ENSG00000172366	16	5	2	5E+05	0.006785	FAM195A	0.237174718539326	1
COPD-HTN	ENSG00000198920	17	177	16	5E+05	0.006752	KIAA0753	0.237079979428571	1
COPD-HTN	ENSG00000149932	16	40	5	5E+05	0.00675	TMEM219	0.237079979428571	1
COPD-HTN	ENSG00000108590	17	38	6	5E+05	0.006744	MED31	0.237079979428571	1
COPD-HTN	ENSG00000141314	17	168	24	5E+05	0.006708	RHBDL3	0.236885237356322	1
COPD-HTN	ENSG00000148795	10	18	3	5E+05	0.006637	CYP17A1	0.234810238771593	1
COPD-HTN	ENSG00000145332	4	143	17	5E+05	0.00663	KLHL8	0.234810238771593	1
COPD-HTN	ENSG0000015532	17	30	4	5E+05	0.006599	XYLT2	0.23436547283237	1
COPD-HTN	ENSG00000091536	17	131	17	5E+05	0.00657	MYO15A	0.233778835521236	1
COPD-HTN	ENSG00000174197	15	247	19	5E+05	0.006459	MGA	0.230301973307544	1
COPD-HTN	ENSG00000159479	1	4	2	5E+05	0.006458	MED8	0.230301973307544	1
COPD-HTN	ENSG00000263620	17	25	5	5E+05	0.006454	RP11-599B13	0.230301973307544	1
COPD-HTN	ENSG00000268241	2	2	1	5E+05	0.006433	AC018470.1	0.230301973307544	1
COPD-HTN	ENSG00000162777	1	42	14	5E+05	0.006429	DENND2D	0.230301973307544	1
COPD-HTN	ENSG00000258512	14	7	1	5E+05	0.006396	RP11-796G6.10	0.2302684921875	1
COPD-HTN	ENSG00000165895	11	1187	52	5E+05	0.00638	ARHGAP42	0.230149171428571	1
COPD-HTN	ENSG00000257955	12	25	5	5E+05	0.006379	RP1-228P16.50	0.230149171428571	1
COPD-HTN	ENSG00000170522	4	437	56	5E+05	0.006352	ELOVL6	0.230021387229862	1
COPD-HTN	ENSG00000156427	5	76	15	5E+05	0.006336	FGF18	0.229886361220472	1

COPD-HTN	ENSG00000213533	3	106	8	5E+05	0.006328	TMEM110	0.229886361220472	1
COPD-HTN	ENSG00000182179	3	6	2	5E+05	0.006311	UBA7	0.229886361220472	1
COPD-HTN	ENSG00000108242	10	128	14	5E+05	0.006279	CYP2C18	0.229175116435644	1
COPD-HTN	ENSG00000240891	3	535	34	5E+05	0.006257	PLCXD2	0.228850815277778	1
COPD-HTN	ENSG00000139318	12	26	5	5E+05	0.006239	DUSP6	0.228616839960239	1
COPD-HTN	ENSG00000137474	11	250	26	5E+05	0.00618	MYO7A	0.226938870916335	1
COPD-HTN	ENSG00000198380	2	110	6	5E+05	0.006166	GFPT1	0.226862031936128	1
COPD-HTN	ENSG00000114349	3	2	1	5E+05	0.006131	GNAT1	0.226018073	1
COPD-HTN	ENSG00000149131	11	36	4	5E+05	0.006123	SERPING1	0.226018073	1
COPD-HTN	ENSG00000089009	12	10	4	5E+05	0.006112	RPL6	0.226018073	1
COPD-HTN	ENSG00000153495	13	113	19	5E+05	0.006105	TEX29	0.226018073	1
COPD-HTN	ENSG00000196092	9	684	57	5E+05	0.006092	PAX5	0.226018073	1
COPD-HTN	ENSG00000116685	1	18	5	5E+05	0.00607	KIAA2013	0.226018073	1
COPD-HTN	ENSG00000162992	2	7	2	5E+05	0.006065	NEUROD1	0.226018073	1
COPD-HTN	ENSG00000090905	16	143	14	5E+05	0.006026	TNRC6A	0.225297622920893	1
COPD-HTN	ENSG00000185888	1	100	16	5E+05	0.006014	PRSS38	0.225297622920893	1
COPD-HTN	ENSG00000116514	1	48	6	5E+05	0.006011	RNF19B	0.225297622920893	1
COPD-HTN	ENSG00000180336	17	27	9	5E+05	0.00597	C17orf104	0.22457036755102	1
COPD-HTN	ENSG00000197128	19	38	4	5E+05	0.005935	ZNF772	0.223725354396728	1
COPD-HTN	ENSG00000129167	11	41	5	5E+05	0.005921	TPH1	0.223639883401639	1
COPD-HTN	ENSG00000133275	19	114	12	5E+05	0.005918	CSNK1G2	0.223639883401639	1
COPD-HTN	ENSG00000128965	15	5	2	5E+05	0.005893	CHAC1	0.223513399794239	1
COPD-HTN	ENSG00000115947	2	125	9	5E+05	0.005825	ORC4	0.221367027835052	1
COPD-HTN	ENSG00000138668	4	43	5	5E+05	0.005813	HNRNPD	0.221367027835052	1
COPD-HTN	ENSG00000162040	16	33	4	5E+05	0.005807	HS3ST6	0.221367027835052	1
COPD-HTN	ENSG00000180098	1	35	6	5E+05	0.005744	TRNAU1AP	0.219673939004149	1
COPD-HTN	ENSG00000137944	1	98	7	5E+05	0.005731	CCBL2	0.219640116839917	1
COPD-HTN	ENSG00000104447	8	482	21	5E+05	0.00571	TRPS1	0.219287416458333	1
COPD-HTN	ENSG00000133069	1	118	13	5E+05	0.005683	TMCC2	0.218710046346555	1
COPD-HTN	ENSG00000196387	12	5	1	5E+05	0.005683	ZNF140	0.218710046346555	1
COPD-HTN	ENSG00000205883	8	11	3	5E+05	0.005675	DEFB135	0.218710046346555	1
COPD-HTN	ENSG00000140832	16	30	6	5E+05	0.00566	MARVELD3	0.218710046346555	1
COPD-HTN	ENSG00000155363	1	51	9	5E+05	0.00565	MOV10	0.218710046346555	1

COPD-HTN	ENSG00000176182	19	39	7	5E+05	0.005602	MYPOP	0.217839949578059	1
COPD-HTN	ENSG00000101210	20	46	12	5E+05	0.0056	EEF1A2	0.217839949578059	1
COPD-HTN	ENSG00000205971	7	4	2	5E+05	0.005548	AC074389.6	0.216654140042373	1
COPD-HTN	ENSG00000108669	17	133	13	5E+05	0.005468	CYTH1	0.213979343524416	1
COPD-HTN	ENSG00000198492	1	43	6	5E+05	0.005414	YTHDF2	0.212340316170213	1
COPD-HTN	ENSG00000248592	3	116	9	5E+05	0.005411	TMEM110-M	0.212340316170213	1
COPD-HTN	ENSG00000138435	2	43	6	5E+05	0.00541	CHRNA1	0.212340316170213	1
COPD-HTN	ENSG00000122406	1	9	3	5E+05	0.005367	RPL5	0.211821615631692	1
COPD-HTN	ENSG00000118369	11	45	8	5E+05	0.005318	USP35	0.210349801287554	1
COPD-HTN	ENSG00000130592	11	173	27	5E+05	0.005299	LSP1	0.210068810537634	1
COPD-HTN	ENSG00000215910	1	142	11	5E+05	0.005296	C1orf167	0.210068810537634	1
COPD-HTN	ENSG00000008838	17	79	8	5E+05	0.005282	MED24	0.210068810537634	1
COPD-HTN	ENSG00000261701	16	36	7	5E+05	0.005275	HPR	0.210068810537634	1
COPD-HTN	ENSG00000115138	2	14	6	5E+05	0.005268	POMC	0.210068810537634	1
COPD-HTN	ENSG00000163029	2	246	22	5E+05	0.005182	SMC6	0.207631716304348	1
COPD-HTN	ENSG00000188334	19	96	13	5E+05	0.005145	BSPH1	0.206602204357298	1
COPD-HTN	ENSG00000171105	19	658	68	5E+05	0.005101	INSR	0.205302568340611	1
COPD-HTN	ENSG00000117477	1	169	17	5E+05	0.005068	CCDC181	0.2044086595186	1
COPD-HTN	ENSG00000121797	3	18	4	5E+05	0.005033	CCRL2	0.203458279824561	1
COPD-HTN	ENSG00000140459	15	42	7	5E+05	0.005009	CYP11A1	0.202908843516484	1
COPD-HTN	ENSG00000100156	22	12	4	5E+05	0.004989	SLC16A8	0.202568113656388	1
COPD-HTN	ENSG00000141101	16	25	7	5E+05	0.004974	NOB1	0.20237643598234	1
COPD-HTN	ENSG00000103254	16	6	1	5E+05	0.004972	FAM173A	0.20237643598234	1
COPD-HTN	ENSG00000133706	5	236	6	5E+05	0.004964	LARS	0.20237643598234	1
COPD-HTN	ENSG00000164338	5	37	4	5E+05	0.004922	UTP15	0.201599672888889	1
COPD-HTN	ENSG00000102886	16	16	6	5E+05	0.004917	GDPD3	0.201599672888889	1
COPD-HTN	ENSG00000173626	6	134	12	5E+05	0.0049	TRAPPC3L	0.201594479464286	1
COPD-HTN	ENSG00000172977	11	22	5	5E+05	0.004855	KAT5	0.200185678970917	1
COPD-HTN	ENSG00000168772	4	25	4	5E+05	0.004848	CXXC4	0.200185678970917	1
COPD-HTN	ENSG00000163069	4	21	4	5E+05	0.004824	SGCB	0.199834431235955	1
COPD-HTN	ENSG00000267534	19	13	4	5E+05	0.004799	S1PR2	0.199225856756757	1
COPD-HTN	ENSG00000253958	8	15	2	5E+05	0.004716	CLDN23	0.196217828668172	1
COPD-HTN	ENSG00000104880	19	323	14	5E+05	0.004703	ARHGEF18	0.196111272624434	1

COPD-HTN	ENSG00000169955	16	6	3	5E+05	0.004701	ZNF747	0.196111272624434	1
COPD-HTN	ENSG00000117281	1	4	1	5E+05	0.004686	CD160	0.196111272624434	1
COPD-HTN	ENSG00000169344	16	55	6	5E+05	0.004664	UMOD	0.195813884965831	1
COPD-HTN	ENSG00000075239	11	44	7	5E+05	0.00463	ACAT1	0.194859535616438	1
COPD-HTN	ENSG00000169223	5	24	4	5E+05	0.004605	LMAN2	0.194246700915332	1
COPD-HTN	ENSG00000074201	11	229	19	5E+05	0.004594	CLNS1A	0.194210257110092	1
COPD-HTN	ENSG00000128285	22	7	2	5E+05	0.00457	MCHR1	0.193635486896552	1
COPD-HTN	ENSG00000253350	8	1987	103	5E+05	0.004547	RP11-127H5.1	0.193126023732719	1
COPD-HTN	ENSG00000129282	17	11	3	5E+05	0.004542	MRM1	0.193126023732719	1
COPD-HTN	ENSG00000156110	10	777	24	5E+05	0.004536	ADK	0.193126023732719	1
COPD-HTN	ENSG00000132781	1	14	6	5E+05	0.004521	MUTYH	0.193126023732719	1
COPD-HTN	ENSG00000130517	19	89	17	5E+05	0.004491	PGPEP1	0.192513394651163	1
COPD-HTN	ENSG00000198758	1	41	11	5E+05	0.004488	EPS8L3	0.192513394651163	1
COPD-HTN	ENSG00000174839	3	125	15	5E+05	0.004441	DENND6A	0.191263908878505	1
COPD-HTN	ENSG00000173261	5	46	2	5E+05	0.004436	PLAC8L1	0.191263908878505	1
COPD-HTN	ENSG00000149295	11	166	21	5E+05	0.004419	DRD2	0.191201268544601	1
COPD-HTN	ENSG00000197150	7	46	9	5E+05	0.004389	ABCB8	0.190367349647059	1
COPD-HTN	ENSG00000196748	6	7	3	5E+05	0.004361	CLPSL2	0.189603403066038	1
COPD-HTN	ENSG00000188452	2	337	22	5E+05	0.004353	CERKL	0.189603403066038	1
COPD-HTN	ENSG00000151006	16	12	3	5E+05	0.004342	PRSS53	0.189603403066038	1
COPD-HTN	ENSG00000196355	4	91	14	5E+05	0.004328	AC021860.1	0.189500872446556	1
COPD-HTN	ENSG00000109787	4	73	15	5E+05	0.004324	KLF3	0.189500872446556	1
COPD-HTN	ENSG00000170959	11	637	20	5E+05	0.004313	DCDC1	0.189500872446556	1
COPD-HTN	ENSG00000125630	2	91	10	5E+05	0.004308	POLR1B	0.189500872446556	1
COPD-HTN	ENSG00000121905	1	13	3	5E+05	0.004288	HPCA	0.189500872446556	1
COPD-HTN	ENSG00000100372	22	57	7	5E+05	0.004288	SLC25A17	0.189500872446556	1
COPD-HTN	ENSG00000143499	1	177	20	5E+05	0.004258	SMYD2	0.189104813253012	1
COPD-HTN	ENSG00000180198	1	57	7	5E+05	0.004174	RCC1	0.185857178502415	1
COPD-HTN	ENSG00000146674	7	19	6	5E+05	0.004157	IGFBP3	0.185517210169492	1
COPD-HTN	ENSG00000205593	22	63	10	5E+05	0.004138	DENND6B	0.185144273300971	1
COPD-HTN	ENSG00000145868	5	60	4	5E+05	0.004132	FBXO38	0.185144273300971	1
COPD-HTN	ENSG00000114999	2	99	10	5E+05	0.004099	TTL	0.184289537317073	1
COPD-HTN	ENSG00000169230	5	10	5	5E+05	0.004078	PRELID1	0.183793685330073	1

COPD-HTN	ENSG00000157851	2	122	7	5E+05	0.004063	DPYSL5	0.183570994117647	1
COPD-HTN	ENSG00000175324	8	18	5	5E+05	0.004027	LSM1	0.182364417199017	1
COPD-HTN	ENSG00000187778	12	15	4	5E+05	0.004016	MCRS1	0.182332334975369	1
COPD-HTN	ENSG00000149596	20	269	34	5E+05	0.004008	JPH2	0.182332334975369	1
COPD-HTN	ENSG00000105722	19	8	1	5E+05	0.003957	ERF	0.180524771782178	1
COPD-HTN	ENSG00000177733	5	1	1	5E+05	0.003951	HNRNPA0	0.180524771782178	1
COPD-HTN	ENSG00000127337	12	111	11	5E+05	0.003924	YEATS4	0.179918918905473	1
COPD-HTN	ENSG00000157322	16	1	1	5E+05	0.003912	CLEC18A	0.179802193266833	1
COPD-HTN	ENSG00000007541	16	52	4	5E+05	0.003906	PIGQ	0.179802193266833	1
COPD-HTN	ENSG00000121989	2	93	10	5E+05	0.003902	ACVR2A	0.179802193266833	1
COPD-HTN	ENSG00000119772	2	182	34	5E+05	0.003835	DNMT3A	0.177600565577889	1
COPD-HTN	ENSG00000177981	12	80	11	5E+05	0.003831	ASB8	0.177600565577889	1
COPD-HTN	ENSG00000171456	20	91	7	5E+05	0.003829	ASXL1	0.177600565577889	1
COPD-HTN	ENSG00000037042	17	8	3	5E+05	0.003794	TUBG2	0.177031465316456	1
COPD-HTN	ENSG00000126351	17	50	12	5E+05	0.003784	THRA	0.177008262690355	1
COPD-HTN	ENSG00000112282	6	40	8	5E+05	0.00378	MED23	0.177008262690355	1
COPD-HTN	ENSG00000105723	19	12	3	5E+05	0.003773	GSK3A	0.177008262690355	1
COPD-HTN	ENSG00000138829	5	1094	32	5E+05	0.003768	FBN2	0.177008262690355	1
COPD-HTN	ENSG00000169194	5	8	2	5E+05	0.003718	IL13	0.175713754102564	1
COPD-HTN	ENSG00000055955	3	41	5	5E+05	0.003667	ITIH4	0.17377722596401	1
COPD-HTN	ENSG00000172548	5	45	7	5E+05	0.003639	NIPAL4	0.17289013814433	1
COPD-HTN	ENSG00000124177	20	438	25	5E+05	0.003613	CHD6	0.172093726873385	1
COPD-HTN	ENSG00000127578	16	15	3	5E+05	0.003588	WFIKKN1	0.171345718393782	1
COPD-HTN	ENSG00000204957	19	7	2	5E+05	0.003588	AC006486.1	0.171345718393782	1
COPD-HTN	ENSG00000113212	5	14	4	5E+05	0.003583	PCDHB7	0.171345718393782	1
COPD-HTN	ENSG00000243696	3	55	6	5E+05	0.003571	RP5-966M1.6	0.171345718393782	1
COPD-HTN	ENSG00000166147	15	353	13	5E+05	0.003537	FBN1	0.170664487958115	1
COPD-HTN	ENSG00000178035	3	4	2	5E+05	0.003523	IMPDH2	0.170430260104987	1
COPD-HTN	ENSG00000101152	20	132	14	5E+05	0.003436	DNAJC5	0.166653723157895	1
COPD-HTN	ENSG00000130203	19	5	2	5E+05	0.003413	APOE	0.165999135356201	1
COPD-HTN	ENSG00000140564	15	27	6	5E+05	0.003299	FURIN	0.160888880687831	1
COPD-HTN	ENSG00000116678	1	512	20	5E+05	0.003298	LEPR	0.160888880687831	1
COPD-HTN	ENSG00000178301	11	40	4	5E+05	0.003234	AQP11	0.158558116755319	1

COPD-HTN	ENSG00000041357	15	22	3	5E+05	0.003213	PSMA4	0.157914282133333	1
COPD-HTN	ENSG00000268643	19	25	3	5E+05	0.003182	AC006486.9	0.15682835828877	1
COPD-HTN	ENSG00000204160	1	42	6	5E+05	0.00318	ZDHHHC18	0.15682835828877	1
COPD-HTN	ENSG00000168268	3	21	3	5E+05	0.003178	NT5DC2	0.15682835828877	1
COPD-HTN	ENSG00000268163	19	127	13	5E+05	0.003171	AC004076.9	0.15682835828877	1
COPD-HTN	ENSG00000115935	2	171	24	5E+05	0.003168	WIPF1	0.15682835828877	1
COPD-HTN	ENSG00000165379	14	691	31	5E+05	0.003153	LRFN5	0.15682835828877	1
COPD-HTN	ENSG00000108798	17	27	8	5E+05	0.003138	ABI3	0.15682835828877	1
COPD-HTN	ENSG00000255622	5	4	2	5E+05	0.003125	PCDHB17	0.15682835828877	1
COPD-HTN	ENSG00000258429	16	5	2	5E+05	0.003122	PDF	0.15682835828877	1
COPD-HTN	ENSG00000100883	14	175	16	5E+05	0.003106	SRP54	0.15682835828877	1
COPD-HTN	ENSG00000241644	7	147	25	5E+05	0.003	INMT	0.151925393681319	1
COPD-HTN	ENSG00000147434	8	88	9	5E+05	0.002991	CHRNA6	0.151897060330579	1
COPD-HTN	ENSG00000124571	6	56	7	5E+05	0.002977	XPO5	0.151563051104972	1
COPD-HTN	ENSG00000106546	7	41	10	5E+05	0.002974	AHR	0.151563051104972	1
COPD-HTN	ENSG00000163431	1	111	18	5E+05	0.002958	LMOD1	0.151468057222222	1
COPD-HTN	ENSG00000113520	5	15	2	5E+05	0.002954	IL4	0.151468057222222	1
COPD-HTN	ENSG00000105662	19	206	24	5E+05	0.002944	CRTC1	0.151468057222222	1
COPD-HTN	ENSG00000144035	2	2	1	5E+05	0.002936	NAT8	0.151468057222222	1
COPD-HTN	ENSG00000269755	19	183	11	5E+05	0.002934	CTD-3105H1	0.151468057222222	1
COPD-HTN	ENSG00000103591	15	100	8	5E+05	0.002885	AAGAB	0.149805769859155	1
COPD-HTN	ENSG00000163491	3	720	22	5E+05	0.002884	NEK10	0.149805769859155	1
COPD-HTN	ENSG00000142751	1	20	4	5E+05	0.002805	GPN2	0.146471855524079	1
COPD-HTN	ENSG00000033327	11	318	5	5E+05	0.002804	GAB2	0.146471855524079	1
COPD-HTN	ENSG00000182704	11	45	7	5E+05	0.002763	TSKU	0.145106046438746	1
COPD-HTN	ENSG00000137207	6	10	3	5E+05	0.002708	YIPF3	0.142624020857143	1
COPD-HTN	ENSG00000186907	11	14	6	5E+05	0.002666	RTN4RL2	0.140782697707736	1
COPD-HTN	ENSG00000102879	16	6	3	5E+05	0.00265	CORO1A	0.140355641954023	1
COPD-HTN	ENSG00000198670	6	214	17	5E+05	0.002649	LPA	0.140355641954023	1
COPD-HTN	ENSG00000135655	12	338	18	5E+05	0.002646	USP15	0.140355641954023	1
COPD-HTN	ENSG00000178033	6	37	6	5E+05	0.002644	FAM26E	0.140355641954023	1
COPD-HTN	ENSG00000115604	2	317	15	5E+05	0.002621	IL18R1	0.140355641954023	1
COPD-HTN	ENSG00000233538	2	1	1	5E+05	0.002601	AC017104.2	0.139752234693878	1

COPD-HTN	ENSG00000106261	7	39	8	5E+05	0.002598	ZKSCAN1	0.139752234693878	1
COPD-HTN	ENSG00000184838	5	664	40	5E+05	0.002596	PRR16	0.139752234693878	1
COPD-HTN	ENSG00000167536	17	7	3	5E+05	0.002575	DHRS13	0.139624553529412	1
COPD-HTN	ENSG00000173349	2	9	4	5E+05	0.002563	SFT2D3	0.139356742477876	1
COPD-HTN	ENSG00000185650	14	17	4	5E+05	0.002551	ZFP36L1	0.139141882248521	1
COPD-HTN	ENSG00000149930	16	23	3	5E+05	0.002545	TAOK2	0.139141882248521	1
COPD-HTN	ENSG00000254470	11	8	3	5E+05	0.002518	AP5B1	0.138154237797619	1
COPD-HTN	ENSG00000058335	15	353	55	5E+05	0.002517	RASGRF1	0.138154237797619	1
COPD-HTN	ENSG00000079459	8	234	25	5E+05	0.002508	FDFT1	0.138154237797619	1
COPD-HTN	ENSG00000220205	17	8	2	5E+05	0.002507	VAMP2	0.138154237797619	1
COPD-HTN	ENSG00000181019	16	46	10	5E+05	0.002488	NQO1	0.138153114156627	1
COPD-HTN	ENSG00000172432	6	21	4	5E+05	0.002474	GTPBP2	0.137779713897281	1
COPD-HTN	ENSG00000135519	12	37	6	5E+05	0.00247	KCNH3	0.137779713897281	1
COPD-HTN	ENSG00000213347	5	24	8	5E+05	0.002459	MXD3	0.137779713897281	1
COPD-HTN	ENSG00000102908	16	259	16	5E+05	0.002433	NFAT5	0.136735769207317	1
COPD-HTN	ENSG00000108963	17	35	11	5E+05	0.002392	DPH1	0.134842750152905	1
COPD-HTN	ENSG00000116489	1	64	9	5E+05	0.002373	CAPZA1	0.134193370858896	1
COPD-HTN	ENSG00000105364	19	16	5	5E+05	0.002371	MRPL4	0.134193370858896	1
COPD-HTN	ENSG00000180834	3	29	4	5E+05	0.002354	MAP6D1	0.13390095308642	1
COPD-HTN	ENSG00000158636	11	189	21	5E+05	0.002353	C11orf30	0.13390095308642	1
COPD-HTN	ENSG00000268870	19	219	8	5E+05	0.002337	CTD-3105H1	0.133759465217391	1
COPD-HTN	ENSG00000143079	1	144	5	5E+05	0.002317	CTTNBP2NL	0.133027687850467	1
COPD-HTN	ENSG00000204393	20	54	11	5E+05	0.002313	RP11-410N8.4	0.133027687850467	1
COPD-HTN	ENSG00000244624	21	1	1	5E+05	0.002308	KRTAP20-1	0.133027687850467	1
COPD-HTN	ENSG00000163347	3	82	18	5E+05	0.002306	CLDN1	0.133027687850467	1
COPD-HTN	ENSG00000007341	1	188	15	5E+05	0.002287	ST7L	0.132990896845426	1
COPD-HTN	ENSG00000132773	1	5	3	5E+05	0.002265	TOE1	0.132099277848101	1
COPD-HTN	ENSG00000125611	2	12	3	5E+05	0.002256	CHCHD5	0.131997835238095	1
COPD-HTN	ENSG00000167083	17	25	7	5E+05	0.002236	GNGT2	0.131232393312102	1
COPD-HTN	ENSG00000048649	11	305	12	5E+05	0.002221	RSF1	0.130774184664537	1
COPD-HTN	ENSG00000116127	2	357	12	5E+05	0.002213	ALMS1	0.13076204775641	1
COPD-HTN	ENSG00000171453	6	25	5	5E+05	0.002209	POLR1C	0.13076204775641	1
COPD-HTN	ENSG00000005955	17	69	10	5E+05	0.002187	GGNBP2	0.130029949677419	1

COPD-HTN	ENSG00000170734	6	40	8	5E+05	0.002139	POLH	0.12756948381877	1
COPD-HTN	ENSG00000054282	1	381	27	5E+05	0.002123	SDCCAG8	0.127032096753247	1
COPD-HTN	ENSG00000091542	17	61	7	5E+05	0.002093	ALKBH5	0.125668628664495	1
COPD-HTN	ENSG00000171060	8	36	12	5E+05	0.002084	C8orf74	0.125519091830065	1
COPD-HTN	ENSG00000128908	15	110	11	5E+05	0.002083	INO80	0.125519091830065	1
COPD-HTN	ENSG00000055483	17	80	9	5E+05	0.002083	USP36	0.125519091830065	1
COPD-HTN	ENSG00000153107	2	131	11	5E+05	0.002059	ANAPC1	0.125283565016502	1
COPD-HTN	ENSG00000116406	1	110	13	5E+05	0.002031	EDEM3	0.123964976821192	1
COPD-HTN	ENSG00000161996	16	68	4	5E+05	0.00203	WDR90	0.123964976821192	1
COPD-HTN	ENSG00000162757	1	2	1	5E+05	0.00201	C1orf74	0.123525677333333	1
COPD-HTN	ENSG00000184489	8	100	14	5E+05	0.001977	PTP4A3	0.121885900668896	1
COPD-HTN	ENSG00000178951	19	37	7	5E+05	0.001971	ZBTB7A	0.121885900668896	1
COPD-HTN	ENSG00000117399	1	5	3	5E+05	0.001968	CDC20	0.121885900668896	1
COPD-HTN	ENSG00000152556	12	97	14	5E+05	0.001917	PFKM	0.119391039189189	1
COPD-HTN	ENSG00000168214	4	420	45	5E+05	0.001905	RBPJ	0.119033440677966	1
COPD-HTN	ENSG00000076604	17	7	2	5E+05	0.001896	TRAF4	0.118842692176871	1
COPD-HTN	ENSG00000077782	8	74	14	5E+05	0.001894	FGFR1	0.118842692176871	1
COPD-HTN	ENSG00000052344	16	4	2	5E+05	0.001892	PRSS8	0.118842692176871	1
COPD-HTN	ENSG00000106290	7	18	5	5E+05	0.00189	TAF6	0.118842692176871	1
COPD-HTN	ENSG00000253626	10	5	2	5E+05	0.001886	EIF5AL1	0.118842692176871	1
COPD-HTN	ENSG00000165512	10	15	4	5E+05	0.001854	ZNF22	0.118258219031142	1
COPD-HTN	ENSG00000272573	3	7	2	5E+05	0.001844	MUSTN1	0.118048004166667	1
COPD-HTN	ENSG00000149084	11	552	23	5E+05	0.001826	HSD17B12	0.117303244599303	1
COPD-HTN	ENSG00000116981	1	16	5	5E+05	0.001791	NT5C1A	0.115406048251748	1
COPD-HTN	ENSG00000117595	1	54	6	5E+05	0.001787	IRF6	0.115406048251748	1
COPD-HTN	ENSG00000113649	5	162	12	5E+05	0.00175	TCERG1	0.113590117253521	1
COPD-HTN	ENSG00000135074	5	583	31	5E+05	0.001747	ADAM19	0.113590117253521	1
COPD-HTN	ENSG00000123689	1	3	2	5E+05	0.001741	G0S2	0.113590117253521	1
COPD-HTN	ENSG00000197415	3	709	33	5E+05	0.001719	VEPH1	0.112749609964413	1
COPD-HTN	ENSG00000125520	20	11	3	5E+05	0.001697	SLC2A4RG	0.111743479285714	1
COPD-HTN	ENSG00000221838	7	17	4	5E+05	0.001695	AP4M1	0.111743479285714	1
COPD-HTN	ENSG00000167395	16	13	3	5E+05	0.001681	ZNF646	0.111479866546763	1
COPD-HTN	ENSG00000185787	15	310	14	5E+05	0.001668	MORF4L1	0.111010579783394	1

