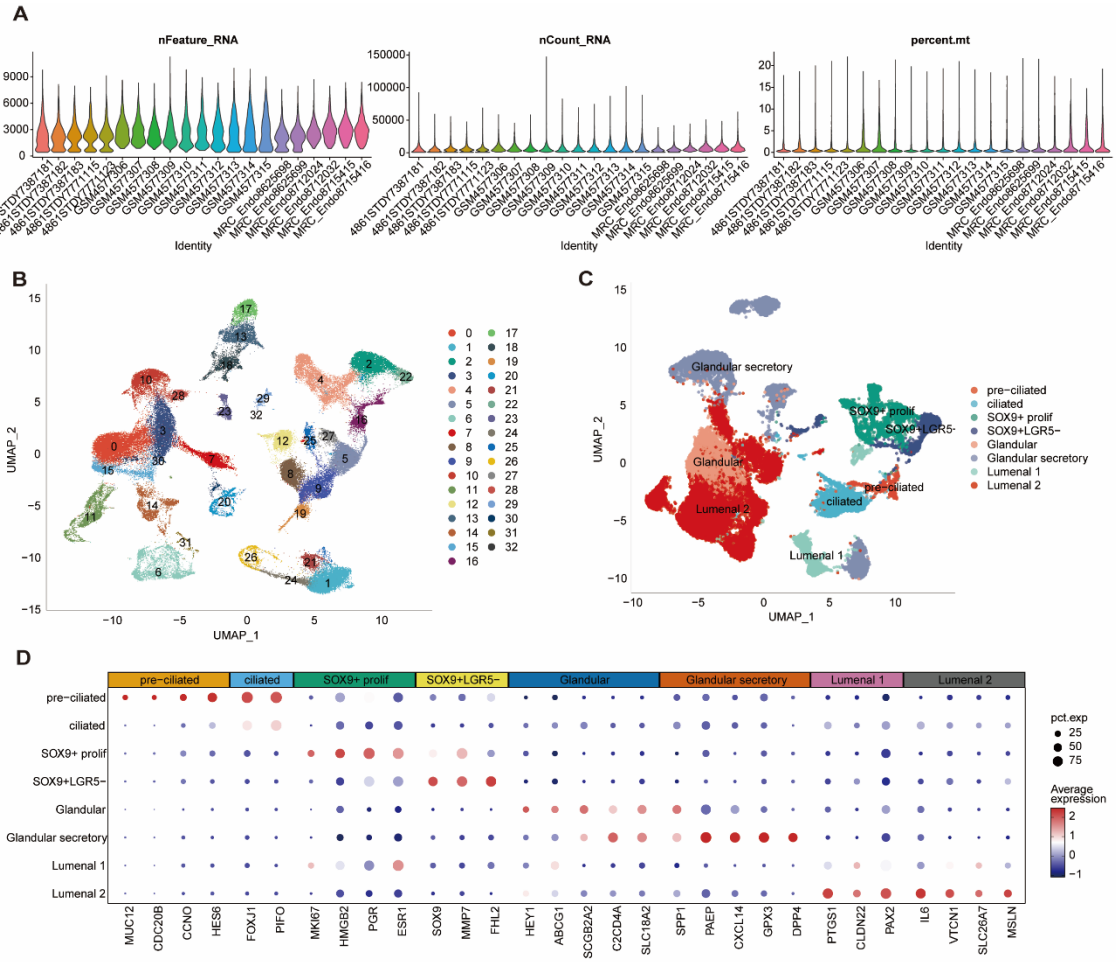

Figure S1. Quality control and annotation of human endometrial epithelial cell subtypes from scRNA-seq data

(A) Violin plots showing the distribution of key quality control metrics for each sample after filtering: the number of detected genes per cell (nFeature_RNA), UMI counts per cell (nCount_RNA), and the percentage of mitochondrial gene expression (percent.mt). (B) UMAP visualization of all analyzed cells, showing the 33 clusters identified through unsupervised clustering. (C) The same UMAP plot with cells colored by their annotated cell identity, highlighting 8 distinct epithelial subtypes. (D) Dot plot showing the expression of canonical marker genes used to identify the 8 epithelial cell subtypes.

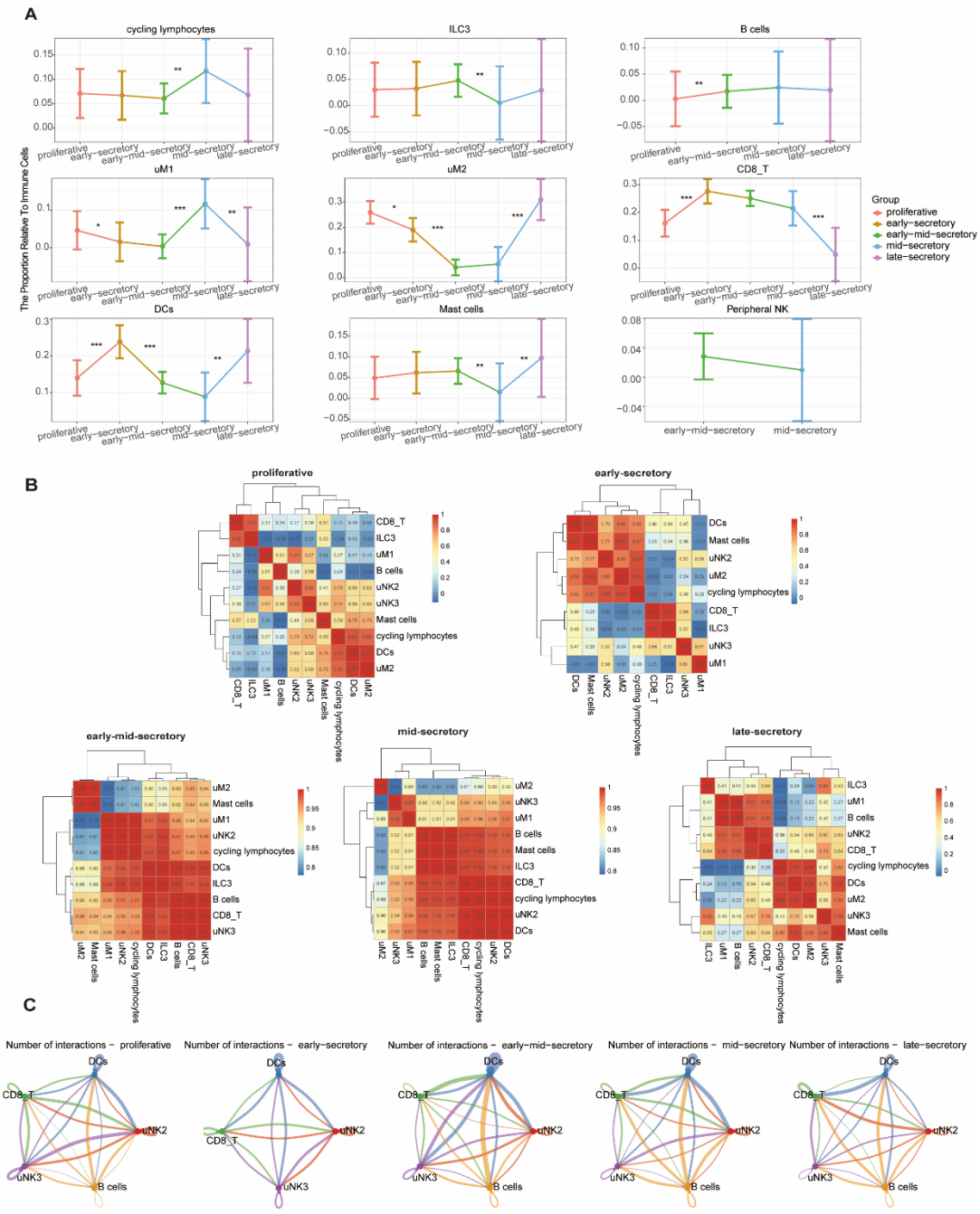

Figure S2. Dynamic remodeling of the endometrial immune landscape across the menstrual cycle

(A) Line graphs showing the dynamic proportions of nine immune cell subtypes relative to the total immune cell population across five phases of the menstrual cycle. Points represented the mean proportion, and error bars indicated the standard error of

the mean. Asterisks denoted the level of statistical significance compared to the proliferative phase (*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$). (B) Heatmaps displaying the correlation matrices of immune cell subtype proportions within each menstrual phase. The color scale represented the Spearman correlation coefficient, with red indicating a positive correlation and blue indicating a negative correlation. (C) Chord diagrams illustrating the predicted cell-cell communication networks among key immune cell types for each phase. The thickness of each line was proportional to the number of the predicted interaction.

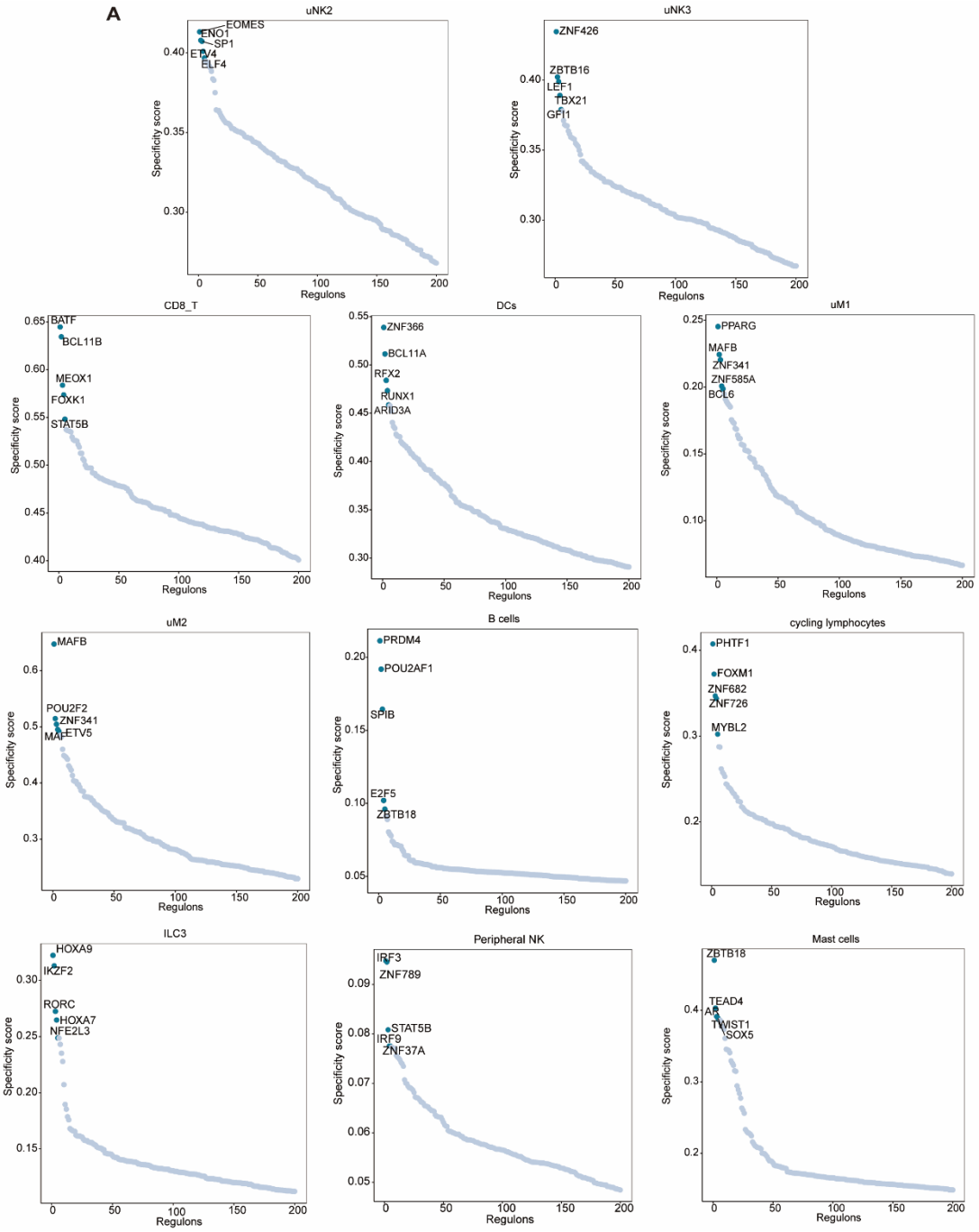

Figure S3. Identification of the subtype-specific gene regulatory transcription

(A) An identification of the top five TFs with high activity specific to immune cells.