COPD-HTN	ENSG00000144152	2	112	17	5E+05	0.001619	FBLN7	0.108146945289855	1
COPD-HTN	ENSG00000107960	10	84	8	5E+05	0.001611	OBFC1	0.108010677090909	1
COPD-HTN	ENSG00000140463	15	92	14	5E+05	0.001609	BBS4	0.108010677090909	1
COPD-HTN	ENSG00000146555	7	3276	92	5E+05	0.001582	SDK1	0.106823623809524	1
COPD-HTN	ENSG00000268466	14	2	1	5E+05	0.001578	AL132989.1	0.106823623809524	1
COPD-HTN	ENSG00000054598	6	3	1	5E+05	0.001573	FOXC1	0.106823623809524	1
COPD-HTN	ENSG00000180855	19	66	5	5E+05	0.001496	ZNF443	0.102098338888889	1
COPD-HTN	ENSG00000147905	9	267	16	5E+05	0.001495	ZCCHC7	0.102098338888889	1
COPD-HTN	ENSG00000178922	1	6	3	5E+05	0.00147	HYI	0.101092624626866	1
COPD-HTN	ENSG00000228008	3	11	3	5E+05	0.001456	CTD-2330K9	0.100484013108614	1
COPD-HTN	ENSG00000131899	17	41	6	5E+05	0.001438	LLGL1	0.0996282860902256	1
COPD-HTN	ENSG00000164989	9	1250	16	5E+05	0.001403	CCDC171	0.0976183856603773	1
COPD-HTN	ENSG00000178685	8	54	4	5E+05	0.001401	PARP10	0.0976183856603773	1
COPD-HTN	ENSG00000079313	19	58	6	5E+05	0.0014	REXO1	0.0976183856603773	1
COPD-HTN	ENSG00000270316	10	132	13	5E+05	0.001389	C10orf32-AS1	0.0976183856603773	1
COPD-HTN	ENSG00000099365	16	25	5	5E+05	0.001383	STX1B	0.0976183856603773	1
COPD-HTN	ENSG00000137802	15	81	12	5E+05	0.001369	MAPKBP1	0.0970426553846154	1
COPD-HTN	ENSG00000164400	5	4	2	5E+05	0.001366	CSF2	0.0970426553846154	1
COPD-HTN	ENSG00000166292	17	8	3	5E+05	0.001345	TMEM100	0.0961016600775194	1
COPD-HTN	ENSG00000133812	11	1530	32	5E+05	0.001345	SBF2	0.0961016600775194	1
COPD-HTN	ENSG00000072778	17	10	3	5E+05	0.00133	ACADV1	0.09577959609375	1
COPD-HTN	ENSG00000108272	17	16	4	5E+05	0.001324	DHRS11	0.0956781129411765	1
COPD-HTN	ENSG00000177455	16	6	3	5E+05	0.001319	CD19	0.0956781129411765	1
COPD-HTN	ENSG00000120915	8	141	10	5E+05	0.001302	EPHX2	0.0948534494071146	1
COPD-HTN	ENSG00000170296	17	3	2	5E+05	0.001298	GABARAP	0.0948534494071146	1
COPD-HTN	ENSG00000262526	17	3	2	5E+05	0.001298	CTD-2545G1	0.0948534494071146	1
COPD-HTN	ENSG00000121848	1	5	2	5E+05	0.001294	RNF115	0.0948534494071146	1
COPD-HTN	ENSG00000269383	2	1	1	5E+05	0.001292	AC012493.2	0.0948534494071146	1
COPD-HTN	ENSG00000137877	15	130	22	5E+05	0.00127	SPTBN5	0.0943799330645161	1
COPD-HTN	ENSG00000158019	2	834	40	5E+05	0.001263	BRE	0.0942844218623482	1
COPD-HTN	ENSG00000196911	6	79	9	5E+05	0.001253	KPNA5	0.0939033967479675	1
COPD-HTN	ENSG00000102967	16	47	8	5E+05	0.00124	DHODH	0.0932559326530612	1
COPD-HTN	ENSG00000255439	16	19	4	5E+05	0.00122	RP11-196G11	0.0921272274590164	1

COPD-HTN	ENSG0000064651	5	146	12	5E+05	0.001194	SLC12A2	0.0906023670781893	1
COPD-HTN	ENSG00000213380	16	44	7	5E+05	0.001178	COG8	0.0897275785123967	1
COPD-HTN	ENSG00000111834	6	46	10	5E+05	0.001166	RSPH4A	0.0891973634854772	1
COPD-HTN	ENSG00000131067	20	45	6	5E+05	0.001157	GGT7	0.088824019	1
COPD-HTN	ENSG00000204138	1	330	9	5E+05	0.001156	PHACTR4	0.088824019	1
COPD-HTN	ENSG00000101350	20	69	7	5E+05	0.001148	KIF3B	0.088824019	1
COPD-HTN	ENSG00000143156	1	680	19	5E+05	0.001141	NME7	0.0887195067510548	1
COPD-HTN	ENSG00000214435	10	99	11	5E+05	0.00113	AS3MT	0.0882675139830509	1
COPD-HTN	ENSG00000134871	13	901	94	5E+05	0.001112	COL4A2	0.0871841680851064	1
COPD-HTN	ENSG00000177731	17	20	6	5E+05	0.00111	FLII	0.0871841680851064	1
COPD-HTN	ENSG00000154328	8	93	14	5E+05	0.001087	NEIL2	0.0860101184549356	1
COPD-HTN	ENSG00000154783	3	467	32	5E+05	0.001077	FGD5	0.0855704353448276	1
COPD-HTN	ENSG00000157315	16	18	7	5E+05	0.001072	TMED6	0.0855578467532468	1
COPD-HTN	ENSG00000182450	11	6	2	5E+05	0.000998	KCNK4	0.0800152486956522	1
COPD-HTN	ENSG00000124469	19	13	6	5E+05	0.000996	CEACAM8	0.0800152486956522	1
COPD-HTN	ENSG00000124688	6	13	4	5E+05	0.000994	MAD2L1BP	0.0800152486956522	1
COPD-HTN	ENSG00000176953	16	17	5	5E+05	0.000991	NFATC2IP	0.0800152486956522	1
COPD-HTN	ENSG00000137962	1	176	25	5E+05	0.000986	ARHGAP29	0.0800152486956522	1
COPD-HTN	ENSG00000173868	17	16	5	5E+05	0.00098	PHOSPHO1	0.0800152486956522	1
COPD-HTN	ENSG00000109118	17	35	7	5E+05	0.000973	PHF12	0.0800152486956522	1
COPD-HTN	ENSG00000082258	2	75	7	5E+05	0.000942	CCNT2	0.0779038094618834	1
COPD-HTN	ENSG00000162374	1	172	27	5E+05	0.000929	ELAVL4	0.0771188561711712	1
COPD-HTN	ENSG00000204882	8	39	7	5E+05	0.000909	GPR20	0.07584720760181	1
COPD-HTN	ENSG00000198892	1	7	3	5E+05	0.000896	SHISA4	0.0750616895909091	1
COPD-HTN	ENSG00000138600	15	191	15	5E+05	0.000891	SPPL2A	0.0749987426940639	1
COPD-HTN	ENSG00000164116	4	176	26	5E+05	0.000832	GUCY1A3	0.0703870023853211	1
COPD-HTN	ENSG00000149782	11	25	8	5E+05	0.000832	PLCB3	0.0703870023853211	1
COPD-HTN	ENSG00000217075	2	47	8	5E+05	0.000832	AC007401.2	0.0703870023853211	1
COPD-HTN	ENSG00000119669	14	4	2	5E+05	0.00082	IRF2BPL	0.0703274677674419	1
COPD-HTN	ENSG00000189377	19	14	2	5E+05	0.000805	CXCL17	0.0693528704672897	1
COPD-HTN	ENSG00000197256	19	111	12	5E+05	0.000796	KANK2	0.0689074002347418	1
COPD-HTN	ENSG00000169900	16	1	1	5E+05	0.00079	PYDC1	0.0686490133018868	1
COPD-HTN	ENSG00000129951	19	33	7	5E+05	0.000786	LPPR3	0.0686490133018868	1

COPD-HTN	ENSG00000164330	5	678	51	5E+05	0.000784	EBF1	0.0686490133018868	1
COPD-HTN	ENSG00000158186	3	122	10	5E+05	0.000738	MRAS	0.0650570244976077	1
COPD-HTN	ENSG00000106536	7	1331	53	5E+05	0.000731	POU6F2	0.0647981984134616	1
COPD-HTN	ENSG00000111605	12	54	9	5E+05	0.000715	CPSF6	0.0636383741545894	1
COPD-HTN	ENSG00000144730	3	190	20	5E+05	0.00071	IL17RD	0.063505264223301	1
COPD-HTN	ENSG00000167394	16	14	2	5E+05	0.000705	ZNF668	0.0633816457073171	1
COPD-HTN	ENSG00000189308	4	191	9	5E+05	0.000704	LIN54	0.0633816457073171	1
COPD-HTN	ENSG00000103496	16	17	3	5E+05	0.000696	STX4	0.0631543636945813	1
COPD-HTN	ENSG00000079387	12	155	15	5E+05	0.00069	SENP1	0.0629240568316832	1
COPD-HTN	ENSG00000132603	16	14	5	5E+05	0.000685	NIP7	0.0628391057711443	1
COPD-HTN	ENSG00000181163	5	56	6	5E+05	0.000666	NPM1	0.061423364	1
COPD-HTN	ENSG00000197114	20	70	7	5E+05	0.000662	ZGPAT	0.0613077874874372	1
COPD-HTN	ENSG00000033867	3	353	21	5E+05	0.000655	SLC4A7	0.0610150919191919	1
COPD-HTN	ENSG00000130940	1	377	67	5E+05	0.000651	CASZ1	0.0608672630964467	1
COPD-HTN	ENSG00000259900	16	35	8	5E+05	0.000642	RP11-343C2.7	0.0604160384183674	1
COPD-HTN	ENSG00000178719	8	3	1	5E+05	0.000632	GRINA	0.059729536974359	1
COPD-HTN	ENSG00000115525	2	143	13	5E+05	0.000627	ST3GAL5	0.0595651943298969	1
COPD-HTN	ENSG00000273154	20	75	7	5E+05	0.000626	RP4-583P15.10	0.0595651943298969	1
COPD-HTN	ENSG00000159788	4	285	30	5E+05	0.000612	RGS12	0.0587542274479167	1
COPD-HTN	ENSG00000153086	2	102	6	5E+05	0.000611	ACMSD	0.0587542274479167	1
COPD-HTN	ENSG00000130584	20	360	19	5E+05	0.00061	ZBTB46	0.0587542274479167	1
COPD-HTN	ENSG00000129968	19	16	3	5E+05	0.000609	ABHD17A	0.0587542274479167	1
COPD-HTN	ENSG00000243509	20	10	2	5E+05	0.000601	TNFRSF6B	0.0587542274479167	1
COPD-HTN	ENSG00000197272	16	22	5	5E+05	0.000574	IL27	0.0565824099465241	1
COPD-HTN	ENSG00000138663	4	47	9	5E+05	0.00057	COPS4	0.0564624592473118	1
COPD-HTN	ENSG00000176974	17	81	9	5E+05	0.000561	SHMT1	0.0559366821621622	1
COPD-HTN	ENSG00000109758	4	34	11	5E+05	0.000554	HGFAC	0.0554723102717391	1
COPD-HTN	ENSG00000260371	16	38	10	5E+05	0.000549	RP11-343C2.5	0.0553413052459016	1
COPD-HTN	ENSG00000163660	3	24	4	5E+05	0.000536	CCNL1	0.0542932874175824	1
COPD-HTN	ENSG00000164077	3	21	5	5E+05	0.000535	MON1A	0.0542932874175824	1
COPD-HTN	ENSG00000128585	7	880	83	5E+05	0.000528	MKLN1	0.0541182639444444	1
COPD-HTN	ENSG00000177374	17	9	4	5E+05	0.000499	HIC1	0.0514074744692738	1
COPD-HTN	ENSG00000188981	4	90	7	5E+05	0.000489	MSANTD1	0.0506037628089888	1

COPD-HTN	ENSG00000141076	16	160	20	5E+05	0.000481	CIRH1A	0.0501263044632768	1
COPD-HTN	ENSG00000148842	10	368	18	5E+05	0.000461	CNNM2	0.0483279745454546	1
COPD-HTN	ENSG00000187492	3	14	5	5E+05	0.000453	CDHR4	0.047748843	1
COPD-HTN	ENSG00000102882	16	11	4	5E+05	0.000444	MAPK3	0.0469946156896552	1
COPD-HTN	ENSG00000136709	2	228	25	5E+05	0.000427	WDR33	0.0454900868208093	1
COPD-HTN	ENSG00000157388	3	689	67	5E+05	0.000417	CACNA1D	0.044695738255814	1
COPD-HTN	ENSG00000115526	2	41	6	5E+05	0.000414	CHST10	0.0446003143274854	1
COPD-HTN	ENSG00000136378	15	76	13	5E+05	0.000412	ADAMTS7	0.0446003143274854	1
COPD-HTN	ENSG00000138785	4	427	13	5E+05	0.000403	INTS12	0.0440090601775148	1
COPD-HTN	ENSG00000101336	20	74	9	5E+05	0.000403	HCK	0.0440090601775148	1
COPD-HTN	ENSG00000258366	20	159	18	5E+05	0.000398	RTEL1	0.0439268323952096	1
COPD-HTN	ENSG00000164078	3	20	4	5E+05	0.000394	MST1R	0.0437173018072289	1
COPD-HTN	ENSG00000061455	5	344	25	5E+05	0.000391	PRDM6	0.0437074358787879	1
COPD-HTN	ENSG00000168152	4	33	4	5E+05	0.000381	THAP9	0.0428308738414634	1
COPD-HTN	ENSG00000138780	4	300	11	5E+05	0.000381	GSTCD	0.0428308738414634	1
COPD-HTN	ENSG00000178201	19	2	1	5E+05	0.00038	VN1R1	0.0428308738414634	1
COPD-HTN	ENSG00000273047	20	5	2	5E+05	0.000372	RP4-583P15.1	0.0425859545341615	1
COPD-HTN	ENSG00000167397	16	7	3	5E+05	0.000355	VKORC1	0.040916652	1
COPD-HTN	ENSG00000153975	6	68	9	5E+05	0.000354	ZUFSP	0.040916652	1
COPD-HTN	ENSG00000103507	16	6	2	5E+05	0.000327	BCKDK	0.0381493101265823	1
COPD-HTN	ENSG00000066056	1	26	3	5E+05	0.000324	TIE1	0.0380189430573248	1
COPD-HTN	ENSG00000111832	6	57	9	5E+05	0.00032	RWDD1	0.0377663811538462	1
COPD-HTN	ENSG00000026036	20	164	19	5E+05	0.000318	RTEL1-TNFR	0.0377663811538462	1
COPD-HTN	ENSG00000197479	5	6	2	5E+05	0.000309	PCDHB11	0.0369402107792208	1
COPD-HTN	ENSG00000165995	10	1367	101	5E+05	0.000308	CACNB2	0.0369402107792208	1
COPD-HTN	ENSG00000168769	4	233	28	5E+05	0.0003	TET2	0.0364294289473684	1
COPD-HTN	ENSG00000079385	19	41	6	5E+05	0.0003	CEACAM1	0.0364294289473684	1
COPD-HTN	ENSG00000177302	17	77	8	5E+05	0.000299	TOP3A	0.0364294289473684	1
COPD-HTN	ENSG00000196502	16	47	5	5E+05	0.000296	SULT1A1	0.0364294289473684	1
COPD-HTN	ENSG00000153815	16	1031	94	5E+05	0.000292	CMIP	0.0363055371621622	1
COPD-HTN	ENSG00000181873	1	16	4	5E+05	0.000291	IBA57	0.0363055371621622	1
COPD-HTN	ENSG00000076685	10	218	16	5E+05	0.000282	NT5C2	0.0355504393150685	1
COPD-HTN	ENSG00000143761	1	25	6	5E+05	0.000279	ARF1	0.0354828893793103	1

COPD-HTN	ENSG00000203896	20	8	2	5E+05	0.000272	LIME1	0.0348191689583333	1
COPD-HTN	ENSG00000170606	5	92	6	5E+05	0.000272	HSPA4	0.0348191689583333	1
COPD-HTN	ENSG00000175029	10	639	60	5E+05	0.000271	CTBP2	0.0348191689583333	1
COPD-HTN	ENSG00000176994	17	33	5	5E+05	0.000271	SMCR8	0.0348191689583333	1
COPD-HTN	ENSG00000272617	16	12	3	5E+05	0.000262	RP11-343C2.10	0.0344894596428571	1
COPD-HTN	ENSG00000120324	5	4	2	5E+05	0.000259	PCDHB10	0.0343888169784173	1
COPD-HTN	ENSG00000180592	10	7	2	5E+05	0.000257	SKIDA1	0.0343414804347826	1
COPD-HTN	ENSG00000169783	15	576	34	5E+05	0.000253	LINGO1	0.0340714495620438	1
COPD-HTN	ENSG00000198700	1	82	13	5E+05	0.000253	IPO9	0.0340714495620438	1
COPD-HTN	ENSG00000111249	12	334	27	5E+05	0.000248	CUX2	0.0338402571851852	1
COPD-HTN	ENSG00000154319	8	253	20	5E+05	0.000246	FAM167A	0.0338402571851852	1
COPD-HTN	ENSG00000186998	22	171	27	5E+05	0.000234	EMID1	0.0323783267669173	1
COPD-HTN	ENSG00000255524	16	3	2	5E+05	0.000233	NPIP8	0.0323783267669173	1
COPD-HTN	ENSG00000178149	3	4	2	5E+05	0.000214	DALRD3	0.0301428798473282	1
COPD-HTN	ENSG00000101246	20	14	2	5E+05	0.000214	ARFRP1	0.0301428798473282	1
COPD-HTN	ENSG00000166165	14	5	2	5E+05	0.000211	CKB	0.0301428798473282	1
COPD-HTN	ENSG00000117971	15	153	20	5E+05	0.000206	CHRN4	0.02972609265625	1
COPD-HTN	ENSG00000198198	1	83	7	5E+05	0.000198	SZT2	0.0287801540944882	1
COPD-HTN	ENSG00000156931	3	413	22	5E+05	0.000197	VPS8	0.0287801540944882	1
COPD-HTN	ENSG00000177710	8	8	2	5E+05	0.000189	SLC35G5	0.027853	1
COPD-HTN	ENSG00000205089	5	6	2	5E+05	0.000185	CCNI2	0.0275365235483871	1
COPD-HTN	ENSG00000145020	3	8	2	5E+05	0.00017	AMT	0.0254824985365854	1
COPD-HTN	ENSG00000187555	16	178	17	5E+05	0.000166	USP7	0.0250839890163934	1
COPD-HTN	ENSG00000103510	16	22	4	5E+05	0.000147	KAT8	0.0223785760330578	1
COPD-HTN	ENSG00000117400	1	13	3	5E+05	0.000146	MPL	0.022354621	1
COPD-HTN	ENSG00000178952	16	7	2	5E+05	0.000143	TUFM	0.0221196	1
COPD-HTN	ENSG00000183763	3	35	5	5E+05	0.000143	TRAIP	0.0221196	1
COPD-HTN	ENSG00000143816	1	79	9	5E+05	0.000137	WNT9A	0.0216091476923077	1
COPD-HTN	ENSG00000196296	16	24	4	5E+05	0.000137	ATP2A1	0.0216091476923077	1
COPD-HTN	ENSG00000178188	16	41	3	5E+05	0.000125	SH2B1	0.0201128073043478	1
COPD-HTN	ENSG00000132535	17	36	7	5E+05	0.000123	DLG4	0.0198235596491228	1
COPD-HTN	ENSG00000213658	16	6	3	5E+05	0.000118	LAT	0.0191915261061947	1
COPD-HTN	ENSG00000168488	16	26	2	5E+05	0.000115	ATXN2L	0.0189777609821429	1

COPD-HTN	ENSG00000108342	17	11	3	5E+05	0.000114	CSF3	0.0189777609821429	1
COPD-HTN	ENSG00000104643	8	102	8	5E+05	0.000113	MTMR9	0.0189022036363636	1
COPD-HTN	ENSG00000184730	16	11	3	5E+05	0.000112	APOBR	0.0188946705504587	1
COPD-HTN	ENSG00000170500	2	160	9	5E+05	0.000109	LONRF2	0.0185524731481481	1
COPD-HTN	ENSG00000236699	4	374	31	5E+05	0.000108	ARHGEF38	0.0185524731481481	1
COPD-HTN	ENSG00000168807	16	220	21	5E+05	0.000106	SNTB2	0.0184747350943396	1
COPD-HTN	ENSG00000125347	5	36	2	5E+05	0.000105	IRF1	0.0184681104761905	1
COPD-HTN	ENSG00000177548	16	30	7	5E+05	0.000101	RABEP2	0.0179650853846154	1
COPD-HTN	ENSG00000176476	16	77	9	5E+05	9.6188e-05	CCDC101	0.0172139165436893	1
COPD-HTN	ENSG00000172037	3	10	6	5E+05	8.5042e-05	LAMB2	0.0153684233921569	1
COPD-HTN	ENSG00000164076	3	15	3	5E+05	8.1148e-05	CAMKV	0.0148099117227723	1
COPD-HTN	ENSG00000143774	1	12	4	5E+05	8.0757e-05	GUK1	0.0148099117227723	1
COPD-HTN	ENSG00000173145	10	92	9	5E+05	8.0324e-05	NOC3L	0.0148099117227723	1
COPD-HTN	ENSG00000157884	2	128	16	5E+05	7.9515e-05	CIB4	0.0148099117227723	1
COPD-HTN	ENSG00000198835	1	12	4	5E+05	7.1916e-05	GJC2	0.0136662642061856	1
COPD-HTN	ENSG00000170291	17	12	3	5E+05	7.0872e-05	ELP5	0.013608162	1
COPD-HTN	ENSG00000067560	3	79	8	5E+05	6.992e-05	RHOA	0.013566688	1
COPD-HTN	ENSG00000164038	4	72	16	5E+05	6.7226e-05	SLC9B2	0.0131827325319149	1
COPD-HTN	ENSG00000176095	3	82	8	5E+05	6.693e-05	IP6K1	0.0131827325319149	1
COPD-HTN	ENSG00000138640	4	1106	43	5E+05	6.3502e-05	FAM13A	0.0127231778913044	1
COPD-HTN	ENSG00000117597	1	97	10	5E+05	6.3029e-05	DIEXF	0.0127231778913044	1
COPD-HTN	ENSG00000164068	3	44	7	5E+05	6.2126e-05	RNF123	0.0127231778913044	1
COPD-HTN	ENSG00000175826	17	5	2	5E+05	5.8871e-05	CTDNBP1	0.0121929117191011	1
COPD-HTN	ENSG00000132612	16	34	7	5E+05	5.4975e-05	VPS4A	0.0115153883522727	1
COPD-HTN	ENSG00000169682	16	12	4	5E+05	4.8071e-05	SPNS1	0.0101849740574713	0.886092743
COPD-HTN	ENSG00000262302	17	21	3	5E+05	4.5951e-05	RP1-4G17.5	0.00984900910465116	0.847014783
COPD-HTN	ENSG00000109332	4	145	7	5E+05	4.5834e-05	UBE2D3	0.00984900910465116	0.844858122
COPD-HTN	ENSG00000188603	16	28	5	5E+05	4.4883e-05	CLN3	0.00984900910465116	0.827328339
COPD-HTN	ENSG00000197165	16	18	4	5E+05	4.3956e-05	SULT1A2	0.00976193913253012	0.810240948
COPD-HTN	ENSG00000181885	17	6	3	5E+05	4.3049e-05	CLDN7	0.00967710020731707	0.793522217
COPD-HTN	ENSG00000164270	5	467	33	5E+05	3.8994e-05	HTR4	0.00887378274074074	0.718776402
COPD-HTN	ENSG00000101204	20	173	31	5E+05	3.87e-05	CHRNA4	0.00887378274074074	0.7133571
COPD-HTN	ENSG00000163798	2	23	8	5E+05	3.739e-05	SLC4A1AP	0.00872417556962025	0.68920987

COPD-HTN	ENSG00000167085	17	24	8	5E+05	3.5687e-05	PHB	0.00843357014102564	0.657818471
COPD-HTN	ENSG00000261832	16	23	4	5E+05	3.5637e-05	CLN3	0.00843357014102564	0.656896821
COPD-HTN	ENSG00000145354	4	33	4	5E+05	3.1853e-05	CISD2	0.00772560985526316	0.587146349
COPD-HTN	ENSG00000173402	3	97	10	5E+05	3.0442e-05	DAG1	0.00748183181333333	0.561137386
COPD-HTN	ENSG00000166822	16	80	10	5E+05	2.5783e-05	TMEM170A	0.00642240593243243	0.475258039
COPD-HTN	ENSG00000198373	16	422	24	5E+05	2.4949e-05	WWP2	0.00629979338356165	0.459884917
COPD-HTN	ENSG00000132604	16	82	14	5E+05	2.4517e-05	TERF2	0.00627669251388889	0.451921861
COPD-HTN	ENSG00000080644	15	34	4	5E+05	2.3454e-05	CHRNA3	0.00608912087323944	0.432327582
COPD-HTN	ENSG00000197183	20	229	22	5E+05	2.0296e-05	C20orf112	0.00534451668571429	0.374116168
COPD-HTN	ENSG00000172818	11	23	6	5E+05	2.0186e-05	OVOL1	0.00534451668571429	0.372088538
COPD-HTN	ENSG00000164037	4	229	8	5E+05	2.0067e-05	SLC9B1	0.00534451668571429	0.369895011
COPD-HTN	ENSG00000109736	4	7	3	5E+05	1.9112e-05	MFSD10	0.00525808202985075	0.352291496
COPD-HTN	ENSG00000169684	15	34	4	5E+05	1.8066e-05	CHRNA5	0.00504561481818182	0.333010578
COPD-HTN	ENSG00000145029	3	7	4	5E+05	1.7996e-05	NICN1	0.00504561481818182	0.331720268
COPD-HTN	ENSG00000145022	3	6	2	5E+05	1.7376e-05	TCTA	0.005000456	0.320291808
COPD-HTN	ENSG00000164062	3	7	2	5E+05	1.6281e-05	APEH	0.00476361385714286	0.300107673
COPD-HTN	ENSG00000101346	20	33	5	5E+05	1.4273e-05	POFUT1	0.00424345498387097	0.263094209
COPD-HTN	ENSG00000205884	8	4	2	5E+05	1.1426e-05	DEFB136	0.00345271242622951	0.210615458
COPD-HTN	ENSG00000205334	2	13	4	5E+05	1.0814e-05	AC074091.13	0.00332224103333333	0.199334462
COPD-HTN	ENSG00000040633	17	4	2	5E+05	1.0587e-05	PHF23	0.00330763001694915	0.195150171
COPD-HTN	ENSG00000260914	16	33	5	5E+05	8.8901e-06	RP11-343C2.10	0.00282536574655172	0.163871213
COPD-HTN	ENSG00000255098	8	3	2	5E+05	7.9969e-06	RP11-481A20	0.00258608522280702	0.147406858
COPD-HTN	ENSG00000104626	8	400	25	5E+05	7.6454e-06	ERI1	0.002516565	0.140927658
COPD-HTN	ENSG00000136770	10	331	16	5E+05	6.0281e-06	DNAJC1	0.00202029031454545	0.111115967
COPD-HTN	ENSG00000204682	10	7	3	5E+05	6.0167e-06	CASC10	0.00202029031454545	0.110905831
COPD-HTN	ENSG00000261717	16	184	11	5E+05	5.8507e-06	RP11-77K12.10	0.00202029031454545	0.107845953
COPD-HTN	ENSG00000138193	10	552	43	5E+05	5.5829e-06	PLCE1	0.00197903068653846	0.102909596
COPD-HTN	ENSG00000181856	17	6	2	5E+05	5.5329e-06	SLC2A4	0.00197903068653846	0.101987946
COPD-HTN	ENSG00000175206	1	11	4	5E+05	4.89e-06	NPPA	0.001802747	0.09013737
COPD-HTN	ENSG00000136574	8	241	34	5E+05	4.857e-06	GATA4	0.001802747	0.089529081
COPD-HTN	ENSG00000126003	20	10	2	5E+05	4.6185e-06	PLAGL2	0.00177360021875	0.085132811
COPD-HTN	ENSG00000233276	3	2	1	5E+05	4.5515e-06	GPX1	0.00177360021875	0.0838978
COPD-HTN	ENSG00000142599	1	598	19	5E+05	4.4095e-06	RERE	0.00176696333695652	0.081280314