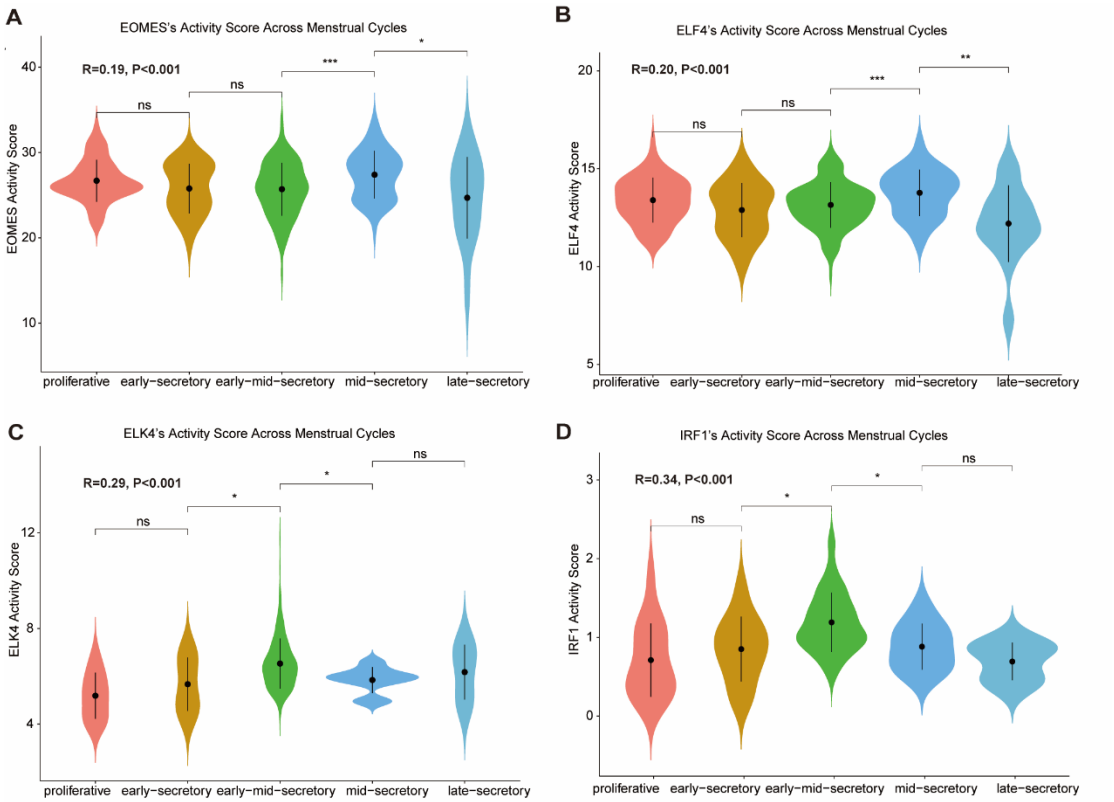

Figure S4. Dynamic activity of uNK2- and uNK3-associated transcription factors across the menstrual cycle

Violin plots showing the activity scores of key TFs associated with uNK2 and uNK3 subtypes across five phases of the menstrual cycle. Activity scores for uNK2-associated TFs, (A) EOMES and (B) ELF4, and uNK3-associated TFs, (C) ELK4 and (D) IRF1, are displayed. The Spearman's rank correlation coefficient (R) and p-value shown in each panel represent the correlation between TF activity and the progression of the menstrual cycle. Black dots indicated the median activity score for each phase. Asterisks denoted the level of statistical significance for pairwise comparisons between phases (*$p < 0.05$, **$p < 0.01$, ***$p < 0.001$); ns = not significant. The distinct temporal activity patterns highlighted that these uNK subtypes were regulated by different programs throughout the cycle.

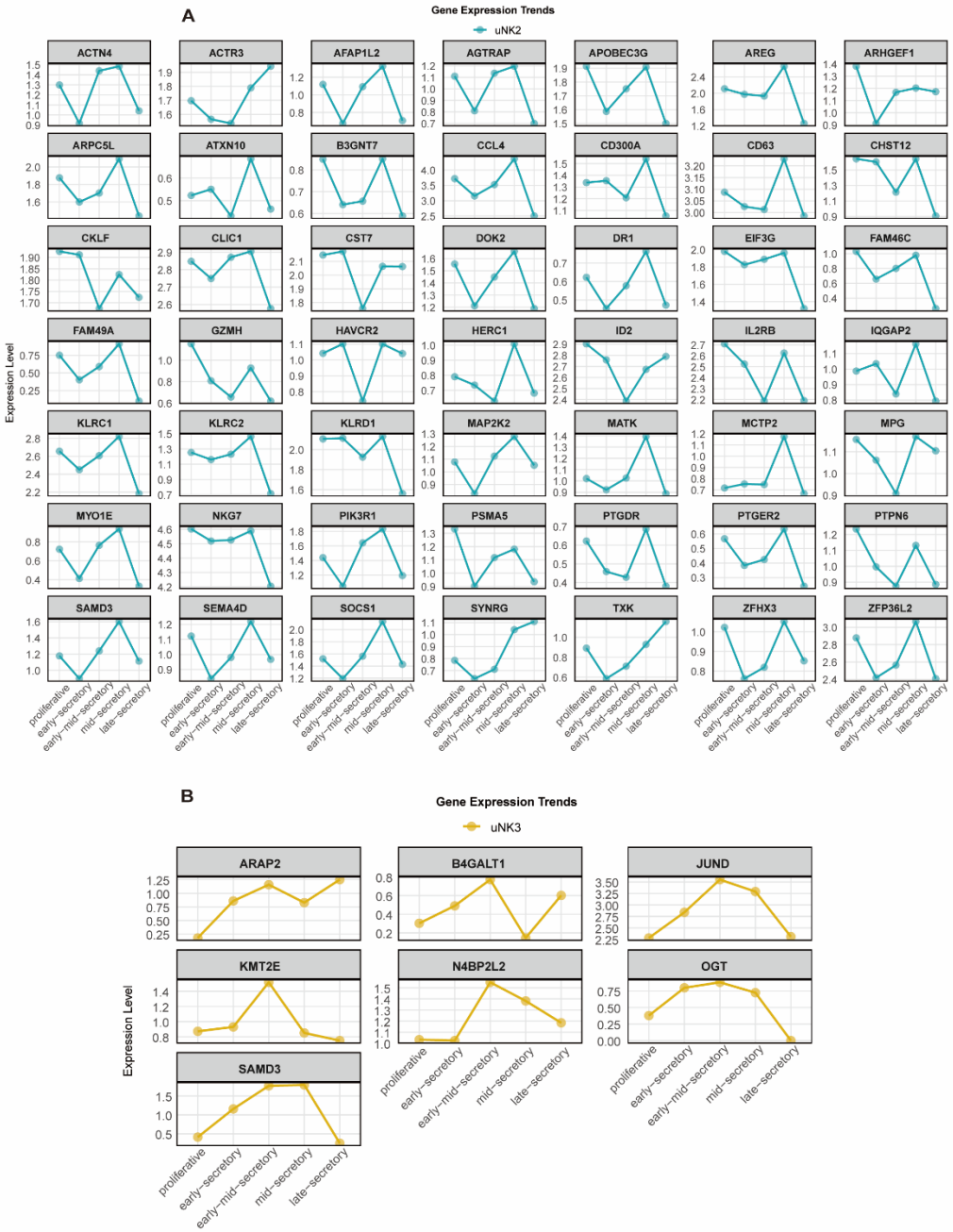

Figure S5. Expression trends of genes correlated with uNK2 and uNK3 cell proportions across the menstrual cycle

Line graphs showing the normalized expression levels of selected genes across five phases of the menstrual cycle. These genes were selected because their expression patterns are significantly correlated with the changing proportions of their respective uNK cell subtypes. (A) Expression trends of genes associated with the uNK2 subtype. (B) Expression trends of genes associated with the uNK3 subtype.

Table S1 An illustration of the source and quality control of single-cell data.

Source	Sample ID	DonorID	Phase	nFeature_RNA	percent.mt	Number of Cells (After filtering)
Garcia-Alonso	4861STDY7387181	A13	proliferative	10000	20%	6072
Garcia-Alonso	4861STDY7387182	A13	proliferative	8500	20%	6006
Garcia-Alonso	4861STDY7387183	A13	proliferative	8000	20%	6343
Garcia-Alonso	4861STDY7771115	A30	early-secretory	8000	25%	4336
Garcia-Alonso	4861STDY7771123	A30	early-secretory	9500	25%	12661
Wang	GSM4577306	SAMN15049051	early-secretory	9000	20%	2023
Wang	GSM4577307	SAMN15049050	proliferative	8500	20%	1870
Wang	GSM4577308	SAMN15049049	mid-secretory	8500	25%	6738
Wang	GSM4577309	SAMN15049048	early-mid-secretory	12000	20%	20811
Wang	GSM4577310	SAMN15049047	early-mid-secretory	10000	20%	7094
Wang	GSM4577311	SAMN15049046	early-mid-secretory	9000	20%	2945
Wang	GSM4577312	SAMN15049045	late-secretory	8500	25%	3383
Wang	GSM4577313	SAMN15049044	early-secretory	10000	20%	3001
Wang	GSM4577314	SAMN15049043	early-secretory	10000	20%	3069
Wang	GSM4577315	SAMN15049042	proliferative	9000	20%	1957
Garcia-Alonso	MRC_Endo8625698	E1	late-secretory	7500	25%	4309
Garcia-Alonso	MRC_Endo8625699	E1	late-secretory	8000	25%	2367
Garcia-Alonso	MRC_Endo8712024	E2	mid-secretory	9000	20%	879
Garcia-Alonso	MRC_Endo8712032	E2	mid-secretory	8000	20%	1408
Garcia-Alonso	MRC_Endo8715415	E3	proliferative	8500	15%	603
Garcia-Alonso	MRC_Endo8715416	E3	proliferative	8500	20%	2416