COPD-HTN	ENSG00000153774	16	451	15	5E+05	3.3769e-06	CFDP1	0.0013832532822222	0.062246398
COPD-HTN	ENSG00000164061	3	148	13	5E+05	3.1492e-06	BSN	0.00131930008181818	0.058049204
COPD-HTN	ENSG00000075413	14	254	9	5E+05	2.6178e-06	MARK3	0.00112218389302326	0.048253907
COPD-HTN	ENSG00000173273	8	726	17	5E+05	2.1404e-06	TNKS	0.000939380790476191	0.039453993
COPD-HTN	ENSG00000004975	17	11	3	5E+05	2.093e-06	DVL2	0.000939380790476191	0.038580269
COPD-HTN	ENSG00000087269	4	53	8	5E+05	1.9032e-06	NOP14	0.000877042	0.035081686
COPD-HTN	ENSG00000215346	8	11	3	5E+05	1.8319e-06	AF131215.5	0.000865831094871795	0.033767413
COPD-HTN	ENSG00000154342	1	87	10	5E+05	1.8181e-06	WNT3A	0.000865831094871795	0.033513037
COPD-HTN	ENSG00000205882	8	14	4	5E+05	1.7815e-06	DEFB134	0.000865831094871795	0.03283839
COPD-HTN	ENSG00000171303	2	74	11	5E+05	1.3834e-06	KCNK3	0.000708339227777778	0.025500212
COPD-HTN	ENSG00000166166	14	18	3	5E+05	1.3176e-06	TRMT61A	0.000693923451428571	0.024287321
COPD-HTN	ENSG00000173531	3	6	3	5E+05	1.3125e-06	MST1	0.000693923451428571	0.024193313
COPD-HTN	ENSG00000125388	4	224	17	5E+05	1.2064e-06	GRK4	0.000673865793939394	0.022237571
COPD-HTN	ENSG00000136573	8	241	23	5E+05	8.1673e-07	BLK	0.0004704620028125	0.015054784
COPD-HTN	ENSG00000088808	14	226	11	5E+05	7.7083e-07	PPP1R13B	0.000458345464193548	0.014208709
COPD-HTN	ENSG00000254093	8	404	19	5E+05	5.858e-07	PINX1	0.000359935046666667	0.010798051
COPD-HTN	ENSG00000196782	4	985	104	5E+05	5.507e-07	MAML3	0.000350036313793103	0.010151053
COPD-HTN	ENSG00000136379	15	224	25	5E+05	5.2782e-07	ABHD17C	0.000347475216428571	0.009729306
COPD-HTN	ENSG00000147324	8	431	27	5E+05	4.6574e-07	MFHAS1	0.000317962422962963	0.008584985
COPD-HTN	ENSG00000175806	8	1486	61	5E+05	4.2683e-07	MSRA	0.000302606053461535	0.007867757
COPD-HTN	ENSG00000262039	17	253	36	5E+05	3.8572e-07	RP11-81K2.1	0.0002843990704	0.007109977
COPD-HTN	ENSG00000256500	14	260	15	5E+05	2.7563e-07	RP11-73M18	0.000211695324583333	0.005080688
COPD-HTN	ENSG00000087274	4	124	15	5E+05	1.9819e-07	ADD1	0.000158836359565217	0.003653236
COPD-HTN	ENSG00000126214	14	297	16	5E+05	1.7059e-07	KLC1	0.000142931157727273	0.003144485
COPD-HTN	ENSG00000183638	8	304	38	5E+05	1.4333e-07	RP1L1	0.000125809613809524	0.002642002
COPD-HTN	ENSG00000171056	8	559	19	5E+05	1.2864e-07	SOX7	0.000118561	0.002371221
COPD-HTN	ENSG00000134245	1	147	28	5E+05	1.0906e-07	WNT2B	0.000105805	0.002010303
COPD-HTN	ENSG00000177000	1	78	11	5E+05	1.0144e-07	MTHFR	0.000103880195555556	0.001869844
COPD-HTN	ENSG00000258724	8	553	19	5E+05	9.2425e-08	SOX7	0.000100215883823525	0.00170367
COPD-HTN	ENSG00000078403	10	154	23	5E+05	8.8952e-08	MLLT10	0.000100215883823525	0.001639652
COPD-HTN	ENSG00000072682	5	235	21	5E+05	3.222e-08	P4HA2	3.9594084e-05	0.000593911
COPD-HTN	ENSG00000011021	1	184	14	5E+05	3.1641e-08	CLCN6	3.9594084e-05	0.000583239
COPD-HTN	ENSG00000131435	5	41	7	5E+05	2.8037e-08	PDLIM4	3.9594084e-05	0.000516806

COPD-HTN	ENSG00000100711	14	40	9	5E+05	2.6904e-08	ZFYVE21	3.9594084e-05	0.000495921
COPD-HTN	ENSG00000184608	8	280	23	5E+05	6.2746e-09	C8orf12	1.05145183454545e-05	0.0001156597018
COPD-HTN	ENSG00000197536	5	179	17	5E+05	3.386e-09	C5orf56	6.2414138e-06	6.2414138e-05
COPD-HTN	ENSG00000198740	17	141	12	5E+05	3.2437e-09	ZNF652	6.2414138e-06	5.97911221e-05
COPD-HTN	ENSG00000224997	14	1	1	5E+05	2.5183e-09	AL049840.1	5.8024779875e-06	4.64198239e-05
COPD-HTN	ENSG00000197208	5	117	10	5E+05	2.3995e-09	SLC22A4	5.8024779875e-06	4.42299835e-05
COPD-HTN	ENSG00000256053	14	94	11	5E+05	2.3609e-09	APOPT1	5.8024779875e-06	4.35184697e-05
COPD-HTN	ENSG00000166170	14	9	2	5E+05	1.445e-09	BAG5	5.327137e-06	2.6635685e-05
COPD-HTN	ENSG00000197375	5	82	8	5E+05	9.5719e-10	SLC22A5	4.4109708175e-06	1.764388327e-05
COPD-HTN	ENSG00000171044	8	969	32	5E+05	5.0901e-10	XKR6	3.12752711e-06	9.38258133e-06
COPD-HTN	ENSG00000126215	14	27	6	5E+05	2.5895e-10	XRCC3	2.386612675e-06	4.77322535e-06
COPD-HTN	ENSG00000127663	19	518	32	5E+05	1.6228e-10	KDM4B	2.386612675e-06	2.99130724e-06

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**Table S2. MAGMA gene enrichment: significantly enriched genes associated with COPD and cardiovascular diseases (P<sub>fd</sub><0.05)**

Trait pair	GENE	CHR	START	STOP	NSNPS	NPARAM	N	P	SYMBOL	P <sub>fd</sub>	P <sub>bon</sub>
COPD-HTN	ENSG00000205334	2	27928653	27938599	13	4	5E+05	1.0814e-05	AC074091	0.003322241033	0.199334462
COPD-HTN	ENSG00000040633	17	7138347	7143041	4	2	5E+05	1.0587e-05	PHF23	0.003307630016	0.195150171
COPD-HTN	ENSG00000260914	16	69333585	69354614	33	5	5E+05	8.8901e-06	RP11-343C	0.002825365746	0.163871213
COPD-HTN	ENSG00000255098	8	11870545	11873043	3	2	5E+05	7.9969e-06	RP11-481A	0.002586085222	0.147406858
COPD-HTN	ENSG00000104626	8	8859657	8974256	400	25	5E+05	7.6454e-06	ERI1	0.002516565	0.140927658
COPD-HTN	ENSG00000136770	10	22045466	22292698	331	16	5E+05	6.0281e-06	DNAJC1	0.002020290314	0.111115967
COPD-HTN	ENSG00000204682	10	21781587	21786191	7	3	5E+05	6.0167e-06	CASC10	0.002020290314	0.110905831
COPD-HTN	ENSG00000261717	16	75446582	75498604	184	11	5E+05	5.8507e-06	RP11-77K1	0.002020290314	0.107845953
COPD-HTN	ENSG00000138193	10	95753746	96092580	552	43	5E+05	5.5829e-06	PLCE1	0.001979030686	0.102909596
COPD-HTN	ENSG00000181856	17	7184986	7191576	6	2	5E+05	5.5329e-06	SLC2A4	0.001979030686	0.101987946
COPD-HTN	ENSG00000175206	1	11905766	11908402	11	4	5E+05	4.89e-06	NPPA	0.001802747	0.09013737
COPD-HTN	ENSG00000136574	8	11534468	11617511	241	34	5E+05	4.857e-06	GATA4	0.001802747	0.089529081
COPD-HTN	ENSG00000126003	20	30780306	30795594	10	2	5E+05	4.6185e-06	PLAGL2	0.001773600218	0.085132811
COPD-HTN	ENSG00000233276	3	49394609	49396033	2	1	5E+05	4.5515e-06	GPX1	0.001773600218	0.0838978
COPD-HTN	ENSG00000142599	1	8412457	8877702	598	19	5E+05	4.4095e-06	RERE	0.001766963336	0.081280314
COPD-HTN	ENSG00000153774	16	75327596	75467383	451	15	5E+05	3.3769e-06	CFDP1	0.001383253282	0.062246398
COPD-HTN	ENSG00000164061	3	49591922	49708978	148	13	5E+05	3.1492e-06	BSN	0.001319300081	0.058049204
COPD-HTN	ENSG00000075413	14	1.04E+08	103970168	254	9	5E+05	2.6178e-06	MARK3	0.001122183893	0.048253907
COPD-HTN	ENSG00000173273	8	9413424	9639856	726	17	5E+05	2.1404e-06	TNKS	0.000939380790	0.039453993
COPD-HTN	ENSG00000004975	17	7128660	7137864	11	3	5E+05	2.093e-06	DVL2	0.000939380790	0.038580269
COPD-HTN	ENSG00000087269	4	2939660	2965112	53	8	5E+05	1.9032e-06	NOP14	0.000877042	0.035081686
COPD-HTN	ENSG00000215346	8	10983980	10987745	11	3	5E+05	1.8319e-06	AF131215	0.000865831094	0.033767413
COPD-HTN	ENSG00000154342	1	2.28E+08	228248961	87	10	5E+05	1.8181e-06	WNT3A	0.000865831094	0.033513037
COPD-HTN	ENSG00000205882	8	11850692	11853821	14	4	5E+05	1.7815e-06	DEFB134	0.000865831094	0.03283839
COPD-HTN	ENSG00000171303	2	26915619	26956288	74	11	5E+05	1.3834e-06	KCNK3	0.000708339227	0.025500212
COPD-HTN	ENSG00000166166	14	1.04E+08	104003410	18	3	5E+05	1.3176e-06	TRMT61A	0.000693923451	0.024287321
COPD-HTN	ENSG00000173531	3	49721380	49726934	6	3	5E+05	1.3125e-06	MST1	0.000693923451	0.024193313
COPD-HTN	ENSG00000125388	4	2965335	3042474	224	17	5E+05	1.2064e-06	GRK4	0.000673865793	0.022237571

COPD-HTN	ENSG00000136573	8	11351510	11422113	241	23	5E+05	8.1673e-07	BLK	0.000470462002	0.015054784
COPD-HTN	ENSG00000088808	14	1.04E+08	104313927	226	11	5E+05	7.7083e-07	PPP1R13B	0.000458345464	0.014208709
COPD-HTN	ENSG00000254093	8	10622473	10697394	404	19	5E+05	5.858e-07	PINX1	0.000359935046	0.010798051
COPD-HTN	ENSG00000196782	4	1.41E+08	141075338	985	104	5E+05	5.507e-07	MAML3	0.000350036313	0.010151053
COPD-HTN	ENSG00000136379	15	80972025	81047962	224	25	5E+05	5.2782e-07	ABHD17C	0.000347475216	0.009729306
COPD-HTN	ENSG00000147324	8	8640864	8751155	431	27	5E+05	4.6574e-07	MFHAS1	0.000317962422	0.008584985
COPD-HTN	ENSG00000175806	8	9911778	10286401	1486	61	5E+05	4.2683e-07	MSRA	0.000302606053	0.007867757
COPD-HTN	ENSG00000262039	17	47448102	47554350	253	36	5E+05	3.8572e-07	RP11-81K20	0.000284399070	0.007109977
COPD-HTN	ENSG00000256500	14	1.04E+08	104152261	260	15	5E+05	2.7563e-07	RP11-73M10	0.000211695324	0.005080688
COPD-HTN	ENSG00000087274	4	2845584	2931803	124	15	5E+05	1.9819e-07	ADD1	0.000158836359	0.003653236
COPD-HTN	ENSG00000126214	14	1.04E+08	104167888	297	16	5E+05	1.7059e-07	KLC1	0.000142931157	0.003144485
COPD-HTN	ENSG00000183638	8	10463859	10569697	304	38	5E+05	1.4333e-07	RP1L1	0.000125809613	0.002642002
COPD-HTN	ENSG00000171056	8	10581278	10697357	559	19	5E+05	1.2864e-07	SOX7	0.000118561	0.002371221
COPD-HTN	ENSG00000134245	1	1.13E+08	113072787	147	28	5E+05	1.0906e-07	WNT2B	0.000105805	0.002010303
COPD-HTN	ENSG00000177000	1	11845780	11866977	78	11	5E+05	1.0144e-07	MTHFR	0.000103880195	0.001869844
COPD-HTN	ENSG00000258724	8	10582909	10697357	553	19	5E+05	9.2425e-08	SOX7	0.000100215883	0.00170367
COPD-HTN	ENSG00000078403	10	21823094	22032559	154	23	5E+05	8.8952e-08	MLLT10	0.000100215883	0.001639652
COPD-HTN	ENSG00000072682	5	1.32E+08	131631008	235	21	5E+05	3.222e-08	P4HA2	3.9594084e-05	0.000593911
COPD-HTN	ENSG00000011021	1	11866207	11903201	184	14	5E+05	3.1641e-08	CLCN6	3.9594084e-05	0.000583239
COPD-HTN	ENSG00000131435	5	1.32E+08	131609147	41	7	5E+05	2.8037e-08	PDLIM4	3.9594084e-05	0.000516806
COPD-HTN	ENSG00000100711	14	1.04E+08	104200005	40	9	5E+05	2.6904e-08	ZFYVE21	3.9594084e-05	0.000495921
COPD-HTN	ENSG00000184608	8	11225911	11296167	280	23	5E+05	6.2746e-09	C8orf12	1.0514518345450	0.0001156597018
COPD-HTN	ENSG00000197536	5	1.32E+08	131811736	179	17	5E+05	3.386e-09	C5orf56	6.2414138e-06	6.2414138e-05
COPD-HTN	ENSG00000198740	17	47366568	47439835	141	12	5E+05	3.2437e-09	ZNF652	6.2414138e-06	5.97911221e-05
COPD-HTN	ENSG00000224997	14	1.04E+08	104179149	1	1	5E+05	2.5183e-09	AL049840	5.8024779875e-14	6.4198239e-05
COPD-HTN	ENSG00000197208	5	1.32E+08	131679899	117	10	5E+05	2.3995e-09	SLC22A4	5.8024779875e-14	4.2299835e-05
COPD-HTN	ENSG00000256053	14	1.04E+08	104073860	94	11	5E+05	2.3609e-09	APOPT1	5.8024779875e-14	3.5184697e-05
COPD-HTN	ENSG00000166170	14	1.04E+08	104029168	9	2	5E+05	1.445e-09	BAG5	5.327137e-06	2.6635685e-05
COPD-HTN	ENSG00000197375	5	1.32E+08	131731306	82	8	5E+05	9.5719e-10	SLC22A5	4.4109708175e-11	7.64388327e-05
COPD-HTN	ENSG00000171044	8	10753555	11058875	969	32	5E+05	5.0901e-10	XKR6	3.12752711e-06	9.38258133e-06

COPD-HTN	ENSG00000126215	14	1.04E+08	104181841	27	6	5E+05	2.5895e-10	XRCC3	2.386612675e-04	4.77322535e-06
COPD-HTN	ENSG00000127663	19	4969125	5153606	518	32	5E+05	1.6228e-10	KDM4B	2.386612675e-04	2.99130724e-06
COPD-CHD	ENSG00000120693	13	37418968	37494902	176	23	4E+05	0.00010255	SMAD9	0.04625005	1
COPD-CHD	ENSG00000272617	16	69362547	69368774	13	4	4E+05	0.00010172	RP11-343C	0.04625005	1
COPD-CHD	ENSG00000166822	16	75476952	75499395	92	9	4E+05	9.9684e-05	TMEM170	0.04625005	1
COPD-CHD	ENSG00000213380	16	69354043	69373570	47	7	4E+05	9.1154e-05	COG8	0.044356016157	1
COPD-CHD	ENSG00000132604	16	69389464	69442474	84	14	4E+05	8.8066e-05	TERF2	0.044011578540	1
COPD-CHD	ENSG00000197375	5	1.32E+08	131731306	84	8	4E+05	8.4584e-05	SLC22A5	0.043445631777	1
COPD-CHD	ENSG00000146477	6	1.61E+08	160876014	214	16	4E+05	8.3719e-05	SLC22A3	0.043445631777	1
COPD-CHD	ENSG00000138663	4	83955600	83996971	49	9	4E+05	7.8234e-05	COPS4	0.042547791	1
COPD-CHD	ENSG00000117400	1	43803478	43818443	13	3	4E+05	7.0475e-05	MPL	0.039489491666	1
COPD-CHD	ENSG00000261717	16	75446582	75498604	204	11	4E+05	6.9525e-05	RP11-77K1	0.039489491666	1
COPD-CHD	ENSG00000066056	1	43766664	43788779	31	4	4E+05	6.3897e-05	TIE1	0.038113529903	1
COPD-CHD	ENSG00000167081	9	1.29E+08	128729656	247	17	4E+05	5.5589e-05	PBX3	0.034263206633	1
COPD-CHD	ENSG00000132603	16	69373333	69377014	14	5	4E+05	4.3668e-05	NIP7	0.027843620275	0.807464988
COPD-CHD	ENSG00000259900	16	69369179	69385633	36	8	4E+05	3.0813e-05	RP11-343C	0.020348685107	0.569763183
COPD-CHD	ENSG00000204775	8	1.45E+08	145331153	1	1	4E+05	3.0266e-05	KM-PA-2	0.020348685107	0.559648606
COPD-CHD	ENSG00000058335	15	79252289	79383115	337	51	4E+05	2.9696e-05	RASGRF1	0.020348685107	0.549108736
COPD-CHD	ENSG00000256053	14	1.04E+08	104073860	108	11	4E+05	2.7492e-05	APOPT1	0.020334183	0.508354572
COPD-CHD	ENSG00000260371	16	69368994	69390209	39	10	4E+05	2.5834e-05	RP11-343C	0.019904020583	0.477696494
COPD-CHD	ENSG00000157315	16	69377151	69385712	19	7	4E+05	2.4691e-05	TMED6	0.019850490478	0.456561281
COPD-CHD	ENSG00000262039	17	47448102	47554350	253	36	4E+05	2.1939e-05	RP11-81K2	0.01843973	0.405674049
COPD-CHD	ENSG00000189308	4	83831126	83934079	209	9	4E+05	2.1573e-05	LIN54	0.01843973	0.398906343
COPD-CHD	ENSG00000169684	15	78857862	78887611	37	5	4E+05	2.0476e-05	CHRNA5	0.01843973	0.378621716
COPD-CHD	ENSG00000197536	5	1.32E+08	131811736	185	18	4E+05	1.44e-05	C5orf56	0.014014231578	0.2662704
COPD-CHD	ENSG00000080644	15	78885394	78913637	44	4	4E+05	1.3801e-05	CHRNA3	0.014014231578	0.255194291
COPD-CHD	ENSG00000168152	4	83821837	83841122	37	4	4E+05	1.3254e-05	THAP9	0.014014231578	0.245079714
COPD-CHD	ENSG00000168802	16	69151913	69166487	29	10	4E+05	9.4108e-06	CHTF8	0.010875944	0.174015103
COPD-CHD	ENSG00000136378	15	79051545	79103773	104	15	4E+05	7.8011e-06	ADAMTS7	0.009616676006	0.14425014
COPD-CHD	ENSG00000166170	14	1.04E+08	104029168	10	2	4E+05	6.6018e-06	BAG5	0.008719563128	0.122073884

COPD-CHD	ENSG00000101204	20	61975420	62009753	188	33	4E+05	2.5133e-06	CHRNA4	0.003574879253	0.04647343
COPD-CHD	ENSG00000130208	19	45417504	45422606	12	5	4E+05	2.2231e-06	APOC1	0.003425611841	0.041107342
COPD-CHD	ENSG00000168807	16	69221032	69342955	229	21	4E+05	1.5852e-06	SNTB2	0.002664721	0.029311933
COPD-CHD	ENSG00000132612	16	69345259	69358949	37	7	4E+05	1.5684e-06	VPS4A	0.002664721	0.029001284
COPD-CHD	ENSG00000141076	16	69165194	69265033	172	21	4E+05	1.3979e-06	CIRH1A	0.002664721	0.025848569
COPD-CHD	ENSG00000130204	19	45393826	45406946	50	10	4E+05	1.0888e-06	TOMM40	0.002516625	0.020133001
COPD-CHD	ENSG00000260914	16	69333585	69354614	39	6	4E+05	8.4901e-07	RP11-343C	0.002242720558	0.015699044
COPD-CHD	ENSG00000168487	8	22022249	22069839	140	20	4E+05	2.3328e-07	BMP1	0.00071893	0.00431358
COPD-CHD	ENSG00000117971	15	78916461	79020096	174	20	4E+05	4.4206e-08	CHRN4	0.000163482629	0.000817413
COPD-CHD	ENSG00000198740	17	47366568	47439835	154	13	4E+05	4.3905e-08	ZNF652	0.000163482629	0.000811847
COPD-CHD	ENSG00000130203	19	45409011	45412650	5	2	4E+05	6.985e-09	APOE	4.305321166666	0.00012916
COPD-CHD	ENSG00000136381	15	78729773	78793798	63	10	4E+05	5.9374e-09	IREB2	4.305321166666	0.0001097884634
COPD-CHD	ENSG00000185787	15	79102829	79190475	343	16	4E+05	9.3726e-10	MORF4L1	1.733087466e-0:	1.733087466e-05
COPD-HF	ENSG00000148842	10	1.05E+08	104849978	368	18	5E+05	0.00046144	CNNM2	0.048327974545	1
COPD-HF	ENSG00000187492	3	49828165	49837268	14	5	5E+05	0.00045332	CDHR4	0.047748843	1
COPD-HF	ENSG00000102882	16	30125426	30134827	11	4	5E+05	0.00044361	MAPK3	0.046994615689	1
COPD-HF	ENSG00000136709	2	1.28E+08	128568761	228	25	5E+05	0.00042694	WDR33	0.045490086820	1
COPD-HF	ENSG00000157388	3	53528683	53847760	689	67	5E+05	0.00041706	CACNA1D	0.044695738255	1
COPD-HF	ENSG00000115526	2	1.01E+08	101034118	41	6	5E+05	0.00041375	CHST10	0.044600314327	1
COPD-HF	ENSG00000136378	15	79051545	79103773	76	13	5E+05	0.00041155	ADAMTS7	0.044600314327	1
COPD-HF	ENSG00000138785	4	1.07E+08	106817143	427	13	5E+05	0.00040349	INTS12	0.044009060177	1
COPD-HF	ENSG00000101336	20	30639991	30689659	74	9	5E+05	0.00040333	HCK	0.044009060177	1
COPD-HF	ENSG00000258366	20	62289163	62328416	159	18	5E+05	0.00039797	RTEL1	0.043926832395	1
COPD-HF	ENSG00000164078	3	49924435	49941299	20	4	5E+05	0.0003937	MST1R	0.043717301807	1
COPD-HF	ENSG00000061455	5	1.22E+08	122529960	344	25	5E+05	0.00039124	PRDM6	0.043707435878	1
COPD-HF	ENSG00000168152	4	83821837	83841122	33	4	5E+05	0.00038107	THAP9	0.042830873841	1
COPD-HF	ENSG00000138780	4	1.07E+08	106768885	300	11	5E+05	0.00038064	GSTCD	0.042830873841	1
COPD-HF	ENSG00000178201	19	57966542	57967854	2	1	5E+05	0.0003804	VN1R1	0.042830873841	1
COPD-HF	ENSG00000273047	20	62369623	62371751	5	2	5E+05	0.00037196	RP4-583P1	0.042585954534	1
COPD-HF	ENSG00000167397	16	31102163	31107301	7	3	5E+05	0.00035516	VKORC1	0.040916652	1

COPD-HF	ENSG00000153975	6	1.17E+08	116989957	68	9	5E+05	0.00035359	ZUFSP	0.040916652	1
COPD-HF	ENSG00000103507	16	31117428	31124110	6	2	5E+05	0.000327	BCKDK	0.038149310126	1
COPD-HF	ENSG00000066056	1	43766664	43788779	26	3	5E+05	0.00032382	TIE1	0.038018943057	1
COPD-HF	ENSG00000111832	6	1.17E+08	116918838	57	9	5E+05	0.00031962	RWDD1	0.037766381153	1
COPD-HF	ENSG00000026036	20	62290653	62330037	164	19	5E+05	0.00031797	RTEL1-TN	0.037766381153	1
COPD-HF	ENSG00000197479	5	1.41E+08	140582618	6	2	5E+05	0.00030862	PCDHB11	0.036940210779	1
COPD-HF	ENSG00000165995	10	18429606	18830798	1367	101	5E+05	0.00030827	CACNB2	0.036940210779	1
COPD-HF	ENSG00000168769	4	1.06E+08	106200973	233	28	5E+05	0.0003004	TET2	0.036429428947	1
COPD-HF	ENSG00000079385	19	43011456	43065386	41	6	5E+05	0.00029983	CEACAM1	0.036429428947	1
COPD-HF	ENSG00000177302	17	18174742	18218321	77	8	5E+05	0.00029881	TOP3A	0.036429428947	1
COPD-HF	ENSG00000196502	16	28616903	28634946	47	5	5E+05	0.00029601	SULT1A1	0.036429428947	1
COPD-HF	ENSG00000153815	16	81478775	81745367	1031	94	5E+05	0.0002915	CMIP	0.036305537162	1
COPD-HF	ENSG00000181873	1	2.28E+08	228369958	16	4	5E+05	0.00029068	IBA57	0.036305537162	1
COPD-HF	ENSG00000076685	10	1.05E+08	104953056	218	16	5E+05	0.00028158	NT5C2	0.035550439315	1
COPD-HF	ENSG00000143761	1	2.28E+08	228286912	25	6	5E+05	0.00027912	ARF1	0.035482889379	1
COPD-HF	ENSG00000203896	20	62366815	62370456	8	2	5E+05	0.00027201	LIME1	0.034819168958	1
COPD-HF	ENSG00000170606	5	1.32E+08	132442141	92	6	5E+05	0.00027172	HSPA4	0.034819168958	1
COPD-HF	ENSG00000175029	10	1.27E+08	126849739	639	60	5E+05	0.00027095	CTBP2	0.034819168958	1
COPD-HF	ENSG00000176994	17	18218624	18226517	33	5	5E+05	0.00027088	SMCR8	0.034819168958	1
COPD-HF	ENSG00000272617	16	69362547	69368774	12	3	5E+05	0.00026195	RP11-343C	0.034489459642	1
COPD-HF	ENSG00000120324	5	1.41E+08	140575215	4	2	5E+05	0.00025932	PCDHB10	0.034388816978	1
COPD-HF	ENSG00000180592	10	21802407	21814611	7	2	5E+05	0.0002571	SKIDA1	0.034341480434	1
COPD-HF	ENSG00000169783	15	77905369	78113242	576	34	5E+05	0.00025323	LINGO1	0.034071449562	1
COPD-HF	ENSG00000198700	1	2.02E+08	201853422	82	13	5E+05	0.00025308	IPO9	0.034071449562	1
COPD-HF	ENSG00000111249	12	1.11E+08	111788358	334	27	5E+05	0.00024784	CUX2	0.033840257185	1
COPD-HF	ENSG00000154319	8	11278972	11332224	253	20	5E+05	0.00024617	FAM167A	0.033840257185	1
COPD-HF	ENSG00000186998	22	29601840	29655586	171	27	5E+05	0.00023362	EMID1	0.032378326766	1
COPD-HF	ENSG00000255524	16	28648975	28670003	3	2	5E+05	0.00023338	NPIP8	0.032378326766	1
COPD-HF	ENSG00000178149	3	49052921	49059726	4	2	5E+05	0.00021422	DALRD3	0.030142879847	1
COPD-HF	ENSG00000101246	20	62329996	62339377	14	2	5E+05	0.0002139	ARFRP1	0.030142879847	1

COPD-HF	ENSG00000166165	14	1.04E+08	103989448	5	2	5E+05	0.00021118	CKB	0.030142879847	1
COPD-HF	ENSG00000117971	15	78916461	79020096	153	20	5E+05	0.00020642	CHRN4	0.029726092656	1
COPD-HF	ENSG00000198198	1	43855553	43918321	83	7	5E+05	0.00019829	SZT2	0.028780154094	1
COPD-HF	ENSG00000156931	3	1.85E+08	184770402	413	22	5E+05	0.00019738	VPS8	0.028780154094	1
COPD-HF	ENSG00000177710	8	11188397	11189717	8	2	5E+05	0.00018888	SLC35G5	0.027853	1
COPD-HF	ENSG00000205089	5	1.32E+08	132089856	6	2	5E+05	0.00018524	CCNI2	0.027536523548	1
COPD-HF	ENSG00000145020	3	49454211	49460186	8	2	5E+05	0.00017004	AMT	0.025482498536	1
COPD-HF	ENSG00000187555	16	8985951	9058371	178	17	5E+05	0.00016602	USP7	0.025083989016	1
COPD-HF	ENSG00000103510	16	31127075	31142714	22	4	5E+05	0.0001469	KAT8	0.022378576033	1
COPD-HF	ENSG00000117400	1	43803478	43818443	13	3	5E+05	0.00014553	MPL	0.022354621	1
COPD-HF	ENSG00000178952	16	28853732	28857729	7	2	5E+05	0.0001428	TUFM	0.0221196	1
COPD-HF	ENSG00000183763	3	49866034	49894007	35	5	5E+05	0.00014262	TRAIP	0.0221196	1
COPD-HF	ENSG00000143816	1	2.28E+08	228135599	79	9	5E+05	0.00013716	WNT9A	0.021609147692	1
COPD-HF	ENSG00000196296	16	28889726	28915830	24	4	5E+05	0.00013661	ATP2A1	0.021609147692	1
COPD-HF	ENSG00000178188	16	28857921	28885526	41	3	5E+05	0.00012548	SH2B1	0.020112807304	1
COPD-HF	ENSG00000132535	17	7093209	7123021	36	7	5E+05	0.0001226	DLG4	0.019823559649	1
COPD-HF	ENSG00000213658	16	28996147	29002104	6	3	5E+05	0.00011765	LAT	0.019191526106	1
COPD-HF	ENSG00000168488	16	28834356	28848558	26	2	5E+05	0.00011531	ATXN2L	0.018977760982	1
COPD-HF	ENSG00000108342	17	38171614	38174066	11	3	5E+05	0.00011432	CSF3	0.018977760982	1
COPD-HF	ENSG00000104643	8	11141925	11185646	102	8	5E+05	0.0001128	MTMR9	0.018902203636	1
COPD-HF	ENSG00000184730	16	28505970	28510291	11	3	5E+05	0.00011173	APOBR	0.018894670550	1
COPD-HF	ENSG00000170500	2	1.01E+08	100939195	160	9	5E+05	0.0001087	LONRF2	0.018552473148	1
COPD-HF	ENSG00000236699	4	1.06E+08	106629250	374	31	5E+05	0.00010773	ARHGEF3	0.018552473148	1
COPD-HF	ENSG00000168807	16	69221032	69342955	220	21	5E+05	0.00010624	SNTB2	0.018474735094	1
COPD-HF	ENSG00000125347	5	1.32E+08	131826490	36	2	5E+05	0.0001052	IRF1	0.018468110476	1
COPD-HF	ENSG00000177548	16	28915742	28947847	30	7	5E+05	0.00010136	RABEP2	0.017965085384	1
COPD-HF	ENSG00000176476	16	28565236	28603111	77	9	5E+05	9.6188e-05	CCDC101	0.017213916543	1
COPD-HF	ENSG00000172037	3	49158547	49170551	10	6	5E+05	8.5042e-05	LAMB2	0.015368423392	1
COPD-HF	ENSG00000164076	3	49895421	49907655	15	3	5E+05	8.1148e-05	CAMKV	0.014809911722	1
COPD-HF	ENSG00000143774	1	2.28E+08	228336685	12	4	5E+05	8.0757e-05	GUK1	0.014809911722	1

COPD-HF	ENSG00000173145	10	96075004	96122716	92	9	5E+05	8.0324e-05	NOC3L	0.014809911722	1
COPD-HF	ENSG00000157884	2	26804070	26864236	128	16	5E+05	7.9515e-05	CIB4	0.014809911722	1
COPD-HF	ENSG00000198835	1	2.28E+08	228347527	12	4	5E+05	7.1916e-05	GJC2	0.013666264206	1
COPD-HF	ENSG00000170291	17	7154735	7163259	12	3	5E+05	7.0872e-05	ELP5	0.013608162	1
COPD-HF	ENSG00000067560	3	49396578	49450431	79	8	5E+05	6.992e-05	RHOA	0.013566688	1
COPD-HF	ENSG00000164038	4	1.04E+08	104006986	72	16	5E+05	6.7226e-05	SLC9B2	0.013182732531	1
COPD-HF	ENSG00000176095	3	49761727	49823975	82	8	5E+05	6.693e-05	IP6K1	0.013182732531	1
COPD-HF	ENSG00000138640	4	89647106	90032549	1106	43	5E+05	6.3502e-05	FAM13A	0.012723177891	1
COPD-HF	ENSG00000117597	1	2.1E+08	210030910	97	10	5E+05	6.3029e-05	DIEXF	0.012723177891	1
COPD-HF	ENSG00000164068	3	49726932	49758962	44	7	5E+05	6.2126e-05	RNF123	0.012723177891	1
COPD-HF	ENSG00000175826	17	7146910	7155810	5	2	5E+05	5.8871e-05	CTDNEP1	0.012192911719	1
COPD-HF	ENSG00000132612	16	69345259	69358949	34	7	5E+05	5.4975e-05	VPS4A	0.011515388352	1
COPD-HF	ENSG00000169682	16	28985542	28995869	12	4	5E+05	4.8071e-05	SPNS1	0.010184974057	0.886092743
COPD-HF	ENSG00000262302	17	7150148	7165408	21	3	5E+05	4.5951e-05	RP1-4G17.1	0.009849009104	0.847014783
COPD-HF	ENSG00000109332	4	1.04E+08	103790053	145	7	5E+05	4.5834e-05	UBE2D3	0.009849009104	0.844858122
COPD-HF	ENSG00000188603	16	28477983	28506896	28	5	5E+05	4.4883e-05	CLN3	0.009849009104	0.827328339
COPD-HF	ENSG00000197165	16	28603264	28608430	18	4	5E+05	4.3956e-05	SULT1A2	0.009761939132	0.810240948
COPD-HF	ENSG00000181885	17	7163222	7167302	6	3	5E+05	4.3049e-05	CLDN7	0.009677100207	0.793522217
COPD-HF	ENSG00000164270	5	1.48E+08	148056798	467	33	5E+05	3.8994e-05	HTR4	0.008873782740	0.718776402
COPD-HF	ENSG00000101204	20	61975420	62009753	173	31	5E+05	3.87e-05	CHRNA4	0.008873782740	0.7133571
COPD-HF	ENSG00000163798	2	27886338	27917840	23	8	5E+05	3.739e-05	SLC4A1AP0	0.008724175569	0.68920987
COPD-HF	ENSG00000167085	17	47481414	47492246	24	8	5E+05	3.5687e-05	PHB	0.008433570141	0.657818471
COPD-HF	ENSG00000261832	16	28477974	28503333	23	4	5E+05	3.5637e-05	CLN3	0.008433570141	0.656896821
COPD-HF	ENSG00000145354	4	1.04E+08	103810399	33	4	5E+05	3.1853e-05	CISD2	0.007725609855	0.587146349
COPD-HF	ENSG00000173402	3	49506146	49573048	97	10	5E+05	3.0442e-05	DAG1	0.007481831813	0.561137386
COPD-HF	ENSG00000166822	16	75476952	75499395	80	10	5E+05	2.5783e-05	TMEM170	0.006422405932	0.475258039
COPD-HF	ENSG00000198373	16	69796209	69975644	422	24	5E+05	2.4949e-05	WWP2	0.006299793383	0.459884917
COPD-HF	ENSG00000132604	16	69389464	69442474	82	14	5E+05	2.4517e-05	TERF2	0.006276692513	0.451921861
COPD-HF	ENSG00000080644	15	78885394	78913637	34	4	5E+05	2.3454e-05	CHRNA3	0.006089120873	0.432327582
COPD-HF	ENSG00000197183	20	31030862	31172876	229	22	5E+05	2.0296e-05	C2orf112	0.005344516685	0.374116168

COPD-HF	ENSG00000172818	11	65554493	65564690	23	6	5E+05	2.0186e-05	OVOL1	0.005344516685	0.372088538
COPD-HF	ENSG00000164037	4	1.04E+08	103940896	229	8	5E+05	2.0067e-05	SLC9B1	0.005344516685	0.369895011
COPD-HF	ENSG00000109736	4	2932288	2936586	7	3	5E+05	1.9112e-05	MFSD10	0.005258082029	0.352291496
COPD-HF	ENSG00000169684	15	78857862	78887611	34	4	5E+05	1.8066e-05	CHRNA5	0.005045614818	0.333010578
COPD-HF	ENSG00000145029	3	49460379	49466759	7	4	5E+05	1.7996e-05	NICN1	0.005045614818	0.331720268
COPD-HF	ENSG00000145022	3	49449639	49453908	6	2	5E+05	1.7376e-05	TCTA	0.00500456	0.320291808
COPD-HF	ENSG00000164062	3	49711435	49721396	7	2	5E+05	1.6281e-05	APEH	0.004763613857	0.300107673
COPD-HF	ENSG00000101346	20	30795683	30826470	33	5	5E+05	1.4273e-05	POFUT1	0.004243454983	0.263094209
COPD-HF	ENSG00000205884	8	11831446	11832108	4	2	5E+05	1.1426e-05	DEFB136	0.003452712426	0.210615458
COPD-HF	ENSG00000205334	2	27928653	27938599	13	4	5E+05	1.0814e-05	AC074091	0.003322241033	0.199334462
COPD-HF	ENSG00000040633	17	7138347	7143041	4	2	5E+05	1.0587e-05	PHF23	0.003307630016	0.195150171
COPD-HF	ENSG00000260914	16	69333585	69354614	33	5	5E+05	8.8901e-06	RP11-343C	0.002825365746	0.163871213
COPD-HF	ENSG00000255098	8	11870545	11873043	3	2	5E+05	7.9969e-06	RP11-481A	0.002586085222	0.147406858
COPD-HF	ENSG00000104626	8	8859657	8974256	400	25	5E+05	7.6454e-06	ERI1	0.002516565	0.140927658
COPD-HF	ENSG00000136770	10	22045466	22292698	331	16	5E+05	6.0281e-06	DNAJC1	0.002020290314	0.111115967
COPD-HF	ENSG00000204682	10	21781587	21786191	7	3	5E+05	6.0167e-06	CASC10	0.002020290314	0.110905831
COPD-HF	ENSG00000261717	16	75446582	75498604	184	11	5E+05	5.8507e-06	RP11-77K1	0.002020290314	0.107845953
COPD-HF	ENSG00000138193	10	95753746	96092580	552	43	5E+05	5.5829e-06	PLCE1	0.001979030686	0.102909596
COPD-HF	ENSG00000181856	17	7184986	7191576	6	2	5E+05	5.5329e-06	SLC2A4	0.001979030686	0.101987946
COPD-HF	ENSG00000175206	1	11905766	11908402	11	4	5E+05	4.89e-06	NPPA	0.001802747	0.09013737
COPD-HF	ENSG00000136574	8	11534468	11617511	241	34	5E+05	4.857e-06	GATA4	0.001802747	0.089529081
COPD-HF	ENSG00000126003	20	30780306	30795594	10	2	5E+05	4.6185e-06	PLAGL2	0.001773600218	0.085132811
COPD-HF	ENSG00000233276	3	49394609	49396033	2	1	5E+05	4.5515e-06	GPX1	0.001773600218	0.0838978
COPD-HF	ENSG00000142599	1	8412457	8877702	598	19	5E+05	4.4095e-06	RERE	0.001766963336	0.081280314
COPD-HF	ENSG00000153774	16	75327596	75467383	451	15	5E+05	3.3769e-06	CFDP1	0.001383253282	0.062246398
COPD-HF	ENSG00000164061	3	49591922	49708978	148	13	5E+05	3.1492e-06	BSN	0.001319300081	0.058049204
COPD-HF	ENSG00000075413	14	1.04E+08	103970168	254	9	5E+05	2.6178e-06	MARK3	0.001122183893	0.048253907
COPD-HF	ENSG00000173273	8	9413424	9639856	726	17	5E+05	2.1404e-06	TNKS	0.000939380790	0.039453993
COPD-HF	ENSG00000004975	17	7128660	7137864	11	3	5E+05	2.093e-06	DVL2	0.000939380790	0.038580269
COPD-HF	ENSG00000087269	4	2939660	2965112	53	8	5E+05	1.9032e-06	NOP14	0.000877042	0.035081686

COPD-HF	ENSG00000215346	8	10983980	10987745	11	3	5E+05	1.8319e-06	AF131215.4	0.000865831094	0.033767413
COPD-HF	ENSG00000154342	1	2.28E+08	228248961	87	10	5E+05	1.8181e-06	WNT3A	0.000865831094	0.033513037
COPD-HF	ENSG00000205882	8	11850692	11853821	14	4	5E+05	1.7815e-06	DEFB134	0.000865831094	0.03283839
COPD-HF	ENSG00000171303	2	26915619	26956288	74	11	5E+05	1.3834e-06	KCNK3	0.000708339227	0.025500212
COPD-HF	ENSG00000166166	14	1.04E+08	104003410	18	3	5E+05	1.3176e-06	TRMT61A	0.000693923451	0.024287321
COPD-HF	ENSG00000173531	3	49721380	49726934	6	3	5E+05	1.3125e-06	MST1	0.000693923451	0.024193313
COPD-HF	ENSG00000125388	4	2965335	3042474	224	17	5E+05	1.2064e-06	GRK4	0.000673865793	0.022237571
COPD-HF	ENSG00000136573	8	11351510	11422113	241	23	5E+05	8.1673e-07	BLK	0.000470462002	0.015054784
COPD-HF	ENSG00000088808	14	1.04E+08	104313927	226	11	5E+05	7.7083e-07	PPP1R13B	0.000458345464	0.014208709
COPD-HF	ENSG00000254093	8	10622473	10697394	404	19	5E+05	5.858e-07	PINX1	0.000359935046	0.010798051
COPD-HF	ENSG00000196782	4	1.41E+08	141075338	985	104	5E+05	5.507e-07	MAML3	0.000350036313	0.010151053
COPD-HF	ENSG00000136379	15	80972025	81047962	224	25	5E+05	5.2782e-07	ABHD17C	0.000347475216	0.009729306
COPD-HF	ENSG00000147324	8	8640864	8751155	431	27	5E+05	4.6574e-07	MFHAS1	0.000317962422	0.008584985
COPD-HF	ENSG00000175806	8	9911778	10286401	1486	61	5E+05	4.2683e-07	MSRA	0.000302606053	0.007867757
COPD-HF	ENSG00000262039	17	47448102	47554350	253	36	5E+05	3.8572e-07	RP11-81K20	0.000284399070	0.007109977
COPD-HF	ENSG00000256500	14	1.04E+08	104152261	260	15	5E+05	2.7563e-07	RP11-73M10	0.000211695324	0.005080688
COPD-HF	ENSG00000087274	4	2845584	2931803	124	15	5E+05	1.9819e-07	ADD1	0.000158836359	0.003653236
COPD-HF	ENSG00000126214	14	1.04E+08	104167888	297	16	5E+05	1.7059e-07	KLC1	0.000142931157	0.003144485
COPD-HF	ENSG00000183638	8	10463859	10569697	304	38	5E+05	1.4333e-07	RP1L1	0.000125809613	0.002642002
COPD-HF	ENSG00000171056	8	10581278	10697357	559	19	5E+05	1.2864e-07	SOX7	0.000118561	0.002371221
COPD-HF	ENSG00000134245	1	1.13E+08	113072787	147	28	5E+05	1.0906e-07	WNT2B	0.000105805	0.002010303
COPD-HF	ENSG00000177000	1	11845780	11866977	78	11	5E+05	1.0144e-07	MTHFR	0.000103880195	0.001869844
COPD-HF	ENSG00000258724	8	10582909	10697357	553	19	5E+05	9.2425e-08	SOX7	0.000100215883	0.00170367
COPD-HF	ENSG00000078403	10	21823094	22032559	154	23	5E+05	8.8952e-08	MLLT10	0.000100215883	0.001639652
COPD-HF	ENSG00000072682	5	1.32E+08	131631008	235	21	5E+05	3.222e-08	P4HA2	3.9594084e-05	0.000593911
COPD-HF	ENSG00000011021	1	11866207	11903201	184	14	5E+05	3.1641e-08	CLCN6	3.9594084e-05	0.000583239
COPD-HF	ENSG00000131435	5	1.32E+08	131609147	41	7	5E+05	2.8037e-08	PDLIM4	3.9594084e-05	0.000516806
COPD-HF	ENSG00000100711	14	1.04E+08	104200005	40	9	5E+05	2.6904e-08	ZFYVE21	3.9594084e-05	0.000495921
COPD-HF	ENSG00000184608	8	11225911	11296167	280	23	5E+05	6.2746e-09	C8orf12	1.0514518345450	0.0001156597018
COPD-HF	ENSG00000197536	5	1.32E+08	131811736	179	17	5E+05	3.386e-09	C5orf56	6.2414138e-06	6.2414138e-05

COPD-HF	ENSG00000198740	17	47366568	47439835	141	12	5E+05	3.2437e-09	ZNF652	6.2414138e-06	5.97911221e-05
COPD-HF	ENSG00000224997	14	1.04E+08	104179149	1	1	5E+05	2.5183e-09	AL049840	5.8024779875e-14	6.4198239e-05
COPD-HF	ENSG00000197208	5	1.32E+08	131679899	117	10	5E+05	2.3995e-09	SLC22A4	5.8024779875e-14	4.2299835e-05
COPD-HF	ENSG00000256053	14	1.04E+08	104073860	94	11	5E+05	2.3609e-09	APOPT1	5.8024779875e-14	3.5184697e-05
COPD-HF	ENSG00000166170	14	1.04E+08	104029168	9	2	5E+05	1.445e-09	BAG5	5.327137e-06	2.6635685e-05
COPD-HF	ENSG00000197375	5	1.32E+08	131731306	82	8	5E+05	9.5719e-10	SLC22A5	4.4109708175e-11	7.64388327e-05
COPD-HF	ENSG00000171044	8	10753555	11058875	969	32	5E+05	5.0901e-10	XKR6	3.12752711e-06	9.38258133e-06
COPD-HF	ENSG00000126215	14	1.04E+08	104181841	27	6	5E+05	2.5895e-10	XRCC3	2.386612675e-04	4.77322535e-06
COPD-HF	ENSG00000127663	19	4969125	5153606	518	32	5E+05	1.6228e-10	KDM4B	2.386612675e-04	2.99130724e-06

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**Table S3: Results of the tissue-specific analysis**

P	FULL_NAME	Trait_pair	Pbon
3.3452e-09	REACTOME_HIGHLY_CALCIUM_PERMEABLE_NICOTINIC_ACETYLCHOLINE_RECEPTORS	COPD-HTN	5.68717452e-05
1.7113e-08	REACTOME_HIGHLY_CALCIUM_PERMEABLE_POSTSYNAPTIC_NICOTINIC_ACETYLCHOLINE_RECEPTORS	COPD-HTN	0.000290921
3.4034e-08	REACTOME_RUNX3_REGULATES_NOTCH_SIGNALING	COPD-HTN	0.000578544
6.0025e-07	REACTOME_ACETYLCHOLINE_BINDING_AND_DOWNSTREAM_EVENTS	COPD-HTN	0.01020305
9.7544e-07	REACTOME_REGULATION_OF_GENE_EXPRESSION_IN_LATE_STAGE_BRANCHING	COPD-HTN	0.016579554
1.3351e-06	REACTOME_FORMATION_OF_PARAXIAL_MESODERM	COPD-HTN	0.02269136
1.8389e-06	GOCC_ACETYLCHOLINE_GATED_CHANNEL_COMPLEX	COPD-HTN	0.031252106
3.3452e-09	REACTOME_HIGHLY_CALCIUM_PERMEABLE_NICOTINIC_ACETYLCHOLINE_RECEPTORS	COPD-HF	5.68717452e-05
1.7113e-08	REACTOME_HIGHLY_CALCIUM_PERMEABLE_POSTSYNAPTIC_NICOTINIC_ACETYLCHOLINE_RECEPTORS	COPD-HF	0.000290921
3.4034e-08	REACTOME_RUNX3_REGULATES_NOTCH_SIGNALING	COPD-HF	0.000578544
6.0025e-07	REACTOME_ACETYLCHOLINE_BINDING_AND_DOWNSTREAM_EVENTS	COPD-HF	0.01020305
9.7544e-07	REACTOME_REGULATION_OF_GENE_EXPRESSION_IN_LATE_STAGE_BRANCHING	COPD-HF	0.016579554
1.3351e-06	REACTOME_FORMATION_OF_PARAXIAL_MESODERM	COPD-HF	0.02269136
1.8389e-06	GOCC_ACETYLCHOLINE_GATED_CHANNEL_COMPLEX	COPD-HF	0.031252106
1.2016e-08	REACTOME_HIGHLY_CALCIUM_PERMEABLE_NICOTINIC_ACETYLCHOLINE_RECEPTORS	COPD-CHD	0.000204284
3.1493e-08	REACTOME_HIGHLY_CALCIUM_PERMEABLE_POSTSYNAPTIC_NICOTINIC_ACETYLCHOLINE_RECEPTORS	COPD-CHD	0.000535381
4.1221e-08	REACTOME_ACETYLCHOLINE_BINDING_AND_DOWNSTREAM_EVENTS	COPD-CHD	0.000700716
1.4433e-07	GOMF_ACETYLCHOLINE_GATED_MONOATOMIC_CATION_SELECTIVE_CHANNEL_ACTIVITY	COPD-CHD	0.002453321
1.4281e-06	REACTOME_HIGHLY_SODIUM_PERMEABLE_POSTSYNAPTIC_ACETYLCHOLINE_NICOTINIC_RECEPTORS	COPD-CHD	0.024273416
2.46e-06	GOBP_HIGH_DENSITY_LIPOPROTEIN_PARTICLE_CLEARANCE	COPD-CHD	0.04181016

**Table S4. SNP loci associated with COPD–CVD identified by PLACO**

Trait pair	SNP	CHR	BP	effect allele	other allele	eaf	beta	se	pval	T.placo	p.placo
COPD-CHD	rs55882046	1	109819981	T	C	0.0496384	-0.07967	0.0240811	0.0009383	23.211609702	3.74781711151106e-10
COPD-CHD	rs67269326	1	109819615	T	C	0.0496776	-0.079563	0.0240684	0.0009473	23.222989085	(3.70976609520531e-10
COPD-CHD	rs66795935	1	109804883	G	C	0.0500057	-0.082601	0.0239732	0.0005699	23.325319438	(3.38449991669713e-10
COPD-CHD	rs12746961	1	109800321	T	C	0.0500259	-0.08303	0.0239834	0.0005362	23.421384261	3.10517310887081e-10
COPD-CHD	rs12731760	1	109800349	A	G	0.0500261	-0.083059	0.0239832	0.0005338	23.433335767	3.07207623907108e-10
COPD-CHD	rs11577931	1	109820884	G	A	0.0502652	-0.082628	0.0239455	0.0005592	23.953362606	1.92745576841282e-10
COPD-HTN	rs2793353	10	22145688	G	A	0.73124	-0.041947	0.0115978	0.0002983	18.724862335	4.67740723435293e-08
COPD-HTN	rs1243188	10	21908803	C	T	0.28608	0.0348312	0.0114002	0.0022482	18.758664303	(4.54234854659564e-08
COPD-HTN	rs2666764	10	22150711	G	A	0.742032	-0.041598	0.0117399	0.0003951	18.804948388	4.3637264184388e-08
COPD-HTN	rs2941732	10	22231670	G	A	0.742301	-0.041818	0.0117429	0.0003693	18.892934163	4.0433258466079e-08
COPD-HTN	rs2666759	10	22254978	T	A	0.739502	-0.043261	0.0117008	0.0002179	19.021948819	(3.61560781806439e-08
COPD-HTN	rs806774	10	22114427	T	A	0.72898	-0.040246	0.011566	0.0005019	19.022605562	(3.61355070068733e-08
COPD-HTN	rs1243193	10	21981257	G	T	0.288474	0.0356052	0.0113688	0.0017372	19.132546975	(3.2851870598193e-08
COPD-HTN	rs10828266	10	22098701	G	A	0.729466	-0.040549	0.0115581	0.000451	19.140433408	(3.26281450230342e-08
COPD-HTN	rs41275486	1	11890105	A	G	0.0331753	0.0746723	0.0282046	0.0081083	-19.151129	3.23271518337567e-08
COPD-HTN	rs10740991	10	22058137	C	G	0.729935	-0.04121	0.0115796	0.0003725	19.164551233	3.195338087388e-08
COPD-HTN	rs41275482	1	11889213	G	T	0.0333287	0.0764155	0.0281218	0.0065816	-19.387588	2.63389050739599e-08
COPD-HTN	rs7072776	10	22032942	G	A	0.762165	-0.045538	0.0120238	0.0001523	19.499937858	2.3896372424122e-08
COPD-HTN	rs55668272	1	11839033	T	G	0.01666	0.124986	0.0385869	0.0011992	-19.520768	2.34690825881384e-08
COPD-HTN	rs41275506	1	11903015	T	C	0.0333088	0.0760531	0.0281395	0.0068775	-19.556698	2.274995590803e-08
COPD-HTN	rs2666773	10	22123768	T	A	0.729188	-0.041718	0.0115707	0.0003115	19.590223065	(2.20988767121242e-08
COPD-HTN	rs76219075	1	11889568	C	G	0.0333287	0.0764155	0.0281218	0.0065816	-19.605333	2.1811563798316e-08
COPD-HTN	rs41275476	1	11887125	T	C	0.0333287	0.076415	0.0281218	0.0065819	-19.605786	2.18030000883593e-08
COPD-HTN	rs77327024	1	11888923	C	T	0.0333287	0.0764155	0.0281218	0.0065816	-19.60581	2.18025423039951e-08
COPD-HTN	rs75049241	1	11886699	A	G	0.0333287	0.076415	0.0281218	0.0065819	-19.606585	2.17879134018545e-08
COPD-HTN	rs41275474	1	11884619	A	G	0.0333287	0.0764149	0.0281218	0.006582	-19.609518	2.17326501399517e-08
COPD-HTN	rs61764037	1	11904186	G	A	0.0333029	0.0758548	0.0281439	0.0070336	-19.612389	2.16786799278942e-08
COPD-HTN	rs41275496	1	11895966	C	G	0.0333239	0.0763981	0.0281257	0.0066015	-19.618887	2.15570069302345e-08
COPD-HTN	rs77204442	1	11883575	G	C	0.0333287	0.0764139	0.0281218	0.0065826	-19.63475	2.12628649817636e-08
COPD-HTN	rs76823085	1	11883548	T	A	0.0333287	0.0764139	0.0281218	0.0065826	-19.636804	2.12250788237087e-08
COPD-HTN	rs75297615	1	11892757	G	A	0.0333287	0.0764168	0.0281218	0.0065807	-19.650423	2.09762132916929e-08
COPD-HTN	rs13306560	1	11866183	T	C	0.0333269	0.0765709	0.0281227	0.0064743	-19.651754	2.09520358785059e-08
COPD-HTN	rs111334345	1	11866442	A	G	0.016685	0.125361	0.0385745	0.0011547	-19.652483	2.09388146624037e-08