Table S2 Marker genes identified in single-cell data.

p_val	avg_log2FC	pct.1	pct.2	p_val_adj	cluster	gene
5.0873E-180	3.12373097	0.914	0.198	1.44E-175	uNK2	GZMB
5.956E-170	3.685523617	0.984	0.392	1.6858E-165	uNK2	GNLY
3.2204E-158	2.637685352	0.99	0.402	9.1153E-154	uNK2	CTSW
8.9482E-157	1.624194074	0.693	0.08	2.5328E-152	uNK2	AFAP1L2
7.5159E-138	2.212776555	1	0.459	2.1274E-133	uNK2	NKG7
5.3876E-136	1.478712849	0.633	0.073	1.5249E-131	uNK2	ITGAD
2.1786E-127	2.009634553	0.994	0.784	6.1666E-123	uNK2	COTL1
3.1699E-123	2.426396469	0.952	0.421	8.9723E-119	uNK2	GZMA
1.179E-120	1.838264554	0.994	0.804	3.3371E-116	uNK2	GSTP1
6.1735E-117	1.688924935	0.946	0.276	1.7474E-112	uNK2	KLRC1
3.1493E-111	1.827616685	0.981	0.388	8.914E-107	uNK2	HOPX
2.1371E-108	1.310254534	0.655	0.11	6.049E-104	uNK2	KIR2DL4
8.2332E-106	1.632976898	0.994	0.337	2.3304E-101	uNK2	TRDC
4.1154E-102	1.390758556	0.47	0.05	1.16486E-97	uNK2	KIR2DL3
4.57383E-97	1.492674593	0.661	0.148	1.29462E-92	uNK2	SYNGR1
6.41986E-95	1.508598342	0.936	0.384	1.81714E-90	uNK2	IL2RB
9.01046E-94	1.458340762	0.869	0.275	2.55041E-89	uNK2	PRF1
3.96038E-88	1.524424176	0.751	0.222	1.12099E-83	uNK2	TESC
1.46518E-83	1.146513914	0.744	0.188	4.14719E-79	uNK2	KLRC2
6.17216E-80	1.154065041	0.754	0.21	1.74703E-75	uNK2	NCAM1
2.0195E-76	1.648557695	0.821	0.341	5.7162E-72	uNK2	IGFBP2
3.05093E-75	1.140940163	0.607	0.144	8.63564E-71	uNK2	NDFIP2
2.03219E-70	1.548190095	0.981	0.786	5.7521E-66	uNK2	LGALS1
1.86738E-69	1.088225924	0.521	0.12	5.28561E-65	uNK2	MYO1E
6.70504E-69	1.841950454	0.744	0.288	1.89786E-64	uNK2	AREG
2.21403E-68	1.337804791	0.888	0.424	6.2668E-64	uNK2	CMC1
4.58078E-68	1.194766467	0.898	0.474	1.29659E-63	uNK2	ARPC5L
6.53457E-65	1.4398088	0.898	0.471	1.84961E-60	uNK2	CD7
7.74355E-64	0.696691132	0.85	0.403	2.19181E-59	uNK2	IGFBP7
4.75835E-62	1.311748099	0.728	0.258	1.34685E-57	uNK2	TNFRSF18
5.22967E-62	1.522958289	0.827	0.353	1.48026E-57	uNK2	XCL2
8.11766E-61	0.963873926	0.981	0.835	2.2977E-56	uNK2	CD63
1.08859E-60	1.041984438	0.684	0.236	3.08124E-56	uNK2	FGR
2.3447E-59	1.400291055	0.859	0.55	6.63669E-55	uNK2	DDIT4
6.63917E-59	0.953109466	0.518	0.124	1.87922E-54	uNK2	DAPK2
3.62688E-58	0.788581602	0.997	0.955	1.02659E-53	uNK2	ACTG1

1.62747E-57	0.950763329	0.987	0.795	4.60656E-53	uNK2	CORO1A
5.29441E-57	1.090513728	0.776	0.323	1.49858E-52	uNK2	CHST12
1.24455E-56	0.729310757	0.917	0.327	3.5227E-52	uNK2	KLRD1
3.91605E-56	0.798714303	0.99	0.881	1.10844E-51	uNK2	CLIC1
6.4641E-56	0.972558966	0.649	0.219	1.82966E-51	uNK2	EPAS1
9.18163E-55	0.974917556	0.949	0.668	2.59886E-50	uNK2	EVL
1.37106E-53	0.785988911	0.406	0.081	3.88079E-49	uNK2	DPF3
2.09568E-52	1.09356539	0.805	0.42	5.93184E-48	uNK2	GLIPR2
2.27726E-52	1.045659735	0.863	0.504	6.44577E-48	uNK2	SLA
3.67865E-52	1.181892127	0.773	0.378	1.04124E-47	uNK2	SOCS1
7.67489E-52	1.014711679	0.869	0.482	2.17238E-47	uNK2	RHOC
1.62292E-51	0.996905409	0.882	0.461	4.59366E-47	uNK2	APOBEC3G
3.39468E-51	1.114774262	0.422	0.102	9.60865E-47	uNK2	CSF1
3.47076E-51	0.788774434	0.594	0.171	9.82398E-47	uNK2	EOMES
1.24834E-50	0.804322993	0.495	0.133	3.53342E-46	uNK2	GFOD1
4.96147E-50	0.903612891	0.946	0.669	1.40434E-45	uNK2	RAC2
2.177E-49	0.876278073	0.907	0.463	6.162E-45	uNK2	CST7
1.78267E-48	0.986038495	0.77	0.373	5.04586E-44	uNK2	CD300A
6.41301E-48	1.017446254	0.792	0.42	1.8152E-43	uNK2	GNPTAB
5.55995E-47	0.615962454	0.764	0.355	1.57374E-42	uNK2	ITGAX
1.00646E-46	0.941418652	0.754	0.318	2.8488E-42	uNK2	ITM2A
1.66675E-46	0.808772841	0.569	0.178	4.71775E-42	uNK2	MCTP2
3.93014E-46	0.81494711	0.463	0.131	1.11243E-41	uNK2	UBASH3B
1.20029E-45	0.874169865	0.859	0.414	3.39743E-41	uNK2	CD247
4.72196E-44	0.626446734	0.994	0.949	1.33655E-39	uNK2	CFL1
1.51057E-43	0.748909795	0.633	0.217	4.27566E-39	uNK2	ITGA1
1.56133E-43	0.620437886	0.428	0.105	4.41933E-39	uNK2	ADGRG3
2.14957E-43	0.686508948	0.751	0.296	6.08436E-39	uNK2	SAMD3
8.33501E-43	0.7424443	0.99	0.951	2.35922E-38	uNK2	GAPDH
3.61846E-42	1.000705961	0.888	0.567	1.0242E-37	uNK2	CAPG
2.03616E-40	0.705463559	0.454	0.126	5.76335E-36	uNK2	SH2D1B
2.54586E-40	0.729890215	0.99	0.786	7.20605E-36	uNK2	HCST
2.89419E-40	0.890811389	0.575	0.222	8.192E-36	uNK2	SRGAP3
6.00357E-40	0.715417609	0.502	0.158	1.69931E-35	uNK2	B3GNT7
3.89932E-39	0.834523329	0.792	0.414	1.1037E-34	uNK2	NUCB2
4.9611E-39	0.817884021	0.914	0.679	1.40424E-34	uNK2	PRELID1
6.61707E-39	0.727716465	0.527	0.176	1.87296E-34	uNK2	LINC00996
1.28336E-38	0.960276104	0.716	0.345	3.63254E-34	uNK2	AGTRAP

3.31995E-38	0.72895736	0.54	0.185	9.39711E-34	uNK2	SLA2
5.6133E-38	0.844870522	0.661	0.316	1.58884E-33	uNK2	SEMA4D
1.21806E-37	0.831030911	0.537	0.181	3.44772E-33	uNK2	KRT81
1.31778E-37	0.926297505	0.767	0.372	3.72998E-33	uNK2	XCL1
2.12556E-37	0.755583092	0.591	0.211	6.0164E-33	uNK2	TMIGD2
3.76627E-37	1.076240355	0.914	0.63	1.06604E-32	uNK2	CCL4
4.10823E-37	0.659870708	0.518	0.171	1.16283E-32	uNK2	SH2D2A
1.29892E-36	0.781652058	0.623	0.272	3.67659E-32	uNK2	ORAI2
1.33774E-36	0.884961211	0.757	0.419	3.78646E-32	uNK2	IDH2
1.49575E-35	0.632572433	0.594	0.221	4.23371E-31	uNK2	ZAP70
1.82792E-35	0.832607901	0.818	0.512	5.17394E-31	uNK2	DOK2
1.36203E-34	0.777378745	0.958	0.759	3.85522E-30	uNK2	ENO1
1.39626E-34	0.84048794	0.61	0.286	3.9521E-30	uNK2	HAVCR2
2.38056E-34	0.740025008	0.498	0.171	6.73816E-30	uNK2	GZMH
3.65977E-34	0.752279377	0.901	0.673	1.0359E-29	uNK2	TAGLN2
4.03548E-34	0.790628363	0.917	0.698	1.14224E-29	uNK2	EIF3G
7.94978E-34	0.671166396	0.441	0.143	2.25019E-29	uNK2	TSPAN5
3.45689E-33	0.850546206	0.54	0.227	9.78472E-29	uNK2	ECI2
4.51487E-33	0.74304147	0.62	0.273	1.27793E-28	uNK2	PSTPIP1
7.42031E-33	0.776673566	0.78	0.475	2.10032E-28	uNK2	WDR1
1.12677E-32	0.755567765	0.933	0.759	3.18931E-28	uNK2	NDUFB2
1.517E-31	0.643883629	0.987	0.659	4.29386E-27	uNK2	FCER1G
1.96249E-30	0.727282845	0.863	0.609	5.55483E-26	uNK2	FKBP1A
1.19803E-29	0.634685254	0.914	0.648	3.39101E-25	uNK2	CKLF
1.258E-29	0.800863417	0.684	0.369	3.56078E-25	uNK2	MPG
2.6489E-29	0.725919955	0.773	0.459	7.49771E-25	uNK2	ECH1
1.24584E-28	0.771309146	0.914	0.829	3.52634E-24	uNK2	ZFP36L2
4.68768E-28	0.61448272	0.783	0.451	1.32685E-23	uNK2	PLP2
5.06536E-28	0.70775967	0.626	0.318	1.43375E-23	uNK2	ZFHX3
1.56516E-27	0.621855665	0.914	0.685	4.4302E-23	uNK2	PGK1
8.14725E-27	0.639238115	0.617	0.302	2.30608E-22	uNK2	ACAA2
3.03673E-26	0.692345741	0.671	0.377	8.59547E-22	uNK2	LASP1
3.26924E-25	0.639409892	0.738	0.431	9.25357E-21	uNK2	ARHGEF1
3.37669E-25	0.667982192	0.837	0.633	9.55773E-21	uNK2	TLN1
6.79352E-25	0.659662713	0.885	0.634	1.92291E-20	uNK2	PRDX5
3.26753E-24	0.618392904	0.831	0.603	9.24874E-20	uNK2	COX5A
9.04977E-24	0.606408655	0.827	0.595	2.56154E-19	uNK2	PSMB8
1.3309E-23	0.609353024	0.834	0.568	3.76711E-19	uNK2	TRAPPC1

1.40005E-23	0.737261593	0.722	0.445	3.96284E-19	uNK2	CCND2
3.19524E-23	0.651519809	0.521	0.254	9.04414E-19	uNK2	CAMK1
3.68402E-23	0.683820714	0.553	0.285	1.04276E-18	uNK2	RNF187
5.7107E-23	0.919655117	0.444	0.196	1.61641E-18	uNK2	RGS16
5.77478E-23	0.804266274	0.553	0.312	1.63455E-18	uNK2	NME1
6.88619E-22	0.639349421	0.722	0.447	1.94914E-17	uNK2	MAP2K2
8.48708E-22	0.606274143	0.425	0.195	2.40227E-17	uNK2	CLPTM1
4.01917E-21	0.686226935	0.422	0.178	1.13763E-16	uNK2	CRTAM
2.02084E-20	0.758295128	0.815	0.62	5.71999E-16	uNK2	DUSP2
1.15108E-19	0.605895549	0.665	0.412	3.25813E-15	uNK2	PTPN6
7.27196E-19	0.628504061	0.454	0.229	2.05833E-14	uNK2	SNRNP25
1.87349E-18	0.618049407	0.607	0.323	5.30292E-14	uNK2	MATK
1.44452E-16	0.633452048	0.725	0.515	4.08872E-12	uNK2	SERPINB1
2.7589E-121	2.227215323	0.951	0.337	7.8092E-117	uNK3	KLRD1
1.3109E-100	1.741428967	0.869	0.291	3.71048E-96	uNK3	MATK
9.77504E-92	1.707077894	0.951	0.36	2.76683E-87	uNK3	TRDC
5.56136E-88	2.375053989	0.907	0.495	1.57414E-83	uNK3	CCL5
6.11183E-85	1.670694719	0.944	0.355	1.72995E-80	uNK3	XCL1
1.4127E-77	1.644683309	0.948	0.474	3.99864E-73	uNK3	CD7
7.54682E-76	1.606326947	0.914	0.402	2.13613E-71	uNK3	IL2RB
7.93599E-76	1.82981324	0.836	0.309	2.24628E-71	uNK3	KLRC1
4.62108E-73	1.331550609	0.985	0.792	1.308E-68	uNK3	HCST
9.55487E-73	1.461987418	0.989	0.474	2.70451E-68	uNK3	NKG7
5.07539E-68	1.591876143	0.769	0.305	1.43659E-63	uNK3	SAMD3
1.68274E-66	1.452556339	0.903	0.475	4.76301E-62	uNK3	CST7
1.92055E-64	1.230594541	0.907	0.354	5.43611E-60	uNK3	XCL2
5.12035E-64	1.666688146	0.653	0.238	1.44932E-59	uNK3	SPRY2
8.33833E-64	1.4324236	0.69	0.245	2.36016E-59	uNK3	TXK
2.61672E-59	1.320598397	0.881	0.422	7.40662E-55	uNK3	CD247
4.13403E-57	1.743505801	0.634	0.219	1.17014E-52	uNK3	KLRC2
1.41984E-56	1.478098367	0.858	0.433	4.01887E-52	uNK3	KLRB1
2.83487E-53	1.408264291	0.687	0.26	8.0241E-49	uNK3	GZMM
8.68636E-53	1.27299413	0.869	0.42	2.45867E-48	uNK3	HOPX
1.00842E-52	1.185694733	0.896	0.58	2.85433E-48	uNK3	STK17A
1.75157E-52	1.11517736	0.944	0.676	4.95783E-48	uNK3	EVL
5.51392E-50	1.252424428	0.504	0.149	1.56072E-45	uNK3	CAPN12
5.82281E-50	1.003552694	0.769	0.305	1.64815E-45	uNK3	PRF1
8.98578E-50	1.268871593	0.739	0.34	2.54342E-45	uNK3	CHST12

9.0087E-49	1.61835352	0.784	0.452	2.54991E-44	uNK3	CMC1
4.86868E-48	1.324179667	0.634	0.242	1.37808E-43	uNK3	NCAM1
8.01972E-46	1.350652646	0.433	0.11	2.26998E-41	uNK3	CLIC3
1.4059E-45	1.186475729	0.843	0.478	3.97941E-41	uNK3	APOBEC3G
7.26105E-45	1.523740339	0.522	0.186	2.05524E-40	uNK3	LINC00996
1.01449E-43	0.977972507	0.989	0.93	2.87153E-39	uNK3	BTG1
2.16592E-43	1.334060498	0.877	0.579	6.13063E-39	uNK3	CD69
7.53891E-43	1.345825575	0.41	0.114	2.13389E-38	uNK3	BCO2
1.54467E-41	1.294317446	0.485	0.167	4.37219E-37	uNK3	FASLG
4.73274E-39	1.020266085	0.534	0.193	1.3396E-34	uNK3	MCTP2
1.70653E-38	0.964396121	0.843	0.52	4.83033E-34	uNK3	ACAP1
7.98831E-38	1.116460317	0.731	0.39	2.26109E-33	uNK3	CD96
1.24559E-37	1.089020468	0.552	0.235	3.52565E-33	uNK3	AOAH
4.75482E-37	2.265236896	0.631	0.385	1.34585E-32	uNK3	ITGAX
8.70516E-37	1.152044835	0.575	0.236	2.464E-32	uNK3	ITGA1
2.40471E-36	1.088236889	0.776	0.529	6.80654E-32	uNK3	PDCD4
4.75218E-36	0.988774694	0.694	0.364	1.3451E-31	uNK3	SKAP1
6.6762E-36	1.304081192	0.604	0.311	1.8897E-31	uNK3	CD38
1.0987E-33	1.12014199	0.5	0.196	3.10988E-29	uNK3	EOMES
1.75824E-33	0.981080742	0.504	0.184	4.9767E-29	uNK3	KRT86
2.16729E-33	0.958647252	0.828	0.641	6.13451E-29	uNK3	TGFB1
1.60593E-32	0.936837564	0.414	0.14	4.54559E-28	uNK3	SH2D1B
1.21216E-31	1.298432944	0.451	0.175	3.43101E-27	uNK3	B3GNT7
1.30072E-31	0.856536609	0.907	0.722	3.68168E-27	uNK3	TXNIP
4.1206E-31	0.734557319	0.914	0.805	1.16634E-26	uNK3	45907
9.56283E-31	0.739016464	0.963	0.858	2.70676E-26	uNK3	PTPRC
1.71027E-30	1.14788547	0.552	0.262	4.84093E-26	uNK3	GATA3
3.49861E-30	1.094365972	0.694	0.445	9.90282E-26	uNK3	GNPTAB
8.46095E-29	0.839236879	0.817	0.618	2.39487E-24	uNK3	STK4
1.95403E-28	0.998751086	0.556	0.239	5.53088E-24	uNK3	GZMK
2.36452E-28	0.952133514	0.451	0.179	6.69278E-24	uNK3	PTGDR
2.73042E-28	1.199568937	0.541	0.268	7.72845E-24	uNK3	FAM46C
7.19551E-28	0.861378359	0.739	0.472	2.03669E-23	uNK3	GIMAP7
8.41706E-28	0.983281015	0.94	0.633	2.38245E-23	uNK3	CCL4
9.07798E-28	1.058559542	0.511	0.227	2.56952E-23	uNK3	PYHIN1
1.19503E-27	0.992841454	0.959	0.825	3.38254E-23	uNK3	ZFP36L2
1.69076E-27	0.882236032	0.489	0.197	4.78569E-23	uNK3	KRT81
1.75086E-27	1.078285178	0.616	0.378	4.95581E-23	uNK3	APMAP

3.56526E-27	0.845412114	0.634	0.348	1.00915E-22	uNK3	TBC1D10C
1.30335E-26	0.952244344	0.567	0.295	3.68914E-22	uNK3	PTPN4
1.31867E-26	0.937277686	0.515	0.238	3.73249E-22	uNK3	SYTL3
1.9195E-26	1.10143535	0.571	0.31	5.43314E-22	uNK3	ARAP2
4.52879E-26	0.813434749	0.519	0.232	1.28187E-21	uNK3	TMIGD2
4.80513E-26	0.987320711	0.668	0.443	1.36009E-21	uNK3	ARHGAP9
6.24033E-26	1.032980015	0.604	0.368	1.76632E-21	uNK3	CLDND1
7.72911E-26	0.956779649	0.616	0.367	2.18772E-21	uNK3	GABARAPL1
5.17819E-25	1.412639168	0.593	0.347	1.46569E-20	uNK3	TMEM2
6.18355E-25	1.002303477	0.575	0.312	1.75025E-20	uNK3	RBL2
1.05275E-24	0.897780723	0.444	0.196	2.9798E-20	uNK3	CH17-189H20.1
1.20741E-24	0.915125047	0.679	0.475	3.41756E-20	uNK3	MBP
3.8084E-24	1.040459585	0.575	0.351	1.07797E-19	uNK3	YPEL3
1.09923E-23	0.917089901	0.56	0.328	3.11136E-19	uNK3	RABGAP1L
1.72042E-23	1.014875012	0.761	0.56	4.86964E-19	uNK3	PIK3R1
5.4401E-23	1.235719075	0.425	0.183	1.53982E-18	uNK3	CRTAM
6.59067E-23	0.926073193	0.724	0.561	1.86549E-18	uNK3	ACTN4
8.11554E-23	0.763753175	0.675	0.448	2.2971E-18	uNK3	ICAM3
1.18329E-22	0.715990254	0.687	0.404	3.3493E-18	uNK3	ETS1
1.78339E-22	0.735935308	0.978	0.891	5.04788E-18	uNK3	JUND
2.04477E-22	0.944798823	0.552	0.312	5.78772E-18	uNK3	RNF125
2.32133E-22	0.868324446	0.586	0.357	6.57054E-18	uNK3	SYNRG
2.40714E-22	0.763040542	0.825	0.718	6.81342E-18	uNK3	EIF3G
3.00477E-22	0.952552186	0.422	0.192	8.50501E-18	uNK3	RP11-347P5.1
4.4268E-22	0.749130491	0.627	0.407	1.253E-17	uNK3	ABHD17A
5.62738E-22	0.94148939	0.563	0.36	1.59283E-17	uNK3	LAT2
9.13135E-22	0.652784905	0.847	0.707	2.58463E-17	uNK3	CD81
2.25404E-21	0.724018292	0.802	0.652	6.38006E-17	uNK3	CLEC2B
9.51743E-21	0.846820517	0.66	0.451	2.69391E-16	uNK3	ARHGEF1
1.71664E-20	0.790147917	0.765	0.588	4.85896E-16	uNK3	RARRES3
2.33705E-20	0.773837292	0.571	0.294	6.61503E-16	uNK3	TNFRSF18
4.40465E-20	0.905365336	0.53	0.292	1.24674E-15	uNK3	PTPN22
5.72792E-20	0.891722874	0.582	0.376	1.62129E-15	uNK3	SUN2
6.98778E-20	1.124960458	0.485	0.277	1.97789E-15	uNK3	VPS37B
3.56041E-19	0.805401346	0.586	0.399	1.00777E-14	uNK3	MAPK1
4.43433E-19	0.860359896	0.56	0.374	1.25514E-14	uNK3	STOM
4.65142E-19	0.847255394	0.493	0.277	1.31659E-14	uNK3	FGR
4.96449E-19	0.792766961	0.504	0.265	1.4052E-14	uNK3	IKZF3