COPD-HTN	rs111293470	1	11895141	A	G	0.0166874	0.124929	0.0385731	0.0012005	-19.653445	2.09213817987289e-08
COPD-HTN	rs75545998	1	11891955	T	C	0.0333287	0.0764168	0.0281218	0.0065807	-19.6539	2.09131436087717e-08
COPD-HTN	rs112140974	1	11891331	G	A	0.0333287	0.0764157	0.0281218	0.0065814	-19.654737	2.08979762582969e-08
COPD-HTN	rs76033082	1	11891557	A	G	0.0333287	0.0764157	0.0281218	0.0065814	-19.654737	2.08979762582969e-08
COPD-HTN	rs79296154	1	11882486	A	G	0.0333287	0.0764139	0.0281218	0.0065826	-19.658496	2.08300678361147e-08
COPD-HTN	rs78366115	1	11879468	T	C	0.0333268	0.076558	0.0281228	0.0064834	-19.6946	2.01888423159527e-08
COPD-HTN	rs76148073	1	11879066	G	C	0.0333268	0.076558	0.0281228	0.0064834	-19.694787	2.01855699523368e-08
COPD-HTN	rs74983098	1	11878226	A	G	0.0333268	0.076558	0.0281228	0.0064834	-19.696523	2.01552392728775e-08
COPD-HTN	rs79171214	1	11879103	C	T	0.0333268	0.076558	0.0281228	0.0064834	-19.696767	2.01509917988735e-08
COPD-HTN	rs79904915	1	11877979	C	A	0.0333268	0.076558	0.0281228	0.0064834	-19.696949	2.0147803125764e-08
COPD-HTN	rs74771026	1	11893830	A	T	0.0333286	0.0764188	0.0281218	0.0065792	-19.697218	2.01431090931285e-08
COPD-HTN	rs78642329	1	11877646	A	G	0.0333268	0.076558	0.0281228	0.0064834	-19.697563	2.01371053963969e-08
COPD-HTN	rs111650969	1	11875709	G	C	0.0333268	0.0765576	0.0281228	0.0064837	-19.69777	2.0133486848519e-08
COPD-HTN	rs75367103	1	11877131	T	A	0.0333268	0.076558	0.0281228	0.0064834	-19.698363	2.0123151356315e-08
COPD-HTN	rs74866971	1	11877062	A	C	0.0333268	0.076558	0.0281228	0.0064834	-19.698737	2.01166286562205e-08
COPD-HTN	rs76337233	1	11893869	T	C	0.0166873	0.124912	0.0385733	0.0012024	-19.702068	2.00586808341141e-08
COPD-HTN	rs78054341	1	11892779	G	A	0.0333287	0.0764168	0.0281218	0.0065807	-19.71184	1.98896539819428e-08
COPD-HTN	rs76288343	1	11892651	A	G	0.0333287	0.0764168	0.0281218	0.0065807	-19.71432	1.98469845371291e-08
COPD-HTN	rs78436614	1	11892002	G	A	0.0333287	0.0764168	0.0281218	0.0065807	-19.715543	1.98259676766278e-08
COPD-HTN	rs76335758	1	11891613	G	A	0.0333287	0.0764157	0.0281218	0.0065814	-19.716567	1.98083961961591e-08
COPD-HTN	rs112859107	1	11891480	G	A	0.0333287	0.0764157	0.0281218	0.0065814	-19.716754	1.98051918804758e-08
COPD-HTN	rs41275490	1	11890390	A	G	0.0333287	0.0764157	0.0281218	0.0065814	-19.726077	1.96459418225942e-08
COPD-HTN	rs79025427	1	11897992	A	G	0.0333164	0.0763434	0.0281317	0.0066518	-19.731642	1.9551475294765e-08
COPD-HTN	rs111479605	1	11899470	T	C	0.0333164	0.0763418	0.0281317	0.006653	-19.734227	1.95077687138735e-08
COPD-HTN	rs76161097	1	11872820	A	G	0.0333268	0.0765582	0.0281228	0.0064832	-19.735527	1.94858209717801e-08
COPD-HTN	rs77785799	1	11900142	T	C	0.0333164	0.0763403	0.0281318	0.0066543	-19.736106	1.94760479073624e-08
COPD-HTN	rs74053326	1	11895624	G	A	0.0333281	0.0764385	0.0281218	0.0065654	-19.741854	1.9379348747959e-08
COPD-HTN	rs79429328	1	11899803	T	C	0.0333164	0.0763321	0.0281318	0.0066602	-19.746399	1.93032208512578e-08
COPD-HTN	rs41452445	1	11858584	C	T	0.0333319	0.076876	0.028121	0.0062615	-19.756562	1.91340806442002e-08
COPD-HTN	rs74053327	1	11895667	C	G	0.0333278	0.0764165	0.0281223	0.0065819	-19.761936	1.90452381499794e-08
COPD-HTN	rs41275508	1	11904049	G	C	0.0333036	0.075856	0.0281436	0.0070322	-19.772523	1.88714356895622e-08
COPD-HTN	rs41275504	1	11902149	G	A	0.0333124	0.0761905	0.028136	0.0067703	-19.815991	1.81742983910706e-08
COPD-HTN	rs1269454	10	21937919	A	G	0.28295	0.0373861	0.0114325	0.0010748	19.82313191251	1.8062269142189e-08
COPD-HTN	rs1057624	1	11846270	C	T	0.0166664	0.124763	0.0385742	0.0012192	-19.830148	1.79528718101245e-08
COPD-HTN	rs45577533	1	11857576	C	T	0.0333345	0.0769853	0.0281181	0.0061827	-19.831346	1.79342599669001e-08

COPD-HTN	rs112007883	1	11899349	T	C	0.0166862	0.125351	0.0385771	0.0011566	-19.831881	1.79259512232619e-08
COPD-HTN	rs13306567	1	11860465	G	C	0.0333294	0.0766992	0.0281232	0.0063865	-19.873111	1.72972621950449e-08
COPD-HTN	rs45532338	1	11859908	T	C	0.0333301	0.0767671	0.0281227	0.0063388	-19.894465	1.69803813706074e-08
COPD-HTN	rs113586584	1	11870161	C	T	0.016685	0.125361	0.0385745	0.0011547	-19.898424	1.69222728167466e-08
COPD-HTN	rs111847924	1	11859747	A	G	0.0333305	0.0767846	0.0281225	0.0063265	-19.900341	1.68942153259806e-08
COPD-HTN	rs80038130	1	11859606	G	T	0.0333307	0.0767892	0.0281223	0.0063231	-19.901521	1.68769531551988e-08
COPD-HTN	rs45533333	1	11858403	T	C	0.0333321	0.0769064	0.0281206	0.0062404	-19.903662	1.68456986783031e-08
COPD-HTN	rs80307360	1	11859132	T	C	0.0333313	0.0768388	0.0281218	0.0062884	-19.903721	1.68448470679143e-08
COPD-HTN	rs45468191	1	11859042	G	A	0.0333314	0.0768449	0.0281216	0.0062838	-19.90409	1.6839464422117e-08
COPD-HTN	rs77078602	1	11859390	C	T	0.033331	0.0768149	0.0281221	0.0063051	-19.904369	1.68353985348995e-08
COPD-HTN	rs4846044	1	11839998	C	T	0.98334	-0.124971	0.0385864	0.0012006	-19.912648	1.67151409109949e-08
COPD-HTN	rs518789	1	10787538	T	C	0.463282	-0.031003	0.0104668	0.0030562	19.9222663333	1.65765176707046e-08
COPD-HTN	rs111776518	1	11867652	G	C	0.016685	0.125361	0.0385745	0.0011547	-19.935578	1.63865594427567e-08
COPD-HTN	rs112513913	1	11869549	A	G	0.016685	0.125361	0.0385745	0.0011547	-19.955159	1.61110956017193e-08
COPD-HTN	rs76351797	1	11867878	T	C	0.016685	0.125361	0.0385745	0.0011547	-19.959879	1.60453819492179e-08
COPD-HTN	rs4747438	10	22124263	T	C	0.6484	-0.046961	0.0107742	1.30861e-05	19.9709439535	1.58924037840078e-08
COPD-HTN	rs35593468	1	11860684	A	G	0.0166869	0.125537	0.0385717	0.0011354	-19.989518	1.56388810585524e-08
COPD-HTN	rs75800607	1	11869521	G	A	0.016685	0.125361	0.0385745	0.0011547	-20.236567	1.26277241768729e-08
COPD-HTN	rs74683406	1	11859636	A	G	0.0333763	0.0785094	0.028106	0.0052169	-20.358391	1.13640174295501e-08
COPD-HTN	rs72699046	1	113038761	C	G	0.155684	0.0499639	0.0141993	0.0004336	22.121584724	2.47358296196187e-09
COPD-HTN	rs12037987	1	113042822	C	T	0.16936	0.0514101	0.0137111	0.0001772	24.938568000	2.17513230624738e-10
COPD-HTN	rs3790607	1	113053023	C	A	0.175757	0.0483627	0.0135156	0.0003458	25.080616545	1.92446914991347e-10
COPD-HTN	rs11102485	1	113052923	G	C	0.175964	0.0483923	0.0135067	0.0003399	25.113477781	1.8707274634901e-10
COPD-HTN	rs12038119	1	113043423	G	A	0.169605	0.050488	0.0137067	0.0002301	25.140367204	1.82787155246745e-10
COPD-HTN	rs10776752	1	113044328	T	G	0.170683	0.0488899	0.0136765	0.0003506	25.204097821	1.73018233295773e-10
COPD-HTN	rs3790604	1	113046879	A	C	0.171844	0.0506321	0.0136431	0.0002063	26.294491595	6.76331806739937e-11

**Table S5. Pleiotropic genomic risk loci for COPD and cardiovascular diseases identified by FUMA**

Trait_pair	rsID	p	start	end	nSNPs	nGWASSNPs	nIndSigSNPs	nLeadSNPs	LeadSNPs
COPD-HTN	rs518789	1.65765176707e-08	10787538	10790797	4	4	1	1	rs518789
COPD-HTN	rs74683406	1.13640174296e-08	11832368	11906821	91	75	2	1	rs74683406
COPD-HTN	rs3790604	6.7633180674e-11	1.13E+08	1.13E+08	9	7	1	1	rs3790604
COPD-HTN	rs11694327	8.98064455381e-14	26911509	26932887	26	13	2	1	rs11694327
COPD-HTN	rs1263412	1.15162344386e-08	2845274	3028499	170	132	1	1	rs1263412
COPD-HTN	rs35319653	3.84636099132e-08	1.41E+08	1.41E+08	76	64	1	1	rs35319653
COPD-HTN	rs6866614	3.75831899167e-12	1.31E+08	1.32E+08	309	273	6	2	rs6866614;rs10477741
COPD-HTN	rs55730499	1.78984458624e-09	1.61E+08	1.61E+08	7	6	1	1	rs55730499
COPD-HTN	rs9650657	1.26459629865e-10	8088230	12203305	1268	1024	19	4	rs2979192;rs6601321;rs9650657;rs10087422
COPD-HTN	rs4747438	1.5892403784e-08	21769216	22288132	194	145	2	1	rs4747438
COPD-HTN	rs604723	8.37873725608e-10	1.01E+08	1.01E+08	29	22	1	1	rs604723
COPD-HTN	rs7137093	1.33507744622e-08	1.12E+08	1.12E+08	34	31	1	1	rs7137093
COPD-HTN	rs60249782	1.00820161397e-09	1.04E+08	1.04E+08	119	92	1	1	rs60249782
COPD-HTN	rs2759308	4.39902068579e-08	80987012	81066058	46	44	1	1	rs2759308
COPD-HTN	rs16948048	9.67865551058e-12	47303456	47475549	120	92	4	1	rs16948048
COPD-HTN	rs59027509	5.10533164894e-09	4970593	5176149	136	111	2	1	rs59027509
COPD-HF	rs11577931	1.92745576841e-10	1.1E+08	1.1E+08	7	7	1	1	rs11577931
COPD-HF	rs2457566	1.22838513743e-12	1.61E+08	1.61E+08	127	101	4	2	rs3125050;rs2457566
COPD-HF	rs112635299	2.39635120658e-12	94838142	94844947	2	1	1	1	rs112635299
COPD-HF	rs71417868	4.70255764796e-08	1.04E+08	1.04E+08	107	94	1	1	rs71417868
COPD-HF	rs17228058	1.22108142598e-08	67441750	67468285	22	20	1	1	rs17228058
COPD-HF	rs11857877	6.33772846075e-22	78837381	79236349	414	370	19	4	rs28661610;rs146703613;rs11857877;rs74614608
COPD-HF	rs2285224	2.03341724691e-09	75304497	75516739	379	317	1	1	rs2285224
COPD-HF	rs12952581	3.16585068869e-12	47260130	47475549	123	104	5	1	rs12952581
COPD-HF	rs12972970	4.70997566e-13	45386467	45428234	27	26	3	1	rs12972970
COPD-HF	rs4809542	4.25939158157e-08	61977640	61991833	9	8	1	1	rs4809542
COPD-HF	rs28451064	1.22258043967e-09	35593827	35625113	15	13	1	1	rs28451064
COPD-CHD	rs1810126	5.48820522499e-10	1.61E+08	1.61E+08	39	20	2	2	rs1810126;rs71033586

COPD-CHD	rs1412832	1.17889744598e-08	21997015	22101702	26	8	1	1 rs1412832
COPD-CHD	rs112635299	4.08175173533e-10	94838142	94844947	2	1	1	1 rs112635299
COPD-CHD	rs4438276	1.32583339506e-10	78884553	79202749	119	99	5	2 rs117832812;rs4438276
COPD-CHD	rs917054	1.66670631441e-09	47320418	47461433	96	86	3	1 rs917054
COPD-CHD	rs11556505	6.83745840117e-13	45386467	45428234	32	30	4	1 rs11556505
COPD-CHD	rs6011779	2.16792667443e-09	61979793	61992005	8	5	2	1 rs6011779
COPD-CHD	rs28451064	1.23007220572e-08	35593827	35625113	15	13	1	1 rs28451064

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**Table S6.Results of the Bayesian colocalization analysis**

rsID	PP.H0.abf	PP.H1.abf	PP.H2.abf	PP.H3.abf	PP.H4.abf	phen1	phen2
rs28451064	0.928935412184339	0.0710228397377311	2.9620509520819e-05	2.25479781150481e-06	9.87277059761634e-06	COPD	HF
rs2457566	0.518775328231863	0.480976320142381	0.000101741196897889	9.42757951515189e-05	5.23346337065017e-05	COPD	HF
rs11577931	0.966271185600061	0.0334866173592305	0.000205875679126292	7.10551008591542e-06	2.92158514957979e-05	COPD	HF
rs16948048	1.51964207520733e-06	4.9005610141959e-05	0.000641440818625622	0.0197056624020332	0.979602371527124	COPD	HTN
rs11556505	1.74364319565299e-06	1.07346843517722e-05	0.0180215578099937	0.110077263683632	0.871888700178828	COPD	CHD
rs55730499	0.000180596252267092	6.06624306315068e-06	0.148085302044231	0.00412659611460905	0.847601439345829	COPD	HTN
rs3790604	1.04080436704129e-06	9.408049303644e-08	0.167400588700008	0.014313405981573	0.818284870433559	COPD	HTN
rs6866614	8.90590348680747e-06	0.00172780008254758	0.00107215177218525	0.207214064649259	0.789977077592521	COPD	HTN
rs1810126	1.11951685822061e-34	1.07373017685313e-34	0.129438975422927	0.123397938393977	0.747163086183097	COPD	CHD
rs59027509	0.0037785136988194	0.00175228314850245	0.26753772711075	0.123466973816231	0.603464502225697	COPD	HTN
rs60249782	0.00122909348612828	0.290747960914143	0.00053442278734656	0.125838624426335	0.581649898386047	COPD	HTN
rs28451064	0.0112568157286429	0.000860652967866323	0.480577844649989	0.0362721067108945	0.471032579942608	COPD	CHD
rs35319653	0.156590012944003	0.370777760293834	0.0155143811692815	0.0363145375616836	0.420803308031197	COPD	HTN
rs917054	0.00949952695206134	0.32037990262217	0.0102891435138468	0.346697281601388	0.313134145310535	COPD	CHD
rs74683406	5.47210339530708e-08	4.51220617356094e-09	0.63797020200142	0.0522962367449506	0.30973350202039	COPD	HTN
rs1263412	0.00189866166946238	0.863163758743795	6.59196094300342e-05	0.0298631626443232	0.105008497332989	COPD	HTN
rs2759308	4.41400466495153e-06	1.03197162102615e-07	0.884603879360398	0.0205867795568096	0.0948048238809657	COPD	HTN
rs4747438	3.70852792799757e-05	1.25590378969188e-05	0.690235148523251	0.233674103330692	0.0760411038288796	COPD	HTN
rs9650657	2.78788908506128e-06	8.96961600456585e-05	0.0280266699350917	0.901684692517547	0.0701961534982315	COPD	HTN
rs604723	2.86479387662285e-11	4.03957113137685e-13	0.91706920229179	0.0128612841356056	0.0700695135435512	COPD	HTN
rs1412832	8.55589693281892e-36	3.46610838627436e-38	0.970314452549646	0.00390509329024519	0.0257804541601072	COPD	CHD
rs11694327	4.23605666569058e-13	9.82411403950312e-14	0.794924910114833	0.184335457324421	0.0207396325602228	COPD	HTN
rs518789	3.2678785617224e-10	1.71096151259988e-13	0.99094249819516	0.00051028003715785	0.00854722144072466	COPD	HTN
rs112635299	2.83280508345593e-14	0.9915468570193	1.83842389332141e-18	5.59518685509669e-05	0.00839719111212032	COPD	CHD
rs6011779	7.85855064802458e-10	0.994126501575571	9.22421719921715e-14	0.00011092610535841	0.00576257153312476	COPD	CHD
rs7137093	7.82330302430047e-06	4.02387760045868e-06	0.657339669485176	0.338094886462953	0.00455359687124627	COPD	HTN
rs2285224	0.419341531821825	0.578790066586215	0.000319865640827471	0.00044038175678312	0.00110815419434944	COPD	HF
rs112635299	2.85613261910604e-14	0.999712030398492	4.74551576366144e-19	1.63387645194812e-05	0.000271630836960318	COPD	HF

rs11857877	6.90592704372387e-71	0.999262316590073	3.32181923855789e-74	0.00048039777582234	0.000257285634107451	COPD	HF
rs4809542	8.04827807267116e-10	0.999732795139004	1.44481088843137e-14	1.76974979425818e-050	0.000249506558212835	COPD	HF
rs4438276	1.05320525467058e-70	0.996294128712847	3.69443774198532e-73	0.00349459338140673	0.000211277905738453	COPD	CHD
rs12972970	0.139704560945439	0.860086724159521	4.3193239008992e-06	2.64137996232172e-050	0.000177981771516084	COPD	HF
rs12952581	0.0279923489467932	0.971731892729671	4.33492663170404e-06	0.000150362432531535	0.000121060964372451	COPD	HF
rs17228058	0.503814866230841	0.496045983221706	1.53146123175707e-05	1.49695928972872e-050	0.000108866342238013	COPD	HF
rs71417868	0.00345256524927359	0.995988528606346	1.57757905502078e-06	0.00045499424701376	0.000102334318311312	COPD	HF

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**Table S7. Shared pleiotropic regions across different trait combinations**

Number	Locus_boundary	Region	Trait_pair
2	6:160680738-160978997, 6:160687412-161111700	6q25.3	COPD-HF, COPD-CHD
3	14:94838142-94844947, 14:94838142-94844947	14q32.13	COPD-HF, COPD-CHD
4	14:103991478-104184737, 14:104008136-104283445	14q32.33	COPD-HF, COPD-HTN
5	15:67441750-67468285	15q22.33	COPD-HF
6	15:78837381-79236349, 15:78884553-79202749, 15:80987012-81066	15q25.1	COPD-HF, COPD-CHD, COPD-HTN
8	17:47260130-47475549, 17:47303456-47475549	17q21.33	COPD-HF, COPD-HTN
9	19:45386467-45428234, 19:45386467-45428234	19q13.32	COPD-HF, COPD-CHD
10	20:61977640-61991833, 20:61979793-61992005	20q13.33	COPD-HF, COPD-CHD
11	21:35593827-35625113, 21:35593827-35625113	21q22.11	COPD-HF, COPD-CHD
12	9:21997015-22101702	9p21.3	COPD-CHD
13	17:47320418-47461433	17q21.32	COPD-CHD
19	5:131336105-131833599	5q31.1	COPD-HTN
24	12:111705893-111814155	12q24.12	COPD-HTN
25	19:4970593-5176149	19p13.3	COPD-HTN

**Table S8. Potential intervention targets identified by the SMR method**

Trait	probeID	ProbeChr	Gene	p_GWAS	p_eQTL	p_SMR	p_HEIDI	nsnp_HEIDI
HF	ENSG00000138031	2	ADCY3	2.606574e-03	1.789511e-108	2.852346e-03	9.803482e-01	20
HF	ENSG00000248275	5	TRIM52-AS1	7.918264e-03	7.656999e-125	8.312217e-03	9.582295e-01	20
HF	ENSG00000215022	6	RP1-257A7.4	3.258967e-03	3.360078e-44	3.991491e-03	9.544724e-01	20
HF	ENSG00000138092	2	CENPO	2.498791e-03	8.436686e-63	2.927040e-03	9.422954e-01	20
HF	ENSG00000270820	2	RP11-355B11.2	2.553583e-04	1.763643e-14	9.646563e-04	9.357922e-01	20
HF	ENSG00000261613	16	RP11-20I23.13	1.667478e-03	2.589742e-74	1.947214e-03	9.228670e-01	20
HF	ENSG00000187134	10	AKR1C1	6.746834e-03	9.998317e-48	7.742334e-03	9.157545e-01	20
HF	ENSG00000088766	20	CRLS1	3.457403e-03	3.481943e-09	8.782086e-03	8.807259e-01	9
HF	ENSG00000099769	16	IGFALS	1.395950e-03	3.746349e-08	5.721638e-03	8.665292e-01	6
HF	ENSG00000101751	18	POLI	8.364885e-03	2.196515e-43	9.592015e-03	8.584238e-01	20
HF	ENSG00000174606	1	ANGEL2	1.190529e-03	1.725490e-15	2.683511e-03	8.213179e-01	20
HF	ENSG00000229314	9	ORM1	5.797623e-03	4.413328e-32	7.221529e-03	8.035767e-01	20
HF	ENSG00000167525	17	PROCA1	6.513434e-03	4.495303e-31	8.078037e-03	7.970937e-01	20
HF	ENSG00000115137	2	DNAJC27	2.606574e-03	1.691306e-40	3.317610e-03	7.893915e-01	20
HF	ENSG00000108785	17	HSD17B1P1	8.098601e-04	5.956266e-12	2.599011e-03	7.795524e-01	20
HF	ENSG00000231887	12	PRH1	1.575869e-03	9.431576e-35	2.206747e-03	7.767840e-01	20
HF	ENSG00000148426	10	PROSER2	5.878276e-03	1.084901e-22	8.005687e-03	7.459196e-01	20
HF	ENSG00000132623	20	ANKEF1	4.158340e-04	1.173065e-19	1.003329e-03	7.411164e-01	16
HF	ENSG00000255837	12	TAS2R20	1.583215e-03	6.113526e-15	3.410805e-03	7.320292e-01	20
HF	ENSG00000145979	6	TBC1D7	3.258967e-03	7.082681e-56	3.825958e-03	7.126120e-01	20
HF	ENSG00000273302	2	RP11-493E12.2	3.625434e-04	5.874668e-10	1.998984e-03	7.021065e-01	20
HF	ENSG00000260565	16	ERVK13-1	2.227666e-03	1.165310e-49	2.744761e-03	6.979014e-01	20
HF	ENSG00000100036	22	SLC35E4	3.104631e-03	4.695391e-10	7.552834e-03	6.939695e-01	16
HF	ENSG00000103184	16	SEC14L5	2.050832e-03	1.349895e-38	2.704154e-03	6.722165e-01	20
HF	ENSG00000111215	12	PRR4	5.014643e-04	6.799589e-32	8.474879e-04	6.463410e-01	20
HF	ENSG00000148450	10	MSRB2	6.626741e-03	1.833948e-20	9.170488e-03	6.291955e-01	12
HF	ENSG00000106638	7	TBL2	2.847213e-04	4.978499e-14	1.078314e-03	6.067562e-01	4
HF	ENSG00000129595	5	EPB41L4A	7.022633e-04	2.352604e-10	2.806054e-03	5.956661e-01	9

HF	ENSG00000143502	1 SUSD4	2.895210e-04	4.158257e-13	1.186966e-03	5.913212e-01	8
HF	ENSG00000123268	12 ATF1	4.058635e-03	6.933215e-28	5.445723e-03	5.767840e-01	20
HF	ENSG00000228278	9 ORM2	5.797623e-03	2.635959e-18	8.521639e-03	5.514786e-01	20
HF	ENSG00000255050	8 RP11-661A12.9	7.019400e-03	1.464347e-76	7.634727e-03	5.320442e-01	20
HF	ENSG00000160991	7 ORAI2	9.045446e-03	1.433552e-95	9.599948e-03	5.274675e-01	20
HF	ENSG00000147813	8 NAPRT1	7.019400e-03	6.686518e-98	7.495555e-03	5.187467e-01	20
HF	ENSG00000108799	17 EZH1	1.062796e-03	3.916743e-11	3.355483e-03	4.986307e-01	5
HF	ENSG00000135341	6 MAP3K7	5.008988e-03	1.215431e-12	9.050220e-03	4.852506e-01	20
HF	ENSG00000183049	10 CAMK1D	4.459539e-03	5.117063e-27	5.971094e-03	4.830553e-01	20
HF	ENSG00000144021	2 CIAO1	5.089206e-03	4.383897e-47	5.961825e-03	4.818146e-01	20
HF	ENSG00000138399	2 FASTKD1	6.170921e-06	6.869787e-17	7.030760e-05	4.522902e-01	20
HF	ENSG00000247157	12 RP11-434C1.1	1.134227e-03	3.988650e-57	1.427411e-03	4.465888e-01	17
HF	ENSG00000198885	2 ITPRIPL1	5.500093e-03	2.347894e-25	7.310400e-03	4.346909e-01	20
HF	ENSG00000100029	22 PES1	3.266931e-03	1.363553e-30	4.376494e-03	4.133499e-01	20
HF	ENSG00000108852	17 MPP2	4.304671e-03	1.075519e-11	8.485407e-03	3.609989e-01	13
HF	ENSG00000212127	12 TAS2R14	1.134227e-03	5.127722e-16	2.522284e-03	3.369015e-01	20
HF	ENSG00000204347	17 BTBD17	3.168765e-03	8.398796e-15	5.811072e-03	3.301470e-01	20
HF	ENSG00000051596	5 THOC3	4.330619e-03	2.136003e-28	5.736370e-03	2.999982e-01	7
HF	ENSG00000004534	3 RBM6	7.582458e-03	1.033104e-130	7.949770e-03	2.928397e-01	20
HF	ENSG00000128245	22 YWHAH	3.262496e-03	9.070730e-18	5.385500e-03	2.792507e-01	20
HF	ENSG00000117862	1 TXNDC12	5.498826e-03	7.498897e-27	7.193646e-03	2.703934e-01	20
HF	ENSG00000165138	9 ANKS6	2.296466e-03	1.039769e-10	5.826804e-03	2.390420e-01	8
HF	ENSG00000212978	2 AC016747.3	1.202154e-03	3.145289e-21	2.185616e-03	2.356703e-01	20
HF	ENSG00000176083	1 ZNF683	4.515127e-04	1.566262e-08	2.874073e-03	2.203078e-01	5
HF	ENSG00000108786	17 HSD17B1	2.917293e-03	2.686161e-19	4.724656e-03	2.051224e-01	14
HF	ENSG00000197520	1 FAM177B	5.457704e-03	3.173838e-23	7.453725e-03	2.016664e-01	20
HF	ENSG00000183762	22 KREMEN1	6.471277e-03	6.997850e-30	8.100648e-03	1.970183e-01	20
HF	ENSG00000170892	19 TSEN34	2.772873e-03	4.727255e-08	8.692325e-03	1.674951e-01	5
HF	ENSG00000172594	6 SMPDL3A	2.336361e-03	1.633683e-14	4.662391e-03	1.633696e-01	5
HF	ENSG00000135587	6 SMPD2	1.531969e-03	2.335480e-52	1.921257e-03	1.584247e-01	20