4.98496E-19	0.926601405	0.59	0.391	1.41099E-14	uNK3	AKNA
6.18289E-19	0.786354578	0.429	0.213	1.75007E-14	uNK3	ADAM8
9.89008E-19	0.716468401	0.81	0.673	2.79939E-14	uNK3	IRF1
1.03297E-18	0.861970004	0.485	0.273	2.92383E-14	uNK3	IL16
1.22174E-18	0.753173019	0.563	0.346	3.45813E-14	uNK3	SLC9A3R1
1.74872E-18	0.664343039	0.821	0.657	4.94976E-14	uNK3	STK17B
1.77243E-18	1.040115789	0.765	0.632	5.01686E-14	uNK3	DUSP2
1.80007E-18	0.68524814	0.713	0.512	5.0951E-14	uNK3	ARPC5L
2.57096E-18	0.717987154	0.515	0.299	7.2771E-14	uNK3	ITGAL
3.9065E-18	0.931544017	0.489	0.294	1.10574E-13	uNK3	HERPUD2
1.08705E-17	0.634987835	0.623	0.41	3.07691E-13	uNK3	TRAF3IP3
1.08801E-17	0.7228473	0.541	0.321	3.07962E-13	uNK3	PRKCH
1.11195E-17	0.817640933	0.496	0.3	3.14737E-13	uNK3	PSTPIP1
1.78326E-17	0.813138966	0.78	0.671	5.04753E-13	uNK3	IFITM2
6.4611E-17	0.756584565	0.493	0.291	1.82881E-12	uNK3	TMC8
9.80372E-17	0.705411714	0.511	0.313	2.77494E-12	uNK3	PDE7A
1.62127E-16	0.708461505	0.772	0.697	4.58901E-12	uNK3	DDX17
1.91426E-16	0.747927582	0.56	0.386	5.4183E-12	uNK3	ADRBK1
2.83484E-16	0.810960819	0.586	0.41	8.02402E-12	uNK3	SLFN5
3.43244E-16	0.751437874	0.552	0.368	9.71552E-12	uNK3	PCSK7
4.08696E-16	0.817254148	0.504	0.332	1.15681E-11	uNK3	DHRS3
5.30748E-16	0.645650766	0.627	0.42	1.50228E-11	uNK3	FYN
1.12091E-15	0.68722396	0.701	0.603	3.17272E-11	uNK3	WIPF1
2.30748E-15	0.652598813	0.489	0.307	6.53133E-11	uNK3	RASSF1
3.6609E-15	0.728352805	0.59	0.407	1.03622E-10	uNK3	PTPN7
3.68378E-15	0.774654617	0.422	0.243	1.04269E-10	uNK3	SNRK
4.17586E-15	0.799032565	0.575	0.426	1.18198E-10	uNK3	POLR2J3
4.78853E-15	0.844232324	0.519	0.326	1.35539E-10	uNK3	IFITM1
7.41409E-15	0.813333797	0.478	0.31	2.09856E-10	uNK3	STARD3NL
7.81137E-15	0.643401656	0.496	0.315	2.21101E-10	uNK3	OGT
3.63369E-14	0.934096004	0.407	0.24	1.02852E-09	uNK3	SLC44A1
4.33846E-14	0.691468381	0.489	0.317	1.228E-09	uNK3	CCNDBP1
4.64338E-14	0.702003092	0.631	0.485	1.31431E-09	uNK3	C9orf142
7.22587E-14	0.60561626	0.705	0.608	2.04528E-09	uNK3	ITGB1
7.3812E-14	0.802133899	0.466	0.304	2.08925E-09	uNK3	DGKZ
8.38015E-14	0.634964366	0.481	0.298	2.372E-09	uNK3	PARP8
1.47565E-13	0.851716055	0.485	0.334	4.17683E-09	uNK3	HERC1
1.76064E-13	0.64341298	0.634	0.493	4.98351E-09	uNK3	CYTIP

1.90501E-13	0.75300002	0.448	0.285	5.39213E-09	uNK3	PHYKPL
3.615E-13	0.662540655	0.44	0.28	1.02323E-08	uNK3	GRAMD1A
3.89102E-13	0.655365729	0.687	0.564	1.10135E-08	uNK3	MACF1
4.14504E-13	0.672316691	0.623	0.505	1.17325E-08	uNK3	VAMP2
4.25997E-13	0.633017247	0.522	0.355	1.20579E-08	uNK3	OFD1
7.77487E-13	0.680662409	0.534	0.384	2.20068E-08	uNK3	PSMA3-AS1
8.14445E-13	0.60138198	0.567	0.429	2.30529E-08	uNK3	PIP4K2A
1.00936E-12	0.701928173	0.463	0.305	2.857E-08	uNK3	PRKACB
2.0966E-12	0.620253485	0.59	0.455	5.93441E-08	uNK3	TNRC6B
5.76419E-12	0.604990371	0.433	0.257	1.63155E-07	uNK3	STAT4
1.02389E-11	0.703187209	0.646	0.549	2.89813E-07	uNK3	SAMSN1
1.13369E-11	0.611819377	0.425	0.275	3.20892E-07	uNK3	TPST2
1.42351E-11	0.624780454	0.724	0.662	4.02924E-07	uNK3	RSRP1
2.33998E-11	0.807432119	0.545	0.417	6.62333E-07	uNK3	CD300A
2.61422E-11	0.638380172	0.41	0.246	7.39956E-07	uNK3	OXNAD1
4.32918E-11	0.645632172	0.515	0.385	1.22537E-06	uNK3	AGTRAP
8.45355E-11	1.11345128	0.5	0.337	2.39278E-06	uNK3	AREG
9.44675E-11	0.65010233	0.791	0.663	2.6739E-06	uNK3	NR4A2
1.31306E-10	0.682731374	0.575	0.463	3.71661E-06	uNK3	FAM177A1
2.28488E-10	0.619103957	0.75	0.637	6.46734E-06	uNK3	LY6E
3.75484E-10	0.6595889	0.537	0.417	1.06281E-05	uNK3	CHORDC1
5.96247E-10	0.673293616	0.522	0.424	1.68768E-05	uNK3	SAR1A
7.13728E-10	0.606210861	0.526	0.411	2.02021E-05	uNK3	BIN2
8.83435E-10	0.719047022	0.638	0.547	2.50056E-05	uNK3	SLA
2.71523E-09	0.894115102	0.47	0.356	7.68547E-05	uNK3	CTD-3252C9.4
4.61167E-09	0.632887018	0.437	0.31	0.000130533	uNK3	NEDD9
8.87199E-09	0.674989346	0.493	0.391	0.000251122	uNK3	MYO1F
9.66785E-09	0.615980108	0.567	0.419	0.000273649	uNK3	SOCS1
1.07909E-07	0.648927143	0.418	0.312	0.003054371	uNK3	ORAI2
2.53759E-07	0.699452391	0.444	0.339	0.007182662	uNK3	PRMT9
3.84841E-07	0.624641213	0.608	0.542	0.010892921	uNK3	NR4A1
1.3037E-06	0.601803522	0.5	0.413	0.036901338	uNK3	METRNL
2.37054E-06	0.804212678	0.437	0.359	0.067098248	uNK3	TAGAP
2.52538E-06	0.731891532	0.429	0.337	0.071481019	uNK3	RASGEF1B
4.36848E-06	0.978195389	0.53	0.489	0.123649777	uNK3	ZNF331
4.88621E-06	0.657336005	0.44	0.363	0.138304072	uNK3	XAF1
9.57312E-06	0.64125552	0.425	0.356	0.270967032	uNK3	ZFHX3
9.2868E-160	3.397962254	0.667	0.008	2.6286E-155	Peripheral NK	FGFBP2

1.0903E-148	2.988969388	0.667	0.01	3.0862E-144	Peripheral NK	MYOM2
3.1959E-118	1.586835297	0.433	0.004	9.0459E-114	Peripheral NK	S1PR5
5.78157E-70	2.538925244	0.667	0.032	1.63647E-65	Peripheral NK	ADGRG1
2.46186E-60	1.662679166	0.467	0.016	6.96828E-56	Peripheral NK	AKR1C3
4.31626E-54	2.502875875	0.767	0.062	1.22172E-49	Peripheral NK	CX3CR1
3.30387E-41	2.844404969	0.833	0.103	9.35159E-37	Peripheral NK	KLRF1
2.31082E-35	2.22205425	0.767	0.101	6.54077E-31	Peripheral NK	TTC38
3.77126E-32	2.639869797	0.867	0.15	1.06746E-27	Peripheral NK	FCGR3A
1.48868E-31	3.097473901	0.733	0.109	4.21371E-27	Peripheral NK	SPON2
4.00259E-30	1.459664659	0.433	0.033	1.13293E-25	Peripheral NK	TGFBR3
1.07736E-28	2.568251651	0.833	0.143	3.04946E-24	Peripheral NK	CLIC3
6.11128E-28	2.606829555	0.933	0.22	1.7298E-23	Peripheral NK	PLAC8
2.82512E-26	2.131941042	0.667	0.097	7.9965E-22	Peripheral NK	KLRG1
2.38756E-25	1.150069988	0.4	0.033	6.758E-21	Peripheral NK	IL18RAP
7.82907E-25	2.827550295	1	0.356	2.21602E-20	Peripheral NK	PRF1
6.78572E-23	1.599672767	0.533	0.069	1.9207E-18	Peripheral NK	TBX21
2.46223E-22	1.417690643	0.5	0.062	6.96935E-18	Peripheral NK	PRSS23
7.69171E-22	2.201340608	0.6	0.092	2.17714E-17	Peripheral NK	SELL
6.42845E-20	2.317484844	0.7	0.146	1.81957E-15	Peripheral NK	IFI44L
1.47135E-19	1.847458775	0.733	0.15	4.16466E-15	Peripheral NK	FAM65B
2.72338E-19	1.598645418	0.533	0.083	7.70852E-15	Peripheral NK	CD226
2.63405E-18	2.148723992	0.967	0.423	7.45567E-14	Peripheral NK	KLF2
6.86003E-18	1.994015088	0.933	0.364	1.94173E-13	Peripheral NK	XAF1
6.93269E-18	1.734590822	0.467	0.067	1.9623E-13	Peripheral NK	CD160
3.50625E-17	1.254573491	0.467	0.066	9.92445E-13	Peripheral NK	LINC00861
1.02645E-16	1.790672526	1	0.409	2.90537E-12	Peripheral NK	KLRD1
1.45899E-16	1.92690577	0.9	0.307	4.12966E-12	Peripheral NK	GZMM
1.75318E-16	1.818116258	0.6	0.125	4.96238E-12	Peripheral NK	ICAM2
7.86392E-16	1.821271167	0.9	0.343	2.22588E-11	Peripheral NK	IFITM1
1.61975E-15	1.885039375	0.967	0.475	4.58469E-11	Peripheral NK	CD247
4.02175E-15	1.238125648	1	0.933	1.13836E-10	Peripheral NK	HLA-E
6.33433E-15	1.787372261	0.9	0.429	1.79293E-10	Peripheral NK	ABHD17A
1.10284E-14	1.699998437	0.967	0.485	3.12158E-10	Peripheral NK	ARL4C
3.52953E-14	1.691588024	0.8	0.287	9.99034E-10	Peripheral NK	TPST2
6.12533E-14	1.034026952	1	0.99	1.73378E-09	Peripheral NK	HLA-B
2.67028E-13	1.916476113	0.867	0.371	7.55822E-09	Peripheral NK	C1orf56
3.38647E-13	1.62776566	1	0.524	9.5854E-09	Peripheral NK	CST7
3.99787E-13	1.122128872	0.433	0.076	1.1316E-08	Peripheral NK	IKZF2

4.25504E-13	1.035819402	1	0.958	1.20439E-08	Peripheral NK	HLA-C
4.3895E-13	1.532593506	0.7	0.207	1.24245E-08	Peripheral NK	MYBL1
5.36121E-12	1.193288933	0.9	0.299	1.51749E-07	Peripheral NK	GZMB
1.32682E-11	1.420902595	0.933	0.623	3.75556E-07	Peripheral NK	AES
1.85543E-11	1.417860802	1	0.68	5.25179E-07	Peripheral NK	IFITM2
2.08189E-11	1.633701032	0.533	0.142	5.89279E-07	Peripheral NK	MX2
2.23673E-11	1.50566743	0.9	0.501	6.33106E-07	Peripheral NK	GIMAP7
2.63247E-11	1.299170464	1	0.815	7.4512E-07	Peripheral NK	HCST
3.33647E-11	1.242155553	0.533	0.141	9.44387E-07	Peripheral NK	NLRC5
4.68807E-11	1.246741607	0.467	0.11	1.32696E-06	Peripheral NK	CEP78
4.8741E-11	1.399567856	0.9	0.672	1.37961E-06	Peripheral NK	PSMB9
5.45405E-11	1.191685981	1	0.93	1.54377E-06	Peripheral NK	MYL12A
6.11994E-11	1.360912878	0.967	0.665	1.73225E-06	Peripheral NK	EMP3
6.28155E-11	2.047652777	0.867	0.508	1.77799E-06	Peripheral NK	ISG15
6.51733E-11	1.407412257	0.933	0.592	1.84473E-06	Peripheral NK	ITGB2
6.79398E-11	1.516828744	0.533	0.15	1.92303E-06	Peripheral NK	OAS1
6.89162E-11	1.502475206	0.733	0.268	1.95067E-06	Peripheral NK	ISG20
1.15062E-10	1.700022669	0.667	0.252	3.25683E-06	Peripheral NK	TRIM22
1.43232E-10	1.152307954	0.633	0.199	4.05419E-06	Peripheral NK	C5orf56
1.48188E-10	1.61871132	0.933	0.618	4.19446E-06	Peripheral NK	RNF213
1.96896E-10	0.99314247	0.9	0.358	5.57315E-06	Peripheral NK	SAMD3
2.59733E-10	1.486471314	0.767	0.384	7.35173E-06	Peripheral NK	CCND3
3.87768E-10	1.197736401	0.933	0.592	1.09758E-05	Peripheral NK	XBP1
4.20011E-10	1.267961664	0.867	0.498	1.18884E-05	Peripheral NK	HLA-F
4.2825E-10	1.278696817	1	0.535	1.21216E-05	Peripheral NK	NKG7
4.97643E-10	1.376141354	0.733	0.304	1.40858E-05	Peripheral NK	SAMD9
5.73785E-10	1.075663698	1	0.519	1.6241E-05	Peripheral NK	APOBEC3G
7.15457E-10	1.438935068	0.9	0.648	2.0251E-05	Peripheral NK	LY6E
1.0831E-09	1.183980337	0.9	0.559	3.06572E-05	Peripheral NK	LIMD2
1.15927E-09	1.386350993	0.8	0.379	3.2813E-05	Peripheral NK	TBC1D10C
1.48533E-09	1.351460216	0.833	0.36	4.20422E-05	Peripheral NK	MATK
1.56753E-09	1.149505064	0.7	0.27	4.4369E-05	Peripheral NK	CASP8
1.68865E-09	1.141685943	0.7	0.265	4.77972E-05	Peripheral NK	ADD3
1.81271E-09	1.279951699	0.567	0.169	5.13088E-05	Peripheral NK	GBP5
2.30654E-09	0.875290919	1	0.816	6.52865E-05	Peripheral NK	PSME1
2.43577E-09	1.131990077	0.967	0.818	6.89444E-05	Peripheral NK	CYBA
2.68293E-09	1.365514882	0.9	0.598	7.59404E-05	Peripheral NK	EFHD2
4.64183E-09	1.439548035	0.767	0.354	0.000131387	Peripheral NK	SPN

4.79131E-09	1.268022296	0.533	0.166	0.000135618	Peripheral NK	PLEKHF1
5.6548E-09	1.495185946	0.567	0.176	0.000160059	Peripheral NK	TRGC1
6.1294E-09	1.067389196	0.933	0.708	0.000173493	Peripheral NK	RAC2
6.82522E-09	1.138568013	0.733	0.276	0.000193188	Peripheral NK	LCK
7.43073E-09	1.042787956	0.967	0.472	0.000210327	Peripheral NK	HOPX
7.69007E-09	1.195866333	0.633	0.223	0.000217667	Peripheral NK	CH17-189H20.1
9.06993E-09	1.222142427	0.733	0.321	0.000256724	Peripheral NK	ITGAL
1.32696E-08	1.278431048	0.733	0.326	0.000375597	Peripheral NK	C1orf162
1.47565E-08	1.273829222	0.667	0.258	0.000417684	Peripheral NK	PYHIN1
2.39733E-08	1.189966692	0.833	0.497	0.000678563	Peripheral NK	MBP
2.56834E-08	1.250757272	0.767	0.401	0.000726969	Peripheral NK	UBE2L6
3.31605E-08	1.562846876	0.833	0.564	0.000938608	Peripheral NK	CDC42SE1
3.32257E-08	0.72772518	0.967	0.973	0.000940453	Peripheral NK	HLA-A
4.36661E-08	0.95983992	0.4	0.102	0.001235968	Peripheral NK	TSPAN32
5.59866E-08	1.280786133	0.6	0.214	0.0015847	Peripheral NK	C12orf75
5.97685E-08	1.192166812	0.933	0.629	0.001691746	Peripheral NK	IFITM3
6.64025E-08	1.335691451	0.867	0.601	0.001879524	Peripheral NK	BST2
7.84187E-08	1.221480197	0.667	0.298	0.002219642	Peripheral NK	GIMAP1
9.06595E-08	0.916409773	0.967	0.713	0.002566117	Peripheral NK	PSME2
1.14175E-07	1.213863539	0.733	0.405	0.003231717	Peripheral NK	APMAP
1.14249E-07	1.617174879	0.733	0.382	0.003233814	Peripheral NK	IFI6
1.18596E-07	1.058512302	0.967	0.743	0.003356867	Peripheral NK	TXNIP
1.21217E-07	0.763939881	0.967	0.485	0.003431055	Peripheral NK	CTSW
1.27829E-07	1.39707757	0.767	0.46	0.003618201	Peripheral NK	CD47
1.29844E-07	0.960326088	0.8	0.418	0.00367523	Peripheral NK	ATM
1.50558E-07	1.434770394	0.567	0.228	0.004261533	Peripheral NK	LYAR
1.66402E-07	0.675896071	0.967	0.496	0.004710023	Peripheral NK	GZMA
1.68921E-07	0.993405147	0.867	0.547	0.004781318	Peripheral NK	CD48
1.73284E-07	0.973415126	0.933	0.662	0.004904811	Peripheral NK	TGFB1
2.11897E-07	1.120888486	0.4	0.115	0.005997756	Peripheral NK	BCL9L
2.37093E-07	1.006443876	0.7	0.346	0.006710918	Peripheral NK	PKN1
2.37181E-07	1.036639564	0.567	0.21	0.006713407	Peripheral NK	SYTL1
2.44928E-07	1.218772315	0.533	0.199	0.006932679	Peripheral NK	SH3BP5
2.98436E-07	1.154758142	0.4	0.116	0.008447223	Peripheral NK	NCR1
3.42592E-07	1.044755419	0.433	0.132	0.009697072	Peripheral NK	SLAMF7
3.43672E-07	1.218238561	0.633	0.284	0.009727629	Peripheral NK	MLLT6
3.56134E-07	0.780184743	0.4	0.112	0.010080371	Peripheral NK	IL12RB1
3.60318E-07	1.320359474	0.4	0.121	0.010198796	Peripheral NK	ADRB2

3.7808E-07	1.07141089	0.533	0.194	0.010701545	Peripheral NK	GIMAP2
3.95011E-07	0.936081504	0.467	0.152	0.011180784	Peripheral NK	RGS3
4.45513E-07	1.109200775	0.467	0.164	0.012610259	Peripheral NK	TAP2
4.80628E-07	1.01034556	0.5	0.167	0.013604182	Peripheral NK	TRGC2
4.96274E-07	1.12976156	0.5	0.193	0.014047037	Peripheral NK	ITGAM
5.06299E-07	1.385942168	0.5	0.192	0.014330796	Peripheral NK	STAT2
5.20395E-07	1.131900354	0.567	0.22	0.014729792	Peripheral NK	NCR3
5.72448E-07	1.177799213	0.733	0.421	0.016203154	Peripheral NK	BIN2
6.25811E-07	1.189904913	0.5	0.189	0.017713574	Peripheral NK	GBP4
7.25179E-07	1.32349641	0.633	0.311	0.020526189	Peripheral NK	GNG2
7.37062E-07	1.288838583	0.5	0.188	0.020862551	Peripheral NK	RAB29
7.59186E-07	0.806424	0.967	0.53	0.021488766	Peripheral NK	CD7
8.11296E-07	0.936378789	0.733	0.369	0.022963735	Peripheral NK	SLC9A3R1
8.12243E-07	0.998469423	0.633	0.273	0.022990541	Peripheral NK	ZAP70
8.35453E-07	1.433610127	0.467	0.168	0.023647485	Peripheral NK	SP110
8.40411E-07	1.082087546	0.5	0.184	0.023787828	Peripheral NK	HSH2D
1.07539E-06	1.256241872	0.767	0.568	0.030438929	Peripheral NK	RAP1B
1.08456E-06	0.847066775	0.967	0.822	0.030698402	Peripheral NK	CORO1A
1.16912E-06	1.212631982	0.733	0.429	0.033091951	Peripheral NK	SLFN5
1.29121E-06	1.123067729	0.867	0.608	0.036547737	Peripheral NK	RARRES3
1.4285E-06	1.167097407	0.733	0.421	0.040433761	Peripheral NK	ANXA6
1.93197E-06	1.322708436	0.5	0.193	0.05468444	Peripheral NK	SYNE1
2.03538E-06	0.976960365	0.533	0.21	0.057611376	Peripheral NK	PTGDR
2.48623E-06	1.122931291	0.4	0.135	0.070372605	Peripheral NK	OAS2
2.63709E-06	0.734277436	0.8	0.41	0.074642847	Peripheral NK	AHNAK
2.86897E-06	0.955501525	0.4	0.131	0.081206219	Peripheral NK	PXN
2.90106E-06	0.823916077	0.667	0.338	0.082114501	Peripheral NK	MIEN1
3.26247E-06	1.113331129	0.767	0.433	0.092344259	Peripheral NK	TRAF3IP3
4.09807E-06	0.854761441	0.7	0.326	0.115995982	Peripheral NK	PTPN4
4.14349E-06	1.003098248	0.767	0.462	0.117281358	Peripheral NK	PET100
4.49299E-06	1.043107336	0.633	0.344	0.127173969	Peripheral NK	TAP1
5.20839E-06	0.71432945	1	0.925	0.147423581	Peripheral NK	TMA7
5.55782E-06	0.732956917	0.9	0.57	0.157313993	Peripheral NK	LITAF
6.39047E-06	1.081233904	0.733	0.438	0.180882339	Peripheral NK	FLNA
7.77208E-06	1.010507021	0.667	0.36	0.219988721	Peripheral NK	RGS19
7.95602E-06	0.867202816	0.867	0.732	0.225195142	Peripheral NK	CD53
8.7372E-06	0.916713496	0.767	0.429	0.247306337	Peripheral NK	CD300A
8.87983E-06	0.687150586	0.433	0.154	0.251343482	Peripheral NK	ST6GALNAC6