HF	ENSG00000196275	7 GTF2IRD2	2.011685e-03	1.255090e-26	3.007534e-03	1.065403e-01	20
HF	ENSG00000260910	13 LINC00565	7.476873e-03	2.815221e-25	9.588119e-03	9.074448e-02	20
HF	ENSG00000149577	11 SIDT2	6.071556e-03	1.077318e-70	6.692019e-03	7.684180e-02	20
HF	ENSG00000237651	2 C2orf74	8.245557e-03	3.326046e-46	9.384415e-03	6.254923e-02	20
HF	ENSG00000165684	9 SNAPC4	2.829632e-03	3.172661e-35	3.701540e-03	5.964843e-02	18
HF	ENSG00000189241	6 TSPYL1	6.456840e-05	1.252840e-08	1.074267e-03	5.664293e-02	5
CHD	ENSG00000197165	16 SULT1A2	8.354299e-03	9.980991e-124	8.762536e-03	9.967917e-01	20
CHD	ENSG00000183520	1 UTP11L	7.799019e-05	1.609773e-10	7.769336e-04	9.912373e-01	11
CHD	ENSG00000121933	1 ADORA3	5.140792e-03	2.798761e-48	5.994358e-03	9.809958e-01	20
CHD	ENSG00000151164	12 RAD9B	4.748539e-06	2.146602e-18	5.020486e-05	9.761854e-01	20
CHD	ENSG00000138303	10 ASCC1	5.560451e-03	4.675821e-15	8.953326e-03	9.645022e-01	14
CHD	ENSG00000140463	15 BBS4	2.514606e-04	8.261672e-27	5.315239e-04	9.580497e-01	20
CHD	ENSG00000118197	1 DDX59	2.533553e-03	2.763281e-15	4.796132e-03	9.539133e-01	10
CHD	ENSG00000111237	12 VPS29	6.198834e-06	6.445495e-15	9.233741e-05	9.538005e-01	12
CHD	ENSG00000168275	1 COA6	2.441799e-03	7.731933e-53	2.951617e-03	9.467738e-01	20
CHD	ENSG00000114735	3 HEMK1	3.076026e-04	6.802882e-09	2.187686e-03	9.276428e-01	12
CHD	ENSG00000169609	15 C15orf40	3.785908e-03	1.334218e-23	5.410338e-03	9.270614e-01	20
CHD	ENSG00000151715	11 TMEM45B	8.056752e-05	1.174353e-63	1.235508e-04	9.244131e-01	20
CHD	ENSG00000153774	16 CFDP1	2.081421e-03	1.041082e-28	3.009679e-03	9.122696e-01	20
CHD	ENSG00000237135	10 DDX10P1	1.477100e-03	3.688795e-24	2.416931e-03	8.980227e-01	20
CHD	ENSG00000143156	1 NME7	2.442924e-03	1.260080e-12	5.319621e-03	8.980034e-01	20
CHD	ENSG00000100296	22 THOC5	4.559739e-03	5.157231e-25	6.231179e-03	8.851522e-01	20
CHD	ENSG00000159110	21 IFNAR2	1.908095e-03	4.339182e-08	6.922538e-03	8.754128e-01	3
CHD	ENSG00000175470	10 PPP2R2D	5.346998e-03	6.725112e-21	7.583203e-03	8.613578e-01	13
CHD	ENSG00000072310	17 SREBF1	5.876382e-04	3.025365e-36	9.144470e-04	8.586554e-01	20
CHD	ENSG00000160961	19 ZNF333	3.158639e-03	7.051271e-35	4.096590e-03	8.561247e-01	20
CHD	ENSG00000152404	11 CWF19L2	1.226027e-03	9.029590e-19	2.394312e-03	8.263208e-01	20
CHD	ENSG00000198467	9 TPM2	1.588656e-04	6.134834e-25	3.903857e-04	8.152139e-01	20
CHD	ENSG00000261000	1 RP11-534L20.5	4.377136e-03	4.692758e-68	4.918770e-03	7.994573e-01	20
CHD	ENSG00000180370	3 PAK2	2.695566e-04	6.808970e-12	1.292671e-03	7.838270e-01	3

CHD ENSG00000163931	3 TKT	3.548951e-03	4.450171e-28	4.829920e-03	7.630339e-01	20
CHD ENSG00000181381	4 DDX60L	7.766047e-04	5.117110e-19	1.662435e-03	7.412346e-01	20
CHD ENSG00000168807	16 SNTB2	1.085600e-03	3.527858e-16	2.421991e-03	7.378442e-01	17
CHD ENSG00000169612	15 FAM103A1	5.024467e-03	1.190549e-12	9.067685e-03	7.250625e-01	4
CHD ENSG00000267082	19 CTC-510F12.2	4.440685e-03	1.906715e-23	6.219110e-03	7.169835e-01	7
CHD ENSG00000117595	1 IRF6	6.217703e-03	1.825841e-44	7.248451e-03	7.034220e-01	20
CHD ENSG00000162757	1 C1orf74	5.539238e-03	3.020916e-14	9.169760e-03	7.000170e-01	10
CHD ENSG00000270000	14 RP3-449M8.9	4.255984e-03	4.768220e-17	6.812078e-03	6.919715e-01	15
CHD ENSG00000005243	17 COPZ2	2.188014e-03	1.668861e-08	7.095135e-03	6.852171e-01	6
CHD ENSG00000182621	20 PLCB1	1.536243e-03	9.553153e-28	2.347842e-03	6.851311e-01	20
CHD ENSG00000259005	14 RP3-449M8.6	4.217159e-03	6.723843e-19	6.458754e-03	6.770266e-01	11
CHD ENSG00000160712	1 IL6R	5.591393e-03	1.339061e-16	8.606470e-03	6.689979e-01	7
CHD ENSG00000260766	1 RP11-226L15.5	1.661652e-03	2.685129e-29	2.457609e-03	6.525848e-01	9
CHD ENSG00000143951	2 WDPCP	3.521681e-03	8.088071e-13	6.886178e-03	6.345509e-01	18
CHD ENSG00000141452	18 C18orf8	3.421370e-03	2.646057e-14	6.291157e-03	6.292649e-01	12
CHD ENSG00000143315	1 PIGM	1.661652e-03	1.555217e-33	2.340380e-03	6.197320e-01	9
CHD ENSG00000142599	1 RERE	5.476083e-03	8.845712e-52	6.294744e-03	6.095442e-01	20
CHD ENSG00000143297	1 FCRL5	5.519249e-03	2.618713e-76	6.063428e-03	5.885159e-01	20
CHD ENSG00000272914	10 RP11-330O11.3	7.822760e-04	1.033559e-11	2.597193e-03	5.708883e-01	15
CHD ENSG00000004534	3 RBM6	4.629989e-04	1.033104e-130	5.290030e-04	5.633752e-01	20
CHD ENSG00000117597	1 DIEXF	5.963483e-03	1.037141e-36	7.207332e-03	5.499256e-01	20
CHD ENSG00000101294	20 HM13	7.602738e-03	7.755235e-52	8.570225e-03	5.277942e-01	20
CHD ENSG00000105072	19 C19orf44	4.270808e-04	2.731776e-13	1.507391e-03	5.188543e-01	3
CHD ENSG00000162066	16 AMDHD2	1.299421e-03	1.020672e-08	5.043498e-03	5.182615e-01	5
CHD ENSG00000139323	12 POC1B	1.565525e-03	1.791407e-10	4.608697e-03	5.027260e-01	9
CHD ENSG00000130479	19 MAP1S	2.050218e-03	7.909072e-12	4.944852e-03	5.020886e-01	6
CHD ENSG00000235944	7 ZNF815P	2.164213e-03	3.535200e-14	4.472925e-03	4.877585e-01	16
CHD ENSG00000143384	1 MCL1	3.203834e-03	2.313062e-14	5.967469e-03	4.791389e-01	9
CHD ENSG00000234465	19 PINLYP	1.716327e-03	4.447136e-08	6.518884e-03	4.764372e-01	5
CHD ENSG00000075234	22 TTC38	6.332133e-03	3.022742e-46	7.329209e-03	4.627399e-01	20

CHD ENSG00000213231	14 TCL1B	2.559588e-03	1.951577e-08	7.877704e-03	4.605115e-01	5
CHD ENSG00000182504	3 CEP97	3.981347e-03	4.717221e-10	8.954053e-03	4.567208e-01	18
CHD ENSG00000197256	19 KANK2	4.440685e-03	1.656585e-29	5.804077e-03	4.560158e-01	20
CHD ENSG00000125877	20 ITPA	4.334111e-03	2.722550e-54	5.020046e-03	4.532335e-01	20
CHD ENSG00000130475	19 FCHO1	3.615930e-04	1.750045e-43	5.530956e-04	4.520711e-01	20
CHD ENSG00000137547	8 MRPL15	3.577009e-03	1.105980e-08	9.449109e-03	4.259064e-01	9
CHD ENSG00000131143	16 COX4I1	4.030232e-03	1.875248e-10	8.763160e-03	4.240929e-01	13
CHD ENSG00000106460	7 TMEM106B	2.134027e-03	6.775056e-32	2.966523e-03	4.186694e-01	20
CHD ENSG00000106638	7 TBL2	2.155659e-05	4.978499e-14	2.153738e-04	4.172806e-01	4
CHD ENSG00000257594	12 GALNT4	1.469806e-03	7.221129e-11	4.259598e-03	3.773809e-01	6
CHD ENSG00000136271	7 DDX56	5.130858e-05	3.359456e-10	6.650894e-04	3.768493e-01	11
CHD ENSG00000228302	10 RP11-186N15.3	5.953056e-03	5.176047e-14	9.784946e-03	3.712467e-01	20
CHD ENSG00000272368	12 RP4-605O3.4	6.784377e-04	2.471050e-19	1.479562e-03	3.621896e-01	20
CHD ENSG00000135378	11 PRRG4	2.632692e-03	1.614940e-13	5.351012e-03	3.566462e-01	8
CHD ENSG00000167378	19 IRGQ	4.863848e-05	2.629628e-08	1.034758e-03	3.552535e-01	10
CHD ENSG00000142208	14 AKT1	8.957978e-04	1.020069e-11	2.838362e-03	3.408474e-01	8
CHD ENSG00000215067	17 AC027763.2	4.655861e-03	6.308412e-14	8.102069e-03	3.366091e-01	13
CHD ENSG00000198270	12 TMEM116	1.258896e-04	4.383078e-20	4.030848e-04	3.344894e-01	14
CHD ENSG00000166507	10 NDST2	1.428335e-03	2.177002e-16	2.952627e-03	3.162211e-01	16
CHD ENSG00000139190	12 VAMP1	7.920270e-03	4.182624e-58	8.794913e-03	2.810757e-01	20
CHD ENSG00000083097	6 DOPEY1	7.583156e-03	1.799578e-41	8.811348e-03	2.663701e-01	20
CHD ENSG00000174080	11 CTSF	6.324410e-03	2.407775e-37	7.582141e-03	2.623166e-01	20
CHD ENSG00000228486	2 AC017099.3	5.370936e-03	2.060501e-18	7.978231e-03	2.594774e-01	4
CHD ENSG00000170322	11 NFRKB	8.056752e-05	6.685603e-46	1.450199e-04	2.552451e-01	20
CHD ENSG00000167306	18 MYO5B	5.645859e-03	7.273167e-15	9.118573e-03	2.469069e-01	13
CHD ENSG00000002016	12 RAD52	6.807380e-03	4.432093e-31	8.406440e-03	2.338402e-01	18
CHD ENSG00000267077	16 RP11-127I20.5	6.005373e-03	1.726453e-33	7.387106e-03	2.251784e-01	20
CHD ENSG00000205517	19 RGL3	3.801719e-03	5.247091e-16	6.417485e-03	1.978493e-01	12
CHD ENSG00000149243	11 KLHL35	1.843869e-03	4.048396e-38	2.466222e-03	1.962110e-01	20
CHD ENSG00000066084	12 DIP2B	3.174022e-04	6.510834e-35	5.477110e-04	1.887991e-01	20

CHD ENSG00000176472	19 ZNF575	8.412208e-04	6.410458e-16	2.029524e-03	1.877345e-01	15
CHD ENSG00000009790	1 TRAF3IP3	4.627218e-03	1.518108e-30	5.966786e-03	1.819884e-01	20
CHD ENSG00000100297	22 MCM5	5.777900e-03	2.731002e-25	7.638900e-03	1.788761e-01	13
CHD ENSG00000172785	9 CBWD1	2.042208e-03	2.098539e-37	2.717496e-03	1.722481e-01	20
CHD ENSG00000119965	10 C10orf88	8.582820e-04	1.855947e-11	2.827871e-03	1.643505e-01	9
CHD ENSG00000073050	19 XRCC1	4.749742e-04	4.434038e-20	1.091717e-03	1.584624e-01	20
CHD ENSG00000172954	2 LCLAT1	3.054429e-03	9.698055e-26	4.362022e-03	1.431827e-01	20
CHD ENSG00000164236	5 ANKRD33B	4.758609e-04	8.072519e-20	1.104708e-03	1.396825e-01	4
CHD ENSG00000168890	2 TMEM150A	4.295364e-04	2.596516e-08	2.921585e-03	1.384738e-01	6
CHD ENSG00000162398	1 C1orf177	3.833628e-03	7.790943e-16	6.496305e-03	1.380782e-01	20
CHD ENSG00000135919	2 SERPINE2	8.083324e-07	2.759686e-22	1.091485e-05	1.340400e-01	15
CHD ENSG00000197520	1 FAM177B	1.240881e-04	3.173838e-23	3.439462e-04	1.176321e-01	20
CHD ENSG00000271751	11 RP11-110I1.14	5.792686e-05	2.452686e-12	4.874980e-04	1.154600e-01	9
CHD ENSG00000158604	7 TMED4	6.694220e-05	9.140515e-11	6.843602e-04	1.105212e-01	6
CHD ENSG00000234553	5 AC022431.3	6.011461e-03	6.623799e-14	9.898046e-03	1.057611e-01	5
CHD ENSG00000214975	6 PPIAP29	6.206975e-03	3.731902e-18	9.049184e-03	9.907829e-02	20
CHD ENSG00000143498	1 TAF1A	6.591587e-04	3.003654e-13	2.027487e-03	9.851495e-02	17
CHD ENSG00000166471	11 TMEM41B	3.826837e-03	7.462441e-29	5.119621e-03	8.959861e-02	20
CHD ENSG00000159352	1 PSMD4	5.167256e-05	2.427129e-11	5.369305e-04	7.367028e-02	11
CHD ENSG00000182179	3 UBA7	3.525900e-03	1.781217e-61	4.060897e-03	7.132748e-02	20
CHD ENSG00000227550	7 TRBV7-5	1.629296e-03	3.348882e-10	4.858670e-03	6.777436e-02	4
CHD ENSG00000225940	5 AC022431.2	6.011461e-03	4.924356e-21	8.361620e-03	6.522912e-02	11
CHD ENSG00000123268	12 ATF1	3.139496e-05	6.933215e-28	9.974139e-05	6.499100e-02	20
HTN ENSG00000173338	11 KCNK7	7.900053e-06	7.672167e-09	4.097497e-04	9.970476e-01	3
HTN ENSG00000157322	16 CLEC18A	1.600000e-04	1.696855e-116	1.987929e-04	9.891470e-01	20
HTN ENSG00000234719	16 RP11-166B2.1	1.199997e-03	4.744435e-94	1.364146e-03	9.845290e-01	20
HTN ENSG00000129625	5 REEP5	8.099906e-03	8.548319e-29	9.972032e-03	9.830344e-01	20
HTN ENSG00000233885	3 YEATS2-AS1	2.999991e-05	8.696857e-10	5.567331e-04	9.823549e-01	20
HTN ENSG00000165626	10 BEND7	2.000000e-03	2.832161e-10	5.434862e-03	9.740188e-01	12
HTN ENSG00000267082	19 CTC-510F12.2	4.200007e-06	1.906715e-23	2.914943e-05	9.672515e-01	7

HTN	ENSG00000161016	8 RPL8	1.899984e-03	2.065987e-82	2.151845e-03	9.614715e-01	20
HTN	ENSG00000170571	5 EMB	1.499996e-03	4.040105e-36	2.140488e-03	9.573532e-01	10
HTN	ENSG00000124104	20 SNX21	2.300011e-03	3.157636e-14	4.670493e-03	9.450849e-01	20
HTN	ENSG00000124767	6 GLO1	5.899973e-03	1.831813e-15	9.267745e-03	9.310537e-01	20
HTN	ENSG00000204160	1 ZDHC1	4.200007e-05	1.769403e-21	1.682404e-04	9.305609e-01	20
HTN	ENSG00000146247	6 PHIP	2.000000e-03	3.337376e-13	4.458501e-03	9.273061e-01	19
HTN	ENSG00000212127	12 TAS2R14	5.999983e-03	5.127722e-16	9.205214e-03	9.264917e-01	20
HTN	ENSG00000143570	1 SLC39A1	1.700004e-04	4.357722e-16	6.419731e-04	9.263584e-01	20
HTN	ENSG00000233232	16 NPIP7	3.699985e-04	9.931134e-25	7.738099e-04	9.227954e-01	20
HTN	ENSG00000212978	2 AC016747.3	5.000000e-03	3.145289e-21	7.099578e-03	9.194907e-01	20
HTN	ENSG00000120860	12 CCDC53	5.000000e-03	4.598636e-29	6.493882e-03	8.661433e-01	20
HTN	ENSG0000037637	1 FBXO42	3.200000e-03	3.202344e-08	9.296000e-03	8.541878e-01	4
HTN	ENSG00000163472	1 TMEM79	4.799986e-03	1.984143e-58	5.511090e-03	8.533581e-01	20
HTN	ENSG00000258919	14 RP11-1029J19.4	6.299992e-03	1.151175e-22	8.546357e-03	8.486568e-01	12
HTN	ENSG00000075568	2 TMEM131	4.600023e-03	4.159758e-10	9.873792e-03	8.338566e-01	7
HTN	ENSG00000111725	12 PRKAB1	5.899973e-03	8.247375e-39	7.086315e-03	8.246575e-01	20
HTN	ENSG00000141068	17 KSR1	8.000000e-03	6.815342e-53	8.923915e-03	8.182241e-01	20
HTN	ENSG00000111490	12 TBC1D30	1.199997e-03	9.822925e-22	2.196522e-03	8.022640e-01	13
HTN	ENSG00000196378	8 ZNF34	4.600023e-04	7.187009e-25	9.176853e-04	8.022234e-01	20
HTN	ENSG00000054282	1 SDCCAG8	9.699961e-04	1.657389e-55	1.247023e-03	7.965002e-01	20
HTN	ENSG00000213083	2 AC010731.6	4.799986e-03	5.255574e-12	9.027979e-03	7.929281e-01	7
HTN	ENSG00000241973	22 PI4KA	1.299990e-03	2.158692e-10	4.102771e-03	7.898914e-01	16
HTN	ENSG00000223508	8 RPL23AP53	4.499974e-04	1.868257e-13	1.532864e-03	7.871764e-01	20
HTN	ENSG00000183605	10 SFXN4	5.699936e-05	1.485788e-65	9.004138e-05	7.871618e-01	20
HTN	ENSG00000180537	6 RNF182	4.399973e-03	2.205109e-84	4.873966e-03	7.812446e-01	20
HTN	ENSG00000135677	12 GNS	2.399993e-03	7.888983e-20	4.032465e-03	7.740479e-01	10
HTN	ENSG00000148824	10 MTG1	8.600031e-03	4.965420e-41	9.948189e-03	7.724842e-01	20
HTN	ENSG00000178904	19 DPY19L3	1.600000e-03	5.178674e-38	2.113942e-03	7.708501e-01	20
HTN	ENSG00000127528	19 KLF2	1.499996e-03	4.015286e-09	5.104575e-03	7.623557e-01	7
HTN	ENSG00000205583	7 STAG3L1	3.799969e-07	4.403875e-34	2.788621e-06	7.589217e-01	17

HTN	ENSG00000131446	5 MGAT1	2.800013e-04	6.897417e-12	1.319331e-03	7.574975e-01	4
HTN	ENSG00000060138	12 YBX3	1.299990e-03	1.005439e-08	4.999699e-03	7.565634e-01	6
HTN	ENSG00000169223	5 LMAN2	2.800013e-03	1.538059e-10	6.843921e-03	7.500520e-01	14
HTN	ENSG00000239697	17 TNFSF12	6.900014e-03	3.638870e-31	8.503995e-03	7.488889e-01	20
HTN	ENSG00000143156	1 NME7	7.399971e-05	1.260080e-12	5.392560e-04	7.418874e-01	19
HTN	ENSG00000063438	5 AHRR	4.600023e-03	4.482348e-11	9.234095e-03	7.388070e-01	20
HTN	ENSG00000104320	8 NBN	1.000000e-03	7.455882e-09	4.322641e-03	7.369493e-01	12
HTN	ENSG00000011523	2 CEP68	1.799990e-05	1.604083e-37	4.884062e-05	7.365030e-01	20
HTN	ENSG00000247157	12 RP11-434C1.1	5.999983e-03	3.988650e-57	6.729175e-03	7.364075e-01	20
HTN	ENSG00000268535	19 RP11-420K14.3	4.600023e-03	2.833170e-88	5.074581e-03	7.312302e-01	20
HTN	ENSG00000223705	7 NSUN5P1	4.099964e-07	9.385212e-26	5.103955e-06	7.211662e-01	15
HTN	ENSG00000105048	19 TNNT1	2.399993e-03	1.275955e-29	3.406721e-03	7.186557e-01	20
HTN	ENSG00000186026	19 ZNF284	6.199976e-03	2.036639e-24	8.150256e-03	7.099030e-01	20
HTN	ENSG00000120899	8 PTK2B	2.999991e-04	1.179909e-16	9.132846e-04	7.074683e-01	16
HTN	ENSG00000198952	1 SMG5	4.300015e-03	0.000000e+00	4.373318e-03	7.037483e-01	20
HTN	ENSG00000196821	6 C6orf106	4.399973e-06	1.839762e-10	1.958241e-04	7.006180e-01	5
HTN	ENSG00000227355	9 RP11-162D16.2	1.299990e-03	5.401646e-18	2.620873e-03	6.998622e-01	19
HTN	ENSG00000160781	1 PAQR6	4.300015e-03	0.000000e+00	4.389956e-03	6.994439e-01	20
HTN	ENSG00000090621	1 PABPC4	5.099998e-05	3.164500e-11	5.437877e-04	6.990002e-01	20
HTN	ENSG00000203279	9 RP11-498P14.5	2.199986e-04	6.240137e-12	1.144256e-03	6.978070e-01	8
HTN	ENSG00000237513	7 RP11-325F22.2	3.699985e-03	8.989743e-22	5.430434e-03	6.957213e-01	20
HTN	ENSG00000164078	3 MST1R	6.800017e-05	4.894054e-08	1.296645e-03	6.918567e-01	12
HTN	ENSG00000176390	17 CRLF3	2.599980e-03	1.655873e-10	6.399116e-03	6.829045e-01	15
HTN	ENSG00000154328	8 NEIL2	3.200000e-04	4.106138e-20	8.104441e-04	6.798073e-01	20
HTN	ENSG00000079459	8 FDFT1	6.800017e-05	7.046650e-13	4.965184e-04	6.694769e-01	20
HTN	ENSG00000143702	1 CEP170	1.299990e-03	3.225226e-14	3.056647e-03	6.679782e-01	16
HTN	ENSG00000125388	4 GRK4	2.800013e-04	1.581272e-29	5.411508e-04	6.661043e-01	20
HTN	ENSG00000067208	1 EVI5	2.300011e-03	1.502928e-13	4.817165e-03	6.641281e-01	20
HTN	ENSG00000011114	14 BTBD7	1.199997e-04	3.545682e-09	1.252655e-03	6.562726e-01	13
HTN	ENSG00000130638	22 ATXN10	4.000000e-03	1.387952e-23	5.696747e-03	6.542749e-01	20

HTN ENSG00000188227	19 ZNF793	1.099993e-03	2.525881e-19	2.108862e-03	6.514481e-01	20
HTN ENSG00000197128	19 ZNF772	5.199960e-03	3.536414e-22	7.297475e-03	6.497689e-01	17
HTN ENSG00000111642	12 CHD4	2.100003e-03	1.814389e-08	6.925006e-03	6.417045e-01	3
HTN ENSG00000119318	9 RAD23B	7.599937e-04	5.190254e-14	2.113494e-03	6.382897e-01	17
HTN ENSG00000172785	9 CBWD1	7.799917e-04	8.847721e-36	1.175338e-03	6.352651e-01	20
HTN ENSG00000197165	16 SULT1A2	4.799986e-04	9.980991e-124	5.493379e-04	6.325767e-01	20
HTN ENSG00000164741	8 DLC1	2.500000e-03	3.874020e-22	3.893081e-03	6.257427e-01	7
HTN ENSG00000141452	18 C18orf8	9.299937e-04	2.646057e-14	2.388094e-03	6.152148e-01	11
HTN ENSG00000197020	19 ZNF100	7.399971e-03	2.905414e-53	8.281110e-03	6.100751e-01	20
HTN ENSG00000171658	3 RP11-443P15.2	6.100002e-03	1.375299e-31	7.536365e-03	6.051552e-01	20
HTN ENSG00000264538	17 SUZ12P	2.100003e-04	9.846741e-14	9.103441e-04	5.934187e-01	16
HTN ENSG00000261643	4 RP11-529E10.6	2.300011e-03	1.550445e-38	3.024246e-03	5.931965e-01	20
HTN ENSG00000004534	3 RBM6	2.300011e-05	1.033104e-130	3.046874e-05	5.923982e-01	20
HTN ENSG00000198715	1 C1orf85	4.300015e-03	0.000000e+00	4.387570e-03	5.903143e-01	20
HTN ENSG00000102978	16 POLR2C	3.699985e-04	9.468183e-12	1.607120e-03	5.853227e-01	18
HTN ENSG00000175611	9 LINC00476	1.199997e-03	5.785793e-64	1.462551e-03	5.752181e-01	20
HTN ENSG00000162302	11 RPS6KA4	1.299990e-03	1.309384e-40	1.710367e-03	5.745622e-01	20
HTN ENSG00000164331	5 ANKRA2	1.400006e-03	2.225835e-13	3.414373e-03	5.735836e-01	13
HTN ENSG00000170145	11 SIK2	1.600000e-03	2.123679e-15	3.360019e-03	5.724553e-01	20
HTN ENSG00000177302	17 TOP3A	3.599979e-03	3.353602e-11	7.755608e-03	5.704291e-01	9
HTN ENSG00000141076	16 CIRH1A	9.200046e-04	3.318449e-16	2.131710e-03	5.699697e-01	17
HTN ENSG00000165548	14 TMEM63C	3.299970e-03	4.531529e-66	3.796231e-03	5.694348e-01	20
HTN ENSG00000076685	10 NT5C2	1.199997e-09	6.202238e-11	8.561912e-06	5.652220e-01	9
HTN ENSG00000178951	19 ZBTB7A	6.900014e-04	3.924324e-10	2.851167e-03	5.586581e-01	14
HTN ENSG00000225329	7 RP11-325F22.5	3.699985e-03	5.594673e-15	6.469330e-03	5.474067e-01	13
HTN ENSG00000169062	13 UPF3A	8.799946e-04	3.663451e-22	1.663440e-03	5.409340e-01	20
HTN ENSG00000198682	10 PAPSS2	7.799917e-04	1.573598e-10	2.936395e-03	5.355600e-01	11
HTN ENSG00000172367	11 PDZD3	6.299992e-03	1.050678e-24	8.319265e-03	5.328599e-01	20
HTN ENSG00000183506	22 PI4KAP2	7.900053e-04	1.814511e-28	1.315983e-03	5.328357e-01	20
HTN ENSG00000175895	8 PLEKHF2	1.499996e-03	5.197187e-12	4.008311e-03	5.301505e-01	13