9.22122E-06	0.927238318	0.467	0.177	0.261006689	Peripheral NK	NSUN6
1.03091E-05	1.242116368	0.433	0.162	0.291800149	Peripheral NK	ZNF276
1.28242E-05	0.939141377	0.433	0.17	0.362989184	Peripheral NK	FBXO6
1.33543E-05	0.953568989	0.9	0.729	0.377994059	Peripheral NK	EIF3G
1.50796E-05	0.706356999	0.567	0.254	0.426828484	Peripheral NK	CTDSP1
2.02374E-05	0.920311847	0.667	0.373	0.572820593	Peripheral NK	RBCK1
2.1138E-05	0.916214473	0.667	0.376	0.598311194	Peripheral NK	APOBEC3C
2.1899E-05	0.75225834	0.5	0.211	0.619851552	Peripheral NK	CAPN2
2.30429E-05	0.815473029	0.667	0.376	0.652228446	Peripheral NK	YPEL3
2.31917E-05	1.084257286	0.5	0.215	0.656440145	Peripheral NK	MX1
2.45582E-05	1.47048232	0.433	0.185	0.695119838	Peripheral NK	PARP9
2.63003E-05	1.091907062	0.567	0.285	0.744431055	Peripheral NK	STAT1
2.85652E-05	0.869404932	0.5	0.205	0.808537667	Peripheral NK	FASLG
2.85894E-05	1.054228005	0.467	0.197	0.809223376	Peripheral NK	DIP2A
3.34574E-05	0.910751663	0.6	0.314	0.947012026	Peripheral NK	TMC8
3.38369E-05	0.808466219	0.433	0.176	0.957752961	Peripheral NK	TRPV2
3.47422E-05	0.785691352	0.5	0.212	0.983378058	Peripheral NK	RBM38
3.71491E-05	0.918280036	0.7	0.39	1	Peripheral NK	FAM107B
4.69277E-05	0.640739566	0.633	0.292	1	Peripheral NK	IKZF3
5.04966E-05	0.914677267	0.4	0.158	1	Peripheral NK	PARP10
5.54973E-05	0.613583467	0.667	0.321	1	Peripheral NK	RORA
5.86701E-05	0.793665098	0.4	0.154	1	Peripheral NK	BTN3A1
6.42495E-05	1.102282465	0.4	0.165	1	Peripheral NK	LPCAT1
6.52902E-05	0.925932813	0.5	0.227	1	Peripheral NK	ORAI1
6.70923E-05	0.82931234	0.8	0.628	1	Peripheral NK	PSMB8
6.75849E-05	0.879746263	0.433	0.181	1	Peripheral NK	CD320
6.97961E-05	0.954695766	0.767	0.538	1	Peripheral NK	SP100
7.60145E-05	0.798892486	0.7	0.388	1	Peripheral NK	CHST12
8.19979E-05	1.055584271	0.8	0.658	1	Peripheral NK	JAK1
8.39343E-05	0.965893117	0.433	0.186	1	Peripheral NK	LMF2
8.86921E-05	0.832108111	0.7	0.445	1	Peripheral NK	UTRN
8.90518E-05	0.735843463	0.7	0.444	1	Peripheral NK	PLEK
9.5011E-05	1.012778419	0.467	0.216	1	Peripheral NK	FBXL15
9.73183E-05	1.162562821	0.533	0.297	1	Peripheral NK	PSMB10
0.000100446	0.790696408	0.533	0.251	1	Peripheral NK	CDKN2D
0.000100737	0.862572786	0.567	0.277	1	Peripheral NK	SYNE2
0.000102286	0.795370534	0.5	0.253	1	Peripheral NK	TSNAX
0.000107357	0.841878584	0.467	0.216	1	Peripheral NK	ADCY7

0.000108317	0.634334038	0.967	0.707	1	Peripheral NK	EVL
0.000110923	0.889507564	0.767	0.556	1	Peripheral NK	DOK2
0.000122291	0.915403309	0.667	0.45	1	Peripheral NK	FMNL1
0.000134133	0.93884194	0.6	0.328	1	Peripheral NK	STARD3NL
0.000173894	0.719240617	0.833	0.702	1	Peripheral NK	CD99
0.0001754	1.002042957	0.667	0.448	1	Peripheral NK	PTPN6
0.000178064	1.382347175	0.6	0.455	1	Peripheral NK	PRMT2
0.000182184	0.696105938	0.733	0.475	1	Peripheral NK	ARHGEF1
0.000184231	0.818009765	0.5	0.254	1	Peripheral NK	CTBP2
0.000191084	0.812334453	0.5	0.238	1	Peripheral NK	CTBP1
0.000192315	1.021125233	0.533	0.302	1	Peripheral NK	FGR
0.000213395	0.75444038	0.433	0.184	1	Peripheral NK	C16orf54
0.00026011	0.711001405	0.667	0.402	1	Peripheral NK	GIMAP4
0.000269072	0.903477826	0.533	0.296	1	Peripheral NK	EPSTI1
0.00029729	0.977729161	0.5	0.269	1	Peripheral NK	BIN1
0.000319273	0.766268293	0.7	0.45	1	Peripheral NK	PPP2R5C
0.000320943	0.696848154	0.567	0.325	1	Peripheral NK	AC113404.1
0.000322848	0.708914075	0.667	0.399	1	Peripheral NK	SUN2
0.000349246	0.691579655	0.767	0.511	1	Peripheral NK	CDC42SE2
0.000349749	0.931613932	0.567	0.314	1	Peripheral NK	RASAL3
0.000381285	0.86392397	0.4	0.181	1	Peripheral NK	IFI44
0.000387149	0.639688604	0.833	0.603	1	Peripheral NK	CD164
0.000401051	1.033284544	0.467	0.255	1	Peripheral NK	C19orf66
0.000434064	1.142002106	0.6	0.423	1	Peripheral NK	PARP14
0.000434959	0.723698299	0.533	0.291	1	Peripheral NK	CYTH1
0.000454334	0.771054658	0.567	0.322	1	Peripheral NK	EIF2AK2
0.000470148	0.642111532	0.467	0.227	1	Peripheral NK	GBP1
0.000475959	0.910629168	0.4	0.181	1	Peripheral NK	KCNAB2
0.00047615	0.629595767	0.467	0.213	1	Peripheral NK	GRK6
0.0004794	1.076292811	0.5	0.269	1	Peripheral NK	SAMD9L
0.000526833	0.66882012	0.667	0.444	1	Peripheral NK	PSMA2
0.000533826	1.013619629	0.6	0.365	1	Peripheral NK	TLE4
0.000570316	0.808718448	0.4	0.186	1	Peripheral NK	DCAF5
0.000578769	1.157667265	0.5	0.291	1	Peripheral NK	APOL6
0.000583149	0.919255122	0.667	0.469	1	Peripheral NK	CASP4
0.000694572	0.687636927	0.867	0.688	1	Peripheral NK	IRF1
0.000695148	0.793721522	0.467	0.239	1	Peripheral NK	CDC42EP3
0.000715073	0.652964213	0.733	0.501	1	Peripheral NK	C9orf142

0.000781291	0.800060603	0.4	0.195	1	Peripheral NK	TFDP2
0.000797698	0.604784431	0.6	0.362	1	Peripheral NK	TMC6
0.000899487	0.741081141	0.4	0.189	1	Peripheral NK	G6PD
0.000922241	0.819038952	0.467	0.238	1	Peripheral NK	FKBP11
0.000933408	0.704446938	0.6	0.357	1	Peripheral NK	RHOF
0.000975656	0.849334997	0.667	0.458	1	Peripheral NK	SAMHD1
0.001024561	0.62198843	0.667	0.438	1	Peripheral NK	CARD16
0.001054829	0.844701782	0.4	0.206	1	Peripheral NK	IGF2R
0.001073045	0.732451603	0.533	0.317	1	Peripheral NK	GBP2
0.001089026	0.726065286	0.6	0.381	1	Peripheral NK	LSM6
0.001144614	0.604975525	0.833	0.699	1	Peripheral NK	DRAP1
0.001237076	0.630701554	0.667	0.403	1	Peripheral NK	SKAP1
0.00140176	0.751491438	0.567	0.362	1	Peripheral NK	RNPEPL1
0.001474537	0.818527169	0.4	0.194	1	Peripheral NK	S1PR4
0.00153906	0.688298768	0.667	0.475	1	Peripheral NK	ICAM3
0.001545801	0.860278883	0.567	0.416	1	Peripheral NK	ADAR
0.001554941	0.611578086	0.533	0.322	1	Peripheral NK	DGKZ
0.001683089	0.704946777	0.467	0.258	1	Peripheral NK	RP11-160E2.6
0.001721455	0.641694692	0.4	0.204	1	Peripheral NK	DPM2
0.001803378	0.838721638	0.6	0.401	1	Peripheral NK	MYO1F
0.001969382	0.640177321	0.533	0.326	1	Peripheral NK	TNFRSF14
0.001994522	0.701718993	0.833	0.736	1	Peripheral NK	CALR
0.002059362	0.744181653	0.5	0.315	1	Peripheral NK	TMED5
0.002094436	0.603969622	0.4	0.198	1	Peripheral NK	PRKCB
0.002245177	0.713774497	0.5	0.327	1	Peripheral NK	SERPINB6
0.00225935	0.650537308	0.767	0.535	1	Peripheral NK	ARPC5L
0.002448332	0.669802927	0.5	0.266	1	Peripheral NK	LAT
0.002461913	0.67693485	0.4	0.205	1	Peripheral NK	SPATA13
0.002652065	0.633895903	0.733	0.681	1	Peripheral NK	FAM49B
0.002672588	0.614139547	0.7	0.499	1	Peripheral NK	GNB2
0.002785779	0.805558512	0.633	0.497	1	Peripheral NK	DHRS7
0.00285114	0.71179143	0.467	0.281	1	Peripheral NK	GOLGA7
0.002901509	0.654653842	0.467	0.26	1	Peripheral NK	HMOX2
0.002931781	0.644608204	0.433	0.231	1	Peripheral NK	CWF19L2
0.003049466	0.737670022	0.667	0.492	1	Peripheral NK	UCP2
0.003165745	0.671800631	0.533	0.333	1	Peripheral NK	SASH3
0.003237037	0.872902043	0.6	0.459	1	Peripheral NK	GOLGA4
0.00332836	1.591191455	0.4	0.218	1	Peripheral NK	GZMH