HTN	ENSG00000127124	1	HIVEP3	4.300015e-03	3.513997e-16	7.106545e-03	5.239367e-01	10
HTN	ENSG00000231160	4	RP11-617D20.1	2.800013e-04	5.790735e-34	4.934277e-04	5.210129e-01	20
HTN	ENSG00000186583	8	SPATC1	3.699985e-03	2.980442e-10	8.361261e-03	5.173531e-01	14
HTN	ENSG00000074755	17	ZZEF1	1.600000e-05	1.644389e-09	4.534265e-04	5.159439e-01	9
HTN	ENSG00000166971	16	AKTIP	3.699985e-03	8.002608e-11	8.093262e-03	5.158140e-01	8
HTN	ENSG00000071575	2	TRIB2	1.099993e-03	1.345516e-10	3.716473e-03	5.144565e-01	17
HTN	ENSG00000170949	19	ZNF160	2.500000e-03	1.870959e-16	4.486044e-03	5.086530e-01	14
HTN	ENSG00000125510	20	OPRL1	4.000000e-04	1.816165e-32	6.950178e-04	5.015689e-01	20
HTN	ENSG00000089916	14	GPATCH2L	2.399993e-04	1.077605e-22	5.921426e-04	4.973456e-01	20
HTN	ENSG00000070831	1	CDC42	1.899984e-03	1.836616e-29	2.811728e-03	4.947495e-01	20
HTN	ENSG00000137815	15	RTF1	3.200000e-04	1.620132e-10	1.727514e-03	4.825236e-01	20
HTN	ENSG00000257433	12	RP1-197B17.3	7.100027e-03	9.557661e-31	8.702416e-03	4.822473e-01	20
HTN	ENSG00000246174	11	KCTD21-AS1	2.900013e-03	1.493416e-69	3.326349e-03	4.756579e-01	20
HTN	ENSG00000196275	7	GTF2IRD2	5.399953e-05	1.255090e-26	1.595092e-04	4.747678e-01	20
HTN	ENSG00000156931	3	VPS8	3.599979e-03	3.658645e-20	5.553943e-03	4.733803e-01	20
HTN	ENSG00000181634	9	TNFSF15	6.900014e-03	3.547995e-18	9.931778e-03	4.708400e-01	18
HTN	ENSG00000205903	7	ZNF316	1.099993e-03	1.270903e-31	1.685065e-03	4.684397e-01	20
HTN	ENSG00000130177	13	CDC16	1.199997e-03	4.163735e-131	1.341454e-03	4.665146e-01	20
HTN	ENSG00000242247	22	ARFGAP3	3.200000e-03	1.561334e-24	4.581097e-03	4.659483e-01	20
HTN	ENSG00000081014	15	AP4E1	1.700004e-03	2.513599e-21	2.907587e-03	4.634128e-01	20
HTN	ENSG00000109180	4	OCIAD1	6.900014e-04	5.881175e-12	2.339968e-03	4.582127e-01	20
HTN	ENSG00000116127	2	ALMS1	1.700004e-03	1.594791e-23	2.722008e-03	4.572184e-01	20
HTN	ENSG00000109519	4	GRPEL1	2.100003e-04	2.548471e-10	1.392122e-03	4.564956e-01	9
HTN	ENSG00000164938	8	TP53INP1	1.600000e-03	8.169517e-17	3.148094e-03	4.539066e-01	20
HTN	ENSG00000138036	2	DYNC2LI1	2.000000e-03	2.921344e-10	5.488812e-03	4.440096e-01	10
HTN	ENSG00000104325	8	DECR1	5.000000e-04	1.035242e-49	6.967784e-04	4.388839e-01	3
HTN	ENSG00000126215	14	XRCC3	8.300036e-06	2.081461e-33	2.910892e-05	4.371467e-01	20
HTN	ENSG00000175470	10	PPP2R2D	2.000000e-03	6.725112e-21	3.313481e-03	4.365649e-01	12
HTN	ENSG00000116273	1	PHF13	4.700023e-04	6.847078e-29	8.391895e-04	4.360960e-01	20
HTN	ENSG00000197548	3	ATG7	1.899984e-03	1.296560e-12	4.507403e-03	4.229349e-01	7

HTN	ENSG00000172269	11 DPAGT1	1.299990e-03	5.723483e-10	4.209038e-03	4.200642e-01	10
HTN	ENSG00000104497	8 SNX16	8.500021e-03	1.463810e-50	9.576851e-03	4.185568e-01	20
HTN	ENSG00000077458	11 FAM76B	5.899973e-03	2.573455e-27	7.611721e-03	4.183706e-01	20
HTN	ENSG00000198270	12 TMEM116	1.199997e-03	4.383078e-20	2.200845e-03	4.138927e-01	14
HTN	ENSG00000126581	17 BECN1	2.100003e-03	7.331944e-17	3.937498e-03	4.058835e-01	4
HTN	ENSG00000135114	12 OASL	3.799969e-03	6.789530e-19	5.936165e-03	4.055816e-01	20
HTN	ENSG00000233006	5 AC034220.3	1.400006e-07	1.284508e-11	3.196351e-05	4.052090e-01	8
HTN	ENSG00000130766	1 SESN2	5.600025e-03	1.684835e-20	7.955109e-03	3.988850e-01	20
HTN	ENSG00000229515	3 FLT1P1	1.499996e-03	3.209579e-16	3.033055e-03	3.958458e-01	20
HTN	ENSG00000169994	2 MYO7B	6.699926e-03	7.460372e-37	7.968929e-03	3.894307e-01	20
HTN	ENSG00000197562	16 RAB40C	4.700023e-03	6.779167e-19	7.099366e-03	3.844637e-01	19
HTN	ENSG00000128973	15 CLN6	1.799990e-03	4.038890e-41	2.333130e-03	3.838043e-01	20
HTN	ENSG00000128944	15 KNSTRN	4.000000e-03	7.032152e-73	4.528593e-03	3.744574e-01	20
HTN	ENSG00000242435	7 UPK3BP1	5.000000e-03	3.293470e-15	8.226372e-03	3.731737e-01	13
HTN	ENSG00000253981	8 ALG1L13P	1.099993e-04	6.231092e-09	1.259773e-03	3.690775e-01	20
HTN	ENSG00000118520	6 ARG1	4.700023e-03	8.145405e-71	5.288623e-03	3.636502e-01	20
HTN	ENSG00000160208	21 RRP1B	8.600031e-08	1.332832e-08	9.740007e-05	3.582266e-01	7
HTN	ENSG00000137825	15 ITPKA	1.000000e-03	1.071662e-09	3.872722e-03	3.562194e-01	8
HTN	ENSG00000132881	1 RSG1	2.800013e-03	2.048843e-11	6.386141e-03	3.521575e-01	13
HTN	ENSG00000114670	3 NEK11	4.399973e-03	3.340093e-16	7.134837e-03	3.509016e-01	18
HTN	ENSG00000134697	1 GNL2	2.900013e-03	4.071848e-08	8.947397e-03	3.450891e-01	7
HTN	ENSG00000229759	3 MRPS18AP1	1.700004e-05	1.118677e-32	5.180094e-05	3.378194e-01	20
HTN	ENSG00000163875	1 MEAF6	1.199997e-03	1.528650e-33	1.698782e-03	3.370794e-01	13
HTN	ENSG00000135250	7 SRPK2	9.400046e-04	1.984758e-25	1.610777e-03	3.340774e-01	20
HTN	ENSG00000106460	7 TMEM106B	1.700004e-03	6.775056e-32	2.434663e-03	3.331718e-01	20
HTN	ENSG00000115525	2 ST3GAL5	1.299990e-03	5.881480e-12	3.634982e-03	3.328264e-01	7
HTN	ENSG00000164649	7 CDCA7L	3.299970e-03	1.691832e-78	3.715747e-03	3.327405e-01	20
HTN	ENSG00000213347	5 MXD3	1.799990e-04	1.755246e-14	7.725013e-04	3.256976e-01	17
HTN	ENSG00000132394	3 EEFSEC	2.699977e-03	3.319088e-14	5.259106e-03	3.232890e-01	20
HTN	ENSG00000107099	9 DOCK8	6.100002e-03	4.329271e-25	7.997494e-03	3.228875e-01	9

HTN	ENSG00000164048	3 ZNF589	1.400006e-05	4.022437e-57	2.862571e-05	3.126335e-01	20
HTN	ENSG00000118046	19 STK11	4.300015e-03	1.169242e-23	6.049325e-03	3.111462e-01	15
HTN	ENSG00000204020	10 LIPN	9.099971e-03	3.789223e-130	9.457204e-03	3.036706e-01	20
HTN	ENSG00000187446	15 CHP1	2.199986e-06	2.739411e-09	2.126556e-04	3.003783e-01	18
HTN	ENSG00000169682	16 SPNS1	1.499996e-05	4.724044e-62	2.819771e-05	2.969624e-01	20
HTN	ENSG00000177710	8 SLC35G5	5.899973e-05	5.670154e-15	3.544943e-04	2.932108e-01	20
HTN	ENSG00000134222	1 PSRC1	1.499996e-03	2.328505e-18	2.918647e-03	2.931647e-01	11
HTN	ENSG00000128928	15 IVD	4.799986e-03	6.557881e-26	6.428913e-03	2.930216e-01	20
HTN	ENSG00000072778	17 ACADVL	1.600000e-06	2.222332e-28	1.079017e-05	2.915076e-01	20
HTN	ENSG00000152219	11 ARL14EP	4.499974e-04	4.117926e-31	7.861205e-04	2.903419e-01	20
HTN	ENSG00000170185	4 USP38	2.000000e-07	6.314544e-27	2.894966e-06	2.903364e-01	20
HTN	ENSG00000165678	10 GHITM	6.299992e-03	1.004647e-22	8.525961e-03	2.831577e-01	12
HTN	ENSG00000110218	11 PANX1	7.000032e-03	2.610154e-31	8.578608e-03	2.824396e-01	20
HTN	ENSG00000099940	22 SNAP29	7.000032e-04	4.259234e-45	9.838860e-04	2.805671e-01	20
HTN	ENSG00000157335	16 CLEC18C	1.499996e-04	2.433242e-71	2.093051e-04	2.797684e-01	20
HTN	ENSG00000189050	17 RNFT1	3.299970e-03	9.599369e-09	8.894122e-03	2.788751e-01	7
HTN	ENSG00000241350	7 PMS2P11	2.199986e-03	1.167979e-59	2.644719e-03	2.703836e-01	20
HTN	ENSG00000089060	12 SLC8B1	4.600023e-04	4.793401e-10	2.262577e-03	2.567944e-01	8
HTN	ENSG00000159202	17 UBE2Z	2.800013e-04	3.409896e-45	4.282945e-04	2.559577e-01	20
HTN	ENSG00000099377	16 HSD3B7	4.200007e-06	2.086672e-15	6.860492e-05	2.492687e-01	13
HTN	ENSG00000129007	15 CALML4	2.599980e-03	2.440509e-13	5.361232e-03	2.486060e-01	12
HTN	ENSG00000099949	22 LZTR1	4.900044e-03	3.306234e-66	5.509126e-03	2.481564e-01	16
HTN	ENSG00000163933	3 RFT1	5.699936e-04	1.199092e-10	2.394566e-03	2.443905e-01	6
HTN	ENSG00000158517	7 NCF1	1.499996e-05	2.381417e-08	6.310419e-04	2.414962e-01	3
HTN	ENSG00000114850	3 SSR3	2.199986e-04	3.066419e-09	1.705592e-03	2.406600e-01	12
HTN	ENSG00000108262	17 GIT1	2.500000e-08	5.790310e-25	9.514330e-07	2.359132e-01	20
HTN	ENSG00000165806	10 CASP7	3.200000e-03	5.301279e-50	3.871914e-03	2.319504e-01	20
HTN	ENSG00000163956	4 LRPAP1	2.800013e-03	1.264813e-40	3.537573e-03	2.229606e-01	20
HTN	ENSG00000170606	5 HSPA4	1.099993e-03	6.542009e-18	2.258597e-03	2.201700e-01	7
HTN	ENSG00000231680	11 AP003774.6	1.299990e-03	1.427765e-35	1.786645e-03	2.126258e-01	20

HTN	ENSG00000099785	19	2-Mar	2.100003e-03	1.572091e-39	2.750458e-03	2.104973e-01	20
HTN	ENSG00000146576	7	C7orf26	1.099993e-03	8.565571e-20	2.143522e-03	2.100575e-01	20
HTN	ENSG00000089169	12	RPH3A	1.099993e-03	1.461064e-112	1.229069e-03	2.087622e-01	20
HTN	ENSG00000196502	16	SULT1A1	4.099964e-04	2.635881e-22	9.043348e-04	2.084994e-01	20
HTN	ENSG00000167394	16	ZNF668	1.400006e-05	2.137503e-21	7.687957e-05	2.021489e-01	20
HTN	ENSG00000198026	20	ZNF335	1.899984e-03	4.386446e-13	4.234932e-03	1.915555e-01	20
HTN	ENSG00000197375	5	SLC22A5	2.100003e-08	3.678602e-37	2.905371e-07	1.902020e-01	20
HTN	ENSG00000171132	2	PRKCE	4.499974e-06	1.545200e-08	3.660083e-04	1.861080e-01	6
HTN	ENSG00000242612	16	DECR2	1.899984e-03	6.059300e-28	2.769397e-03	1.783255e-01	20
HTN	ENSG00000245680	19	ZNF585B	3.599979e-03	2.343009e-08	9.891909e-03	1.767396e-01	18
HTN	ENSG00000143549	1	TPM3	4.399973e-03	4.266791e-14	7.642888e-03	1.705815e-01	20
HTN	ENSG00000253982	8	CTD-2336O2.1	1.199997e-03	7.156469e-30	1.890281e-03	1.703484e-01	20
HTN	ENSG00000087274	4	ADD1	1.000000e-03	5.059829e-12	3.011689e-03	1.696842e-01	12
HTN	ENSG00000130479	19	MAP1S	4.600023e-04	7.909072e-12	1.833321e-03	1.669084e-01	6
HTN	ENSG00000100991	20	TRPC4AP	7.499978e-03	6.697828e-25	9.601345e-03	1.642234e-01	20
HTN	ENSG00000237886	9	RP11-611D20.2	4.399973e-03	1.514880e-43	5.254872e-03	1.612823e-01	17
HTN	ENSG00000198756	1	COLGALT2	6.800017e-04	5.686644e-68	8.543709e-04	1.595650e-01	20
HTN	ENSG00000141905	19	NFIC	1.099993e-03	5.924845e-14	2.704856e-03	1.523805e-01	11
HTN	ENSG00000060642	1	PIGV	2.000000e-04	3.434974e-26	4.509314e-04	1.465846e-01	20
HTN	ENSG00000232934	10	RP11-324O2.3	4.499974e-03	4.525531e-27	6.070736e-03	1.460566e-01	20
HTN	ENSG00000161618	19	ALDH16A1	4.000000e-03	4.151776e-83	4.430819e-03	1.419699e-01	20
HTN	ENSG00000198373	16	WWP2	1.400006e-03	1.966110e-11	3.848009e-03	1.414012e-01	12
HTN	ENSG00000102858	16	MGRN1	2.000000e-03	1.738449e-76	2.304540e-03	1.392583e-01	20
HTN	ENSG00000169230	5	PRELID1	3.299970e-04	1.856860e-44	5.103636e-04	1.311331e-01	20
HTN	ENSG00000163935	3	SFMBT1	1.099993e-04	1.808688e-14	5.399787e-04	1.293834e-01	20
HTN	ENSG00000142233	19	NTN5	1.499996e-07	1.110479e-10	4.658716e-05	1.284163e-01	6
HTN	ENSG00000100296	22	THOC5	7.499978e-03	5.157231e-25	9.597092e-03	1.274868e-01	20
HTN	ENSG00000173209	2	AHSA2	1.499996e-03	2.038960e-78	1.735324e-03	1.268213e-01	20
HTN	ENSG00000213445	11	SIPA1	1.000000e-05	2.359846e-09	3.873465e-04	1.262794e-01	7
HTN	ENSG00000177337	18	DLGAP1-AS1	2.000000e-03	1.070509e-29	2.921000e-03	1.226502e-01	16

HTN	ENSG00000173706	3 HEG1	2.800013e-03	5.720822e-13	5.813380e-03	1.214608e-01	13
HTN	ENSG00000184110	16 EIF3C	1.299990e-03	6.027230e-09	4.810378e-03	1.204923e-01	14
HTN	ENSG00000211678	22 IGLJ3	5.099998e-03	3.138398e-14	8.619907e-03	1.203622e-01	12
HTN	ENSG00000226416	11 MRPL23-AS1	2.199986e-06	7.159711e-17	3.781495e-05	1.195340e-01	11
HTN	ENSG00000170291	17 ELP5	8.300036e-06	1.866290e-23	4.724128e-05	1.181758e-01	20
HTN	ENSG00000124207	20 CSE1L	4.099964e-05	6.786886e-10	6.392148e-04	1.164604e-01	9
HTN	ENSG00000114520	3 SNX4	8.099906e-04	6.838228e-10	3.253818e-03	1.157323e-01	8
HTN	ENSG00000127957	7 PMS2P3	8.900000e-04	2.638558e-22	1.658917e-03	1.065902e-01	13
HTN	ENSG00000131067	20 GGT7	1.499996e-03	2.919427e-11	4.153307e-03	1.048210e-01	18
HTN	ENSG00000218739	2 AC007390.5	3.599979e-06	3.715975e-21	3.215374e-05	1.044967e-01	20
HTN	ENSG00000067533	1 RRP15	4.300015e-03	9.265494e-11	9.055078e-03	1.016391e-01	4
HTN	ENSG00000249173	4 RP11-701P16.4	7.599937e-04	6.746404e-18	1.712115e-03	9.914470e-02	8
HTN	ENSG00000233609	8 RP11-62H7.2	1.400006e-05	3.105938e-32	4.553298e-05	9.581736e-02	20
HTN	ENSG00000182179	3 UBA7	1.899984e-05	1.781217e-61	3.540020e-05	9.574361e-02	20
HTN	ENSG00000257017	16 HP	5.699936e-04	1.510386e-13	1.783675e-03	9.154262e-02	20
HTN	ENSG00000228638	3 FCF1P2	1.700004e-04	1.525957e-22	4.501149e-04	8.623376e-02	20
HTN	ENSG00000175193	3 PARL	4.700023e-04	1.050771e-34	7.639080e-04	8.364511e-02	20
HTN	ENSG00000188603	16 CLN3	1.899984e-03	1.669228e-15	3.780159e-03	8.277284e-02	16
HTN	ENSG00000146243	6 IRAK1BP1	2.500000e-03	1.444490e-14	4.881620e-03	7.840303e-02	20
HTN	ENSG00000249572	5 CTD-2203K17.1	5.999983e-03	1.230804e-23	8.078927e-03	7.649568e-02	12
HTN	ENSG00000153774	16 CFDP1	3.200000e-03	1.041082e-28	4.349498e-03	7.441597e-02	20
HTN	ENSG00000108559	17 NUP88	4.200007e-03	1.314758e-11	8.365086e-03	7.430579e-02	14
HTN	ENSG00000268081	19 RP11-678G14.2	1.299990e-03	9.217095e-35	1.832037e-03	7.334437e-02	20
HTN	ENSG00000229453	3 SPINK8	1.400006e-04	5.862027e-15	6.100594e-04	7.270794e-02	15
HTN	ENSG00000175826	17 CTDNEP1	4.900044e-06	4.251838e-25	2.911391e-05	7.062475e-02	20
HTN	ENSG00000230069	4 LRRC37A15P	6.100002e-03	6.952534e-21	8.432667e-03	7.019743e-02	20
HTN	ENSG00000113810	3 SMC4	1.099993e-03	8.452299e-09	4.597393e-03	6.979473e-02	7
HTN	ENSG00000198837	1 DENND4B	4.099964e-03	7.794788e-22	5.911139e-03	6.958902e-02	10
HTN	ENSG00000169592	16 INO80E	4.600023e-05	2.690099e-17	2.402432e-04	6.790582e-02	16
HTN	ENSG00000033800	15 PIAS1	2.399993e-03	2.188468e-17	4.300294e-03	6.754985e-02	20

HTN ENSG00000158865	16 SLC5A11	1.400006e-05	1.390179e-104	1.987144e-05	6.647293e-02	20
HTN ENSG00000167397	16 VKORC1	4.200007e-07	7.716004e-10	9.353322e-05	6.382336e-02	20
HTN ENSG00000149084	11 HSD17B12	1.099993e-04	1.490246e-136	1.369200e-04	6.257548e-02	20
HTN ENSG00000223496	16 EXOSC6	6.400000e-03	1.971035e-87	6.888282e-03	6.228612e-02	20
HTN ENSG00000102882	16 MAPK3	4.900044e-03	4.368646e-53	5.599764e-03	6.087628e-02	20
HTN ENSG00000261098	11 RP11-819C21.1	5.999983e-06	1.475422e-08	4.054215e-04	6.065650e-02	14
HTN ENSG00000130475	19 FCHO1	4.499974e-03	1.750045e-43	5.420931e-03	6.007120e-02	20
HTN ENSG00000167523	16 SPATA33	5.399953e-03	5.912893e-14	9.146081e-03	5.770674e-02	20
HTN ENSG00000186792	3 HYAL3	7.599937e-03	3.051381e-56	8.492584e-03	5.760698e-02	20
HTN ENSG00000141569	17 TRIM65	1.600000e-03	3.154466e-30	2.379239e-03	5.543923e-02	20
HTN ENSG00000261556	16 RP11-296I10.6	6.400000e-03	1.150177e-54	7.215056e-03	5.510002e-02	20
HTN ENSG00000111424	12 VDR	6.800017e-04	4.798333e-16	1.715278e-03	5.356671e-02	6
HTN ENSG00000047849	3 MAP4	2.000000e-03	1.542218e-14	4.204405e-03	5.289011e-02	20
HTN ENSG00000104626	8 ERI1	2.599980e-03	1.085084e-25	3.838429e-03	5.241534e-02	20
HTN ENSG00000197536	5 C5orf56	1.099993e-03	5.328123e-16	2.521280e-03	5.129596e-02	20
HTN ENSG00000168404	16 MLKL	1.199997e-03	2.512359e-15	2.764053e-03	5.115273e-02	7
COPIENSG00000213593	11 TMX2	2.725400e-03	2.306139e-09	7.385600e-03	9.802675e-01	10
COPIENSG00000160111	19 CPAMD8	7.024900e-03	5.628356e-31	8.655196e-03	9.713448e-01	7
COPIENSG00000243176	3 RP11-550I24.2	8.603990e-05	2.207533e-19	3.189823e-04	9.606569e-01	19
COPIENSG00000226259	5 GTF2H2B	2.038450e-03	5.231025e-57	2.460106e-03	9.600415e-01	17
COPIENSG00000096996	19 IL12RB1	1.239770e-03	4.634410e-41	1.689891e-03	9.530951e-01	20
COPIENSG00000261613	16 RP11-20I23.13	6.151910e-03	2.589742e-74	6.745165e-03	9.154116e-01	20
COPIENSG00000260565	16 ERVK13-1	2.541970e-03	1.165310e-49	3.101047e-03	9.057595e-01	20
COPIENSG00000244515	3 KRT18P34	1.613650e-04	9.198012e-10	1.317995e-03	8.886723e-01	8
COPIENSG00000169203	16 RP11-231C14.4	6.601000e-04	1.034063e-13	1.958956e-03	8.875116e-01	12
COPIENSG00000131507	5 NDFIP1	3.304610e-03	4.061387e-11	7.272310e-03	8.864523e-01	16
COPIENSG00000153786	16 ZDHHC7	4.942200e-03	6.872571e-16	7.943179e-03	8.791625e-01	20
COPIENSG00000204138	1 PHACTR4	6.875270e-04	1.025339e-32	1.096464e-03	8.760531e-01	20
COPIENSG00000149131	11 SERPING1	6.766440e-04	4.004789e-08	3.852771e-03	8.738908e-01	7
COPIENSG00000254634	16 RP11-231C14.3	6.774540e-04	4.872347e-09	3.294641e-03	8.692753e-01	6

COPIENSG00000163660	3 CCNL1	1.690050e-04	1.121278e-17	5.739889e-04	8.623977e-01	20
COPIENSG00000166501	16 PRKCB	1.926900e-03	1.343533e-23	3.052374e-03	8.575436e-01	20
COPIENSG00000106804	9 C5	1.095390e-03	6.879762e-17	2.361136e-03	8.569044e-01	20
COPIENSG00000134996	9 OSTF1	3.800840e-03	1.360915e-22	5.515509e-03	8.471534e-01	20
COPIENSG00000113758	5 DBN1	2.067430e-04	2.239267e-18	6.359034e-04	8.369132e-01	12
COPIENSG00000080345	2 RIF1	2.051110e-03	6.049991e-10	5.790953e-03	8.338034e-01	6
COPIENSG00000267795	16 SMIM22	5.257750e-03	4.381915e-31	6.661142e-03	8.292693e-01	20
COPIENSG00000272950	7 RP11-307C18.1	3.186250e-03	2.356161e-43	3.925374e-03	8.141484e-01	20
COPIENSG00000172878	2 METAP1D	3.384700e-03	2.998911e-11	7.331367e-03	8.026105e-01	9
COPIENSG00000140623	16 SEPT12	5.257750e-03	1.083659e-30	6.681400e-03	8.015636e-01	20
COPIENSG00000077585	1 GPR137B	5.143040e-03	4.588184e-21	7.316538e-03	7.997026e-01	13
COPIENSG00000186152	19 LILRP1	5.975720e-03	2.063912e-30	7.510927e-03	7.977766e-01	13
COPIENSG00000089876	10 DHX32	5.332000e-04	3.458518e-35	8.518212e-04	7.915997e-01	20
COPIENSG00000196526	4 AFAP1	6.992620e-04	4.972368e-306	7.354526e-04	7.915074e-01	20
COPIENSG00000206077	5 ZDHHC11B	3.774070e-03	6.149930e-12	7.601001e-03	7.888818e-01	3
COPIENSG00000184110	16 EIF3C	1.272150e-03	6.027230e-09	4.824480e-03	7.857949e-01	15
COPIENSG00000116883	1 RP11-268J15.5	7.172820e-03	2.008216e-27	9.060682e-03	7.684238e-01	18
COPIENSG00000133275	19 CSNK1G2	2.142990e-04	5.575382e-15	8.224362e-04	7.653663e-01	14
COPIENSG00000267077	16 RP11-127I20.5	7.043360e-03	1.726453e-33	8.540381e-03	7.633402e-01	20
COPIENSG00000183458	16 RP11-958N24.1	4.270220e-03	5.488410e-11	8.804844e-03	7.409882e-01	15
COPIENSG00000144136	2 SLC20A1	3.811800e-03	3.011723e-10	8.559426e-03	7.332337e-01	14
COPIENSG00000246089	8 RP11-115C21.2	1.812470e-03	4.013782e-25	2.819640e-03	7.327740e-01	20
COPIENSG00000119397	9 CNTRL	1.690640e-03	2.115581e-12	4.148794e-03	7.285716e-01	17
COPIENSG00000226450	22 CYP2D8P1	6.032540e-03	3.276098e-15	9.512461e-03	7.256941e-01	20
COPIENSG00000103269	16 RHBDL1	9.160100e-05	2.920524e-15	4.564612e-04	7.234083e-01	18
COPIENSG00000076864	1 RAP1GAP	6.164250e-03	9.078676e-65	6.850709e-03	7.232028e-01	20
COPIENSG00000198890	1 PRMT6	2.143780e-03	3.449739e-41	2.766753e-03	7.141327e-01	17
COPIENSG00000095261	9 PSMD5	2.071190e-03	2.811046e-08	7.074800e-03	7.073312e-01	8
COPIENSG00000113269	5 RNF130	5.287740e-03	3.384930e-28	6.859605e-03	7.049021e-01	7
COPIENSG00000183604	16 RP11-347C12.2	6.554200e-04	2.316458e-23	1.263871e-03	7.031619e-01	20

COPIENSG00000176125	7 UFSP1	4.842730e-03	1.927300e-16	7.691137e-03	6.918795e-01	20
COPIENSG00000147324	8 MFHAS1	1.456330e-03	1.108237e-11	3.947135e-03	6.912065e-01	20
COPIENSG00000183336	16 BOLA2	2.000230e-03	8.655712e-27	2.985806e-03	6.832111e-01	20
COPIENSG00000213462	7 ERV3-1	2.457650e-03	5.521211e-46	3.054464e-03	6.797640e-01	20
COPIENSG00000198064	16 RP11-347C12.1	2.751250e-03	5.445186e-09	7.726886e-03	6.796167e-01	5
COPIENSG00000271780	14 RP11-1017G21.5	6.813500e-03	2.460822e-23	9.026661e-03	6.779318e-01	15
COPIENSG00000112282	6 MED23	7.074570e-03	1.015000e-19	9.814723e-03	6.713071e-01	20
COPIENSG00000241852	8 C8orf58	5.949220e-03	1.099110e-13	9.896809e-03	6.565663e-01	20
COPIENSG00000137877	15 SPTBN5	1.077900e-03	8.067098e-56	1.369332e-03	6.557002e-01	20
COPIENSG00000243156	22 MICAL3	9.675650e-04	1.216703e-10	3.319832e-03	6.542695e-01	20
COPIENSG00000129355	19 CDKN2D	1.817190e-03	2.361771e-09	5.705515e-03	6.376992e-01	5
COPIENSG00000137267	6 TUBB2A	9.624760e-05	1.709453e-143	1.156962e-04	6.373814e-01	20
COPIENSG00000143740	1 SNAP47	8.312470e-06	6.565554e-09	4.086599e-04	6.241995e-01	7
COPIENSG00000125447	17 GGA3	8.200120e-04	1.396315e-14	2.151138e-03	6.238024e-01	9
COPIENSG00000146285	6 SCML4	4.641300e-03	1.288469e-32	5.887712e-03	6.204101e-01	20
COPIENSG00000261349	1 RP3-465N24.5	4.754780e-03	1.823445e-113	5.086454e-03	6.092782e-01	20
COPIENSG00000065029	6 ZNF76	5.014180e-03	1.341057e-22	6.989777e-03	6.087918e-01	20
COPIENSG00000171792	12 RHNO1	5.022270e-03	3.432308e-27	6.617980e-03	6.007850e-01	20
COPIENSG00000164039	4 BDH2	6.145260e-03	1.193008e-18	8.884430e-03	5.976190e-01	20
COPIENSG00000166896	12 XRCC6BP1	8.688400e-03	2.465174e-104	9.185037e-03	5.804236e-01	20
COPIENSG00000023892	6 DEF6	2.340020e-03	1.237275e-50	2.861289e-03	5.710396e-01	20
COPIENSG00000111237	12 VPS29	2.646920e-03	6.445495e-15	5.036424e-03	5.651208e-01	11
COPIENSG00000261783	16 RP11-252K23.2	3.837960e-03	8.525660e-26	5.312178e-03	5.634497e-01	20
COPIENSG00000250138	5 RP11-848G14.5	4.156430e-03	5.838765e-21	6.120394e-03	5.517361e-01	6
COPIENSG00000259940	16 CTD-3203P2.1	3.020860e-03	2.574405e-08	8.857690e-03	5.489396e-01	8
COPIENSG00000167210	18 LOXHD1	8.448700e-03	1.961152e-51	9.476987e-03	5.283677e-01	10
COPIENSG00000235750	1 KIAA0040	2.107710e-04	3.465920e-09	1.693594e-03	5.195811e-01	9
COPIENSG00000172057	17 ORMDL3	2.165610e-04	4.006311e-56	3.166226e-04	5.184753e-01	20
COPIENSG00000178809	7 TRIM73	1.201710e-03	1.870493e-10	3.889797e-03	5.093095e-01	3
COPIENSG00000140395	15 WDR61	1.273500e-11	1.144011e-14	3.555377e-07	5.087066e-01	15

COPIENSG00000253816	5 RP11-1415C14.3	2.102760e-03	2.206111e-08	7.038011e-03	5.030497e-01	4
COPIENSG00000119242	12 CCDC92	1.567330e-04	1.200562e-14	6.871473e-04	5.024205e-01	11
COPIENSG00000104972	19 LILRB1	4.750840e-03	1.193088e-35	5.893138e-03	5.007120e-01	20
COPIENSG00000187010	1 RHD	5.265990e-03	8.690250e-293	5.399164e-03	4.982341e-01	20
COPIENSG00000160563	9 MED27	7.406790e-03	2.227005e-23	9.704960e-03	4.963247e-01	20
COPIENSG00000254554	11 RP11-351I24.1	5.174280e-04	3.678269e-20	1.162651e-03	4.959180e-01	20
COPIENSG00000099994	22 SUSD2	1.205400e-04	3.204980e-17	4.670826e-04	4.925164e-01	13
COPIENSG00000230910	6 RP3-525N10.2	3.204870e-03	8.504365e-43	3.957011e-03	4.847773e-01	20
COPIENSG00000234585	7 CCT6P3	2.457650e-03	3.118596e-100	2.715730e-03	4.776870e-01	20
COPIENSG00000226002	7 RP11-460N20.5	2.831130e-03	5.320302e-98	3.118400e-03	4.756602e-01	20
COPIENSG00000178952	16 TUFM	5.566860e-04	3.387607e-286	5.898144e-04	4.750088e-01	20
COPIENSG00000168385	2 SEPT2	3.333420e-03	2.249848e-90	3.677676e-03	4.590536e-01	20
COPIENSG00000082258	2 CCNT2	1.977290e-03	5.030508e-15	4.014710e-03	4.572022e-01	12
COPIENSG00000179902	1 C1orf194	3.195580e-03	3.349465e-25	4.569560e-03	4.450094e-01	13
COPIENSG00000087274	4 ADD1	1.121860e-07	5.059829e-12	2.588625e-05	4.366392e-01	13
COPIENSG00000105339	8 DENND3	4.188030e-03	6.783045e-11	8.735390e-03	4.303932e-01	4
COPIENSG00000170858	19 LILRP2	4.750840e-03	2.354530e-90	5.171484e-03	4.198391e-01	20
COPIENSG00000126432	11 PRDX5	7.352410e-03	3.699254e-27	9.283797e-03	4.190844e-01	20
COPIENSG00000178093	19 TSSK6	3.110860e-03	4.763569e-12	6.560771e-03	4.181105e-01	20
COPIENSG00000133243	19 BTBD2	2.170850e-04	1.259791e-10	1.345621e-03	4.036117e-01	7
COPIENSG00000214435	10 AS3MT	2.007100e-03	1.204173e-37	2.670907e-03	3.984825e-01	20
COPIENSG00000153391	18 INO80C	7.482730e-04	1.389479e-16	1.798723e-03	3.890509e-01	13
COPIENSG00000140941	16 MAP1LC3B	1.235580e-03	1.177878e-16	2.614003e-03	3.888619e-01	20
COPIENSG00000198168	11 SVIP	4.536700e-03	2.974934e-11	9.047126e-03	3.799777e-01	6
COPIENSG00000133706	5 LARS	3.178480e-03	2.537190e-20	4.952553e-03	3.785075e-01	15
COPIENSG00000258429	16 PDF	1.763520e-06	7.831459e-11	1.176361e-04	3.587676e-01	13
COPIENSG00000125445	17 MRPS7	5.591010e-04	2.369119e-51	7.690162e-04	3.577159e-01	20
COPIENSG00000174529	1 TMEM81	5.048470e-03	1.191811e-12	9.100959e-03	3.519590e-01	20
COPIENSG00000154127	11 UBASH3B	5.992940e-04	1.036618e-18	1.379632e-03	3.488866e-01	20
COPIENSG00000041988	1 THAP3	4.926630e-03	1.396839e-12	8.962768e-03	3.488028e-01	16

COPIENSG00000136247	7 ZDHC4	2.404810e-03	1.839535e-47	2.973714e-03	3.440435e-01	20
COPIENSG00000227373	1 RP11-160H22.5	4.227850e-03	1.192922e-11	8.396358e-03	3.436549e-01	6
COPIENSG00000145736	5 GTF2H2	3.350190e-03	1.413800e-55	3.929735e-03	3.427660e-01	8
COPIENSG00000166130	12 IKBIP	4.472700e-04	1.001375e-15	1.298427e-03	3.424810e-01	14
COPIENSG00000117592	1 PRDX6	3.197350e-03	4.082654e-33	4.199106e-03	3.403783e-01	20
COPIENSG00000224183	1 SDHDP6	5.265990e-03	6.486986e-86	5.735031e-03	3.391662e-01	20
COPIENSG00000233232	16 NPIP7	1.541130e-03	9.931134e-25	2.476907e-03	3.306284e-01	20
COPIENSG00000166263	17 STXP4	1.035740e-03	1.561914e-19	2.043306e-03	3.282966e-01	15
COPIENSG00000166507	10 NDST2	4.259710e-03	2.177002e-16	6.945746e-03	3.275461e-01	17
COPIENSG00000225611	3 RP11-70C1.1	4.267560e-03	3.954602e-20	6.356920e-03	3.145871e-01	10
COPIENSG00000077782	8 FGFR1	7.280310e-03	1.746022e-46	8.344827e-03	3.126656e-01	16
COPIENSG00000183726	1 TMEM50A	5.265990e-03	1.750457e-53	6.040779e-03	3.119736e-01	20
COPIENSG00000172460	16 PRSS30P	2.695010e-03	3.689468e-40	3.426967e-03	3.028816e-01	20
COPIENSG00000161653	17 NAGS	3.329890e-03	5.017393e-10	7.940187e-03	2.962983e-01	10
COPIENSG00000165275	9 TRMT10B	3.926000e-03	5.148703e-27	5.339952e-03	2.953394e-01	20
COPIENSG00000266970	17 RP11-806H10.4	1.310840e-04	1.566021e-10	1.027940e-03	2.828901e-01	20
COPIENSG00000100417	22 PMM1	4.150880e-03	4.194480e-15	7.091063e-03	2.776247e-01	20
COPIENSG00000262468	16 RP11-95P2.1	4.277300e-05	1.102452e-08	8.781602e-04	2.674274e-01	7
COPIENSG00000119632	14 IFI27L2	4.940150e-03	1.015508e-37	6.035287e-03	2.647051e-01	13
COPIENSG00000197375	5 SLC22A5	3.471520e-07	3.678602e-37	2.231229e-06	2.624515e-01	20
COPIENSG00000140374	15 ETFA	6.985540e-03	3.562859e-34	8.443419e-03	2.488946e-01	20
COPIENSG00000145868	5 FBXO38	3.970730e-03	6.001640e-29	5.284437e-03	2.450832e-01	17
COPIENSG00000116032	19 GRIN3B	8.683600e-04	2.417162e-16	2.033479e-03	2.446738e-01	20
COPIENSG00000224203	1 RPS23P10	6.238640e-04	5.078994e-32	1.018979e-03	2.413937e-01	20
COPIENSG00000226029	1 RP4-798A10.2	6.272350e-03	2.926549e-25	8.213290e-03	2.378932e-01	20
COPIENSG00000049449	11 RCN1	6.130130e-03	3.297564e-15	9.636915e-03	2.367085e-01	12
COPIENSG00000145743	5 FBXL17	6.639260e-05	4.933431e-10	7.853110e-04	2.289893e-01	14
COPIENSG00000113441	5 LNPEP	4.046130e-05	4.697216e-13	3.568707e-04	2.289095e-01	11
COPIENSG00000273382	1 RP5-1065J22.8	1.757840e-03	4.467804e-15	3.664977e-03	2.266939e-01	9
COPIENSG00000169684	15 CHRNA5	8.373360e-14	3.602823e-12	3.632298e-07	2.254649e-01	14

COPIENSG00000167074	22 TEF	3.267160e-04	6.789273e-35	5.616166e-04	2.248580e-01	20
COPIENSG00000245954	4 RP11-18H21.1	1.024120e-03	4.395634e-112	1.156592e-03	2.162217e-01	20
COPIENSG00000008838	17 MED24	3.455650e-05	2.315095e-21	1.473480e-04	2.158687e-01	20
COPIENSG00000142552	19 RCN3	3.014600e-03	1.408453e-34	3.937611e-03	2.103693e-01	20
COPIENSG00000204859	1 ZBTB48	1.365780e-04	1.804759e-15	5.832465e-04	1.998664e-01	12
COPIENSG00000166147	15 FBN1	1.370280e-03	6.192685e-40	1.864290e-03	1.894928e-01	20
COPIENSG00000102882	16 MAPK3	2.970570e-03	4.368646e-53	3.539346e-03	1.887664e-01	20
COPIENSG00000187775	17 DNAH17	7.192670e-05	1.413545e-12	5.342543e-04	1.810220e-01	20
COPIENSG00000127580	16 WDR24	2.888420e-03	1.979732e-30	3.931594e-03	1.765146e-01	20
COPIENSG00000257176	12 RP11-996F15.2	5.194930e-03	2.964445e-73	5.744959e-03	1.736298e-01	20
COPIENSG00000125388	4 GRK4	1.858230e-06	1.581272e-29	1.122139e-05	1.718879e-01	20
COPIENSG00000267283	19 AC005306.3	2.142990e-04	1.019388e-12	1.019815e-03	1.694935e-01	14
COPIENSG00000151164	12 RAD9B	3.212920e-03	2.146602e-18	5.230439e-03	1.666779e-01	20
COPIENSG00000135972	2 MRPS9	5.035590e-05	3.185423e-24	1.665590e-04	1.655279e-01	20
COPIENSG00000134864	13 GACT	2.683980e-03	3.743778e-39	3.435184e-03	1.607661e-01	3
COPIENSG00000241945	21 PWP2	3.481770e-03	7.200620e-146	3.696369e-03	1.592608e-01	20
COPIENSG00000160221	21 C21orf33	3.229760e-03	1.288995e-144	3.436949e-03	1.590696e-01	20
COPIENSG00000152527	2 PLEKHH2	3.959680e-03	1.476253e-09	9.291106e-03	1.553262e-01	11
COPIENSG00000168488	16 ATXN2L	1.261940e-03	1.414974e-12	3.338931e-03	1.540578e-01	18
COPIENSG00000145734	5 BDP1	3.350190e-03	7.578276e-09	8.903197e-03	1.506992e-01	3
COPIENSG00000224635	20 RP4-564F22.5	5.247350e-03	7.076636e-67	5.856634e-03	1.410455e-01	20
COPIENSG00000103264	16 FBXO31	1.235580e-03	2.316710e-16	2.648003e-03	1.373066e-01	18
COPIENSG00000226822	1 RP11-356N1.2	7.108370e-03	6.207815e-53	8.023438e-03	1.359745e-01	20
COPIENSG00000107960	10 OBFC1	3.189330e-03	1.470249e-14	5.898160e-03	1.325032e-01	19
COPIENSG00000230847	5 RP11-195E2.1	3.350190e-03	1.598248e-32	4.399352e-03	1.294550e-01	3
COPIENSG00000259475	15 RP11-654A16.3	3.105490e-04	1.398949e-21	7.423118e-04	1.294452e-01	11
COPIENSG00000075651	3 PLD1	2.470420e-03	6.432045e-09	7.275051e-03	1.285177e-01	9
COPIENSG00000166275	10 C10orf32	4.612860e-03	1.176456e-22	6.501147e-03	1.254852e-01	20
COPIENSG00000228409	7 CCT6P1	3.465850e-03	6.383020e-17	5.794122e-03	1.251504e-01	18
COPIENSG00000167077	22 MEI1	1.888430e-03	3.486534e-55	2.305822e-03	1.207131e-01	20

COPIENSG00000178425	6 NT5DC1	4.171670e-04	5.013093e-09	2.517034e-03	1.202288e-01	20
COPIENSG00000164308	5 ERAP2	8.384940e-05	0.000000e+00	8.701764e-05	1.156462e-01	20
COPIENSG00000255571	15 LINC00925	6.661930e-04	1.726415e-12	2.175616e-03	1.118458e-01	15
COPIENSG00000253981	8 ALG1L13P	1.531370e-03	6.231092e-09	5.404151e-03	1.009754e-01	20
COPIENSG00000234389	2 AC007278.3	6.869580e-03	9.514866e-107	7.300443e-03	9.790403e-02	20
COPIENSG00000196236	22 XPNPEP3	9.166210e-04	2.753713e-20	1.809985e-03	9.617366e-02	20
COPIENSG00000073605	17 GSDMB	2.165610e-04	6.031688e-82	2.813299e-04	9.616956e-02	20
COPIENSG00000198198	1 SZT2	4.372800e-04	9.868162e-11	2.004761e-03	9.548117e-02	9
COPIENSG00000171055	2 FEZ2	7.412250e-04	2.772872e-52	9.882368e-04	8.935653e-02	20
COPIENSG00000205269	6 TMEM170B	6.145820e-03	7.142338e-28	7.863607e-03	8.818816e-02	20
COPIENSG00000233006	5 AC034220.3	2.895080e-04	1.284508e-11	1.396284e-03	8.817202e-02	11
COPIENSG00000188603	16 CLN3	3.944850e-03	1.669228e-15	6.719359e-03	8.100062e-02	17
COPIENSG00000167645	19 YIF1B	2.684290e-03	1.051250e-30	3.675304e-03	8.017017e-02	20
COPIENSG00000257218	12 GATC	6.435320e-03	1.956603e-18	9.274054e-03	7.701322e-02	19
COPIENSG00000146373	6 RNF217	7.245860e-04	4.065077e-08	4.001773e-03	7.672913e-02	4
COPIENSG00000157045	16 NTAN1	4.810610e-03	1.863269e-13	8.468662e-03	7.513829e-02	15
COPIENSG00000176476	16 CCDC101	5.026200e-03	1.722082e-32	6.331319e-03	7.486312e-02	20
COPIENSG00000233609	8 RP11-62H7.2	9.209370e-04	3.105938e-32	1.419732e-03	7.476797e-02	20
COPIENSG00000134255	1 CEPT1	8.994980e-05	3.866760e-22	2.833362e-04	7.339054e-02	20
COPIENSG00000215717	1 TMEM167B	1.757840e-03	2.292055e-36	2.396645e-03	7.240776e-02	20
COPIENSG00000259514	15 RP11-685G9.2	2.786630e-03	1.357017e-10	6.712961e-03	6.867625e-02	6
COPIENSG00000255310	8 AF131215.2	3.287300e-03	1.823350e-18	5.319172e-03	6.836634e-02	20
COPIENSG00000103550	16 KNOP1	2.989920e-03	1.170137e-30	4.044268e-03	6.750568e-02	20
COPIENSG00000196502	16 SULT1A1	2.436740e-03	2.635881e-22	3.809965e-03	6.262916e-02	20
COPIENSG00000134809	11 TIMM10	2.973170e-03	9.272034e-24	4.390564e-03	5.798618e-02	20
COPIENSG00000166170	14 BAG5	1.193220e-07	1.053511e-09	6.367446e-05	5.557145e-02	10
COPIENSG00000130731	16 C16orf13	7.729480e-03	2.178328e-91	8.266714e-03	5.465012e-02	20
COPIENSG00000088888	20 MAVS	9.107100e-04	3.745769e-14	2.382222e-03	5.258501e-02	20

**Table S9.Prioritized candidate genes with pleiotropic effects across COPD and cardiovascular diseases**

SYMBOL	P	Trait_pair	Pbon	sig.placo	eQTL_eQT.v8_Whole_Blood	SMR_Whole_Blood	SMR_eQTLGen	band
ABHD17C	5.2782e-07	COPD-HTN	0.00972931	1	1	1	0	0 q25.1
ADD1	1.9819e-07	COPD-HTN	0.00365324	1	1	1	1	1 p16.3
AF131215.5	1.8319e-06	COPD-HTN	0.03376741	1	0	0	0	0 NA
AL049840.1	2.5183e-09	COPD-HTN	4.64198239e-0	1	1	1	0	0 NA
APOPT1	2.3609e-09	COPD-HTN	4.35184697e-0	1	0	0	0	0 NA
BAG5	1.445e-09	COPD-HTN	2.6635685e-05	1	1	1	0	0 q32.33
BLK	8.1673e-07	COPD-HTN	0.01505478	1	1	1	1	1 p23.1
C5orf56	3.386e-09	COPD-HTN	6.2414138e-05	1	1	1	1	0 NA
C8orf12	6.2746e-09	COPD-HTN	0.0001156597	1	0	0	0	0 NA
CLCN6	3.1641e-08	COPD-HTN	0.00058324	1	1	1	0	0 p36.22
DEFB134	1.7815e-06	COPD-HTN	0.03283839	1	0	0	0	0 p23.1
DVL2	2.093e-06	COPD-HTN	0.03858027	1	0	0	0	0 p13.1
GRK4	1.2064e-06	COPD-HTN	0.02223757	1	1	1	1	1 p16.3
KCNK3	1.3834e-06	COPD-HTN	0.02550021	1	0	0	0	0 p23.3
KDM4B	1.6228e-10	COPD-HTN	2.99130724e-0	1	1	1	0	0 p13.3
KLC1	1.7059e-07	COPD-HTN	0.00314449	1	1	1	0	1 q32.33
MAML3	5.507e-07	COPD-HTN	0.01015105	1	1	1	0	0 q31.1
MARK3	2.6178e-06	COPD-HTN	0.04825391	1	1	1	0	0 q32.32
MFHAS1	4.6574e-07	COPD-HTN	0.00858499	1	1	1	0	0 p23.1
MLLT10	8.8952e-08	COPD-HTN	0.00163965	1	0	0	0	0 p12.31
MSRA	4.2683e-07	COPD-HTN	0.00786776	1	1	1	0	1 p23.1
MST1	1.3125e-06	COPD-HTN	0.02419331	1	0	0	0	0 p21.31
MTHFR	1.0144e-07	COPD-HTN	0.00186984	1	1	1	0	0 p36.22
NOP14	1.9032e-06	COPD-HTN	0.03508169	1	1	1	0	0 p16.3
P4HA2	3.222e-08	COPD-HTN	0.00059391	1	1	1	0	0 q31.1
PDLIM4	2.8037e-08	COPD-HTN	0.00051681	1	1	1	0	0 q31.1
PINX1	5.858e-07	COPD-HTN	0.01079805	1	0	0	0	0 p23.1
PPP1R13B	7.7083e-07	COPD-HTN	0.01420871	1	1	1	0	0 q32.33

RP11-73M182.7563e-07	COPD-HTN	0.00508069	1	0	0	0	0 NA
RP11-81K2.13.8572e-07	COPD-HTN	0.00710998	1	1	1	0	0 NA
RP1L1	1.4333e-07 COPD-HTN	0.002642	1	0	0	0	0 p23.1
SLC22A4	2.3995e-09 COPD-HTN	4.42299835e-C	1	1	1	0	1 q31.1
SLC22A5	9.5719e-10 COPD-HTN	1.764388327e-	1	1	1	1	1 q31.1
SOX7	9.2425e-08 COPD-HTN	0.00170367	1	0	0	0	0 p23.1
SOX7	1.2864e-07 COPD-HTN	0.00237122	1	1	1	0	1 p23.1
TNKS	2.1404e-06 COPD-HTN	0.03945399	1	1	1	0	0 p23.1
TRMT61A	1.3176e-06 COPD-HTN	0.02428732	1	1	1	0	0 q32.33
WNT2B	1.0906e-07 COPD-HTN	0.0020103	1	0	0	0	0 p13.2
WNT3A	1.8181e-06 COPD-HTN	0.03351304	1	0	0	0	0 q42.13
XKR6	5.0901e-10 COPD-HTN	9.38258133e-C	1	1	1	0	0 p23.1
XRCC3	2.5895e-10 COPD-HTN	4.77322535e-C	1	1	1	1	0 q32.33
ZFYVE21	2.6904e-08 COPD-HTN	0.00049592	1	1	1	0	0 q32.33
ZNF652	3.2437e-09 COPD-HTN	5.97911221e-C	1	1	1	0	0 q21.33
ABHD17C	5.2782e-07 COPD-HF	0.00972931	0	1	1	0	0 q25.1
ADD1	1.9819e-07 COPD-HF	0.00365324	0	1	1	0	0 p16.3
AF131215.5	1.8319e-06 COPD-HF	0.03376741	0	0	0	0	0 NA
AL049840.1	2.5183e-09 COPD-HF	4.64198239e-C	0	1	1	0	1 NA
APOPT1	2.3609e-09 COPD-HF	4.35184697e-C	0	0	0	0	0 NA
BAG5	1.445e-09 COPD-HF	2.6635685e-05	0	1	1	0	0 q32.33
BLK	8.1673e-07 COPD-HF	0.01505478	0	1	1	0	0 p23.1
C5orf56	3.386e-09 COPD-HF	6.2414138e-05	0	1	1	0	0 NA
C8orf12	6.2746e-09 COPD-HF	0.0001156597	0	0	0	0	0 NA
CLCN6	3.1641e-08 COPD-HF	0.00058324	0	1	1	0	0 p36.22
DEFB134	1.7815e-06 COPD-HF	0.03283839	0	0	0	0	0 p23.1
DVL2	2.093e-06 COPD-HF	0.03858027	0	0	0	0	0 p13.1
GRK4	1.2064e-06 COPD-HF	0.02223757	0	1	1	0	0 p16.3
KCNK3	1.3834e-06 COPD-HF	0.02550021	0	0	0	0	0 p23.3
KDM4B	1.6228e-10 COPD-HF	2.99130724e-C	0	1	1	0	0 p13.3

KLC1	1.7059e-07	COPD-HF	0.00314449	0	1	1	0	0 q32.33
MAML3	5.507e-07	COPD-HF	0.01015105	0	1	1	0	0 q31.1
MARK3	2.6178e-06	COPD-HF	0.04825391	0	1	1	1	1 q32.32
MFHAS1	4.6574e-07	COPD-HF	0.00858499	0	1	1	0	0 p23.1
MLLT10	8.8952e-08	COPD-HF	0.00163965	0	0	0	0	0 p12.31
MSRA	4.2683e-07	COPD-HF	0.00786776	0	1	1	0	0 p23.1
MST1	1.3125e-06	COPD-HF	0.02419331	0	0	0	0	0 p21.31
MTHFR	1.0144e-07	COPD-HF	0.00186984	0	1	1	0	0 p36.22
NOP14	1.9032e-06	COPD-HF	0.03508169	0	1	1	0	0 p16.3
P4HA2	3.222e-08	COPD-HF	0.00059391	0	1	1	0	1 q31.1
PDLIM4	2.8037e-08	COPD-HF	0.00051681	0	1	1	0	0 q31.1
PINX1	5.858e-07	COPD-HF	0.01079805	0	0	0	0	0 p23.1
PPP1R13B	7.7083e-07	COPD-HF	0.01420871	0	1	1	0	0 q32.33
RP11-73M18	2.7563e-07	COPD-HF	0.00508069	0	0	0	0	0 NA
RP11-81K2.13	8572e-07	COPD-HF	0.00710998	0	1	1	0	0 NA
RP1L1	1.4333e-07	COPD-HF	0.002642	0	0	0	0	0 p23.1
SLC22A4	2.3995e-09	COPD-HF	4.42299835e-C	0	1	1	0	0 q31.1
SLC22A5	9.5719e-10	COPD-HF	1.764388327e-	0	1	1	1	1 q31.1
SOX7	9.2425e-08	COPD-HF	0.00170367	0	0	0	0	0 p23.1
SOX7	1.2864e-07	COPD-HF	0.00237122	0	1	1	0	0 p23.1
TNKS	2.1404e-06	COPD-HF	0.03945399	0	1	1	0	0 p23.1
TRMT61A	1.3176e-06	COPD-HF	0.02428732	0	1	1	1	0 q32.33
WNT2B	1.0906e-07	COPD-HF	0.0020103	0	0	0	0	0 p13.2
WNT3A	1.8181e-06	COPD-HF	0.03351304	0	0	0	0	0 q42.13
XKR6	5.0901e-10	COPD-HF	9.38258133e-C	0	1	1	0	0 p23.1
XRCC3	2.5895e-10	COPD-HF	4.77322535e-C	0	1	1	0	0 q32.33
ZFYVE21	2.6904e-08	COPD-HF	0.00049592	0	1	1	0	1 q32.33
ZNF652	3.2437e-09	COPD-HF	5.97911221e-C	0	1	1	0	0 q21.33
APOC1	2.2231e-06	COPD-CHD	0.04110734	1	0	0	0	0 q13.32
APOE	6.985e-09	COPD-CHD	0.00012916	1	0	0	0	0 q13.32

BMP1	2.3328e-07	COPD-CHD	0.00431358	1	0	0	0	0 p21.3
CHRNA4	2.5133e-06	COPD-CHD	0.04647343	1	0	0	0	0 q13.33
CHRNA4	4.4206e-08	COPD-CHD	0.00081741	1	0	0	0	0 q25.1
CIRH1A	1.3979e-06	COPD-CHD	0.02584857	1	0	0	0	0 NA
IREB2	5.9374e-09	COPD-CHD	0.0001097884	1	1	1	0	0 q25.1
MORF4L1	9.3726e-10	COPD-CHD	1.733087466e-	1	0	0	0	0 q25.1
RP11-343C2	8.4901e-07	COPD-CHD	0.01569904	1	0	0	0	0 NA
SNTB2	1.5852e-06	COPD-CHD	0.02931193	1	0	0	1	1 q22.1
TOMM40	1.0888e-06	COPD-CHD	0.020133	1	0	0	0	0 q13.32
VPS4A	1.5684e-06	COPD-CHD	0.02900128	1	0	0	0	1 q22.1
ZNF652	4.3905e-08	COPD-CHD	0.00081185	1	1	1	0	0 q21.33

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