0.00343715	0.751345116	0.4	0.214	1	Peripheral NK	TMEM173
0.003575222	0.711415606	0.5	0.314	1	Peripheral NK	SMARCE1
0.00391993	0.725903804	0.5	0.296	1	Peripheral NK	BTN3A2
0.003963128	0.761756961	0.6	0.413	1	Peripheral NK	PIM1
0.004048054	0.62098902	0.733	0.614	1	Peripheral NK	WIPF1
0.004145409	0.749109208	0.633	0.476	1	Peripheral NK	TAOK3
0.004331053	0.728916134	0.433	0.236	1	Peripheral NK	SELPLG
0.00442109	0.682457851	0.433	0.245	1	Peripheral NK	KIAA2026
0.004505737	0.73797014	0.533	0.347	1	Peripheral NK	FAM204A
0.004565184	1.033406103	0.4	0.23	1	Peripheral NK	IRF7
0.004731916	0.723834713	0.433	0.248	1	Peripheral NK	PTK2B
0.004866486	0.639620464	0.6	0.393	1	Peripheral NK	SH3KBP1
0.005086554	0.642292149	0.667	0.557	1	Peripheral NK	NDUFB7
0.005193536	0.640985005	0.6	0.492	1	Peripheral NK	LMAN2
0.005307535	0.618608601	0.467	0.271	1	Peripheral NK	DENND2D
0.005428823	0.833465641	0.667	0.571	1	Peripheral NK	CCDC85B
0.006022049	0.600668747	0.4	0.213	1	Peripheral NK	TNRC6A
0.006206843	0.784573779	0.633	0.519	1	Peripheral NK	U2AF1
0.006994595	0.758384217	0.533	0.359	1	Peripheral NK	LNPEP
0.007097513	0.638920085	0.5	0.319	1	Peripheral NK	PDLIM2
0.007274017	0.8315588	0.6	0.445	1	Peripheral NK	PIP4K2A
0.00761392	0.804952338	0.4	0.234	1	Peripheral NK	PPM1K
0.008119459	0.714045263	0.433	0.275	1	Peripheral NK	YIPF4
0.008164723	1.073942336	0.4	0.245	1	Peripheral NK	CXXC5
0.008246024	0.688182754	0.567	0.4	1	Peripheral NK	HMHA1
0.008276578	0.704517832	0.733	0.67	1	Peripheral NK	MSN
0.009186839	0.69099762	0.4	0.228	1	Peripheral NK	RNF166
0.009869911	0.767128942	0.467	0.324	1	Peripheral NK	ADAM10
1.2389E-244	2.86213507	0.88	0.037	3.5066E-240	cycling lymphocytes	UBE2C
4.5061E-195	1.339485043	0.627	0.016	1.2754E-190	cycling lymphocytes	CKAP2L
4.4722E-192	1.690097633	0.683	0.025	1.2659E-187	cycling lymphocytes	AURKB
3.1626E-189	2.372688439	0.697	0.029	8.9518E-185	cycling lymphocytes	ASPM
3.8372E-188	1.472716147	0.62	0.018	1.0861E-183	cycling lymphocytes	CDCA8
3.8273E-187	2.072272202	0.676	0.027	1.0833E-182	cycling lymphocytes	RRM2
1.1557E-181	2.117923937	0.81	0.054	3.2712E-177	cycling lymphocytes	BIRC5
1.8657E-170	1.421208348	0.655	0.028	5.281E-166	cycling lymphocytes	NUF2
6.0739E-169	2.283392154	0.866	0.077	1.7192E-164	cycling lymphocytes	NUSAP1
7.2176E-169	1.420186889	0.563	0.016	2.0429E-164	cycling lymphocytes	CCNA2

4.0883E-168	2.750552175	0.789	0.059	1.1572E-163	cycling lymphocytes	TOP2A
1.4012E-167	1.643471322	0.634	0.027	3.9662E-163	cycling lymphocytes	GTSE1
5.7249E-167	1.189622856	0.542	0.014	1.6204E-162	cycling lymphocytes	CDCA3
7.781E-167	1.450224475	0.585	0.02	2.2024E-162	cycling lymphocytes	DLGAP5
6.3512E-163	2.010577473	0.732	0.049	1.7977E-158	cycling lymphocytes	TPX2
9.9969E-157	1.641475817	0.62	0.029	2.8296E-152	cycling lymphocytes	HMMR
1.9419E-154	2.637989171	0.845	0.085	5.4965E-150	cycling lymphocytes	MKI67
7.2505E-153	0.891646444	0.423	0.005	2.0523E-148	cycling lymphocytes	PBK
4.9512E-147	1.290671169	0.592	0.029	1.4014E-142	cycling lymphocytes	NDC80
2.3425E-146	1.240815473	0.599	0.03	6.6305E-142	cycling lymphocytes	KIFC1
3.4557E-145	2.439246473	0.852	0.095	9.7814E-141	cycling lymphocytes	TYMS
2.52E-144	1.712548114	0.746	0.064	7.1329E-140	cycling lymphocytes	ZWINT
7.5593E-144	1.721576828	0.81	0.078	2.1397E-139	cycling lymphocytes	MAD2L1
1.6211E-143	1.833080688	0.711	0.055	4.5885E-139	cycling lymphocytes	CDKN3
1.1947E-142	1.280047376	0.563	0.026	3.3817E-138	cycling lymphocytes	SGOL1
2.656E-139	1.777666354	0.761	0.07	7.5177E-135	cycling lymphocytes	CENPM
4.1469E-139	1.146647045	0.458	0.012	1.1738E-134	cycling lymphocytes	PLK1
1.0424E-138	2.269918093	0.887	0.111	2.9506E-134	cycling lymphocytes	KIAA0101
2.2983E-136	1.292595693	0.599	0.035	6.5053E-132	cycling lymphocytes	CASC5
7.555E-135	1.275376652	0.592	0.034	2.1384E-130	cycling lymphocytes	CEP55
3.2895E-134	1.276514031	0.606	0.037	9.3108E-130	cycling lymphocytes	ASF1B
1.7746E-133	2.818768892	0.859	0.11	5.0229E-129	cycling lymphocytes	CENPF
9.6695E-133	1.694431653	0.563	0.031	2.7369E-128	cycling lymphocytes	CDC20
5.0291E-132	1.794728311	0.634	0.045	1.4235E-127	cycling lymphocytes	CCNB1
2.6721E-131	0.973609286	0.437	0.012	7.5634E-127	cycling lymphocytes	HJURP
9.4047E-129	0.94856204	0.415	0.011	2.662E-124	cycling lymphocytes	CDCA2
1.1539E-128	1.542031877	0.676	0.057	3.2661E-124	cycling lymphocytes	UBE2T
4.2547E-128	0.98345592	0.408	0.01	1.2043E-123	cycling lymphocytes	KIF15
4.3817E-128	1.996806768	0.873	0.123	1.2402E-123	cycling lymphocytes	CKS1B
1.0713E-127	0.996582248	0.486	0.02	3.0322E-123	cycling lymphocytes	NCAPG
4.5455E-125	1.115814345	0.465	0.018	1.2866E-120	cycling lymphocytes	CENPA
5.3352E-125	1.554251065	0.556	0.033	1.5101E-120	cycling lymphocytes	CCNB2
4.733E-124	1.103957708	0.493	0.023	1.3397E-119	cycling lymphocytes	KIF11
9.6476E-124	1.74273646	0.627	0.049	2.7307E-119	cycling lymphocytes	TK1
1.7875E-120	0.978262756	0.423	0.014	5.0596E-116	cycling lymphocytes	KIF2C
1.433E-117	1.557940987	0.458	0.02	4.0561E-113	cycling lymphocytes	HIST1H1B
4.0007E-117	0.963891363	0.437	0.017	1.1324E-112	cycling lymphocytes	CDCA5
4.9527E-117	1.011330868	0.493	0.025	1.4019E-112	cycling lymphocytes	KIF23

1.0718E-116	1.518810276	0.641	0.056	3.0339E-112	cycling lymphocytes	PRC1
6.2866E-115	1.47610602	0.585	0.044	1.7794E-110	cycling lymphocytes	CENPE
4.3185E-114	0.972035327	0.423	0.016	1.2223E-109	cycling lymphocytes	SPC25
2.4817E-111	1.619043397	0.634	0.061	7.0245E-107	cycling lymphocytes	CDK1
3.161E-108	1.473223409	0.739	0.096	8.9471E-104	cycling lymphocytes	CENPW
2.6737E-104	1.291502924	0.577	0.051	7.568E-100	cycling lymphocytes	SGOL2
1.2239E-102	1.008612737	0.5	0.034	3.46416E-98	cycling lymphocytes	RACGAP1
7.9701E-101	2.952463525	0.993	0.344	2.25592E-96	cycling lymphocytes	STMN1
1.78234E-94	1.14685721	0.521	0.044	5.04492E-90	cycling lymphocytes	AURKA
3.08325E-94	2.028674952	0.859	0.172	8.72713E-90	cycling lymphocytes	PTTG1
2.24449E-89	1.068950931	0.415	0.026	6.35303E-85	cycling lymphocytes	TROAP
1.66266E-88	0.848096235	0.423	0.027	4.70616E-84	cycling lymphocytes	SHCBP1
3.18225E-88	1.088924442	0.486	0.041	9.00736E-84	cycling lymphocytes	BUB1
7.57606E-88	2.867409177	0.993	0.48	2.1444E-83	cycling lymphocytes	HMGB2
2.26825E-87	0.882723037	0.437	0.03	6.42029E-83	cycling lymphocytes	MND1
7.4488E-86	0.947103157	0.472	0.039	2.10838E-81	cycling lymphocytes	KIAA1524
4.26755E-85	0.979489157	0.423	0.029	1.20793E-80	cycling lymphocytes	MXD3
1.44651E-83	1.174648433	0.423	0.031	4.09436E-79	cycling lymphocytes	HIST1H2AI
2.0782E-83	1.314902851	0.549	0.061	5.88233E-79	cycling lymphocytes	CLSPN
1.17903E-82	0.961576408	0.521	0.053	3.33725E-78	cycling lymphocytes	CENPN
3.99441E-80	2.637136702	1	0.765	1.13062E-75	cycling lymphocytes	TUBA1B
4.97482E-78	1.097716666	0.401	0.029	1.40812E-73	cycling lymphocytes	HIST1H2AJ
1.84263E-77	1.021564874	0.535	0.061	5.21556E-73	cycling lymphocytes	CENPU
1.61445E-76	2.5908488	0.986	0.598	4.5697E-72	cycling lymphocytes	TUBB
8.94573E-76	1.321791399	0.761	0.152	2.53209E-71	cycling lymphocytes	DTYMK
1.27671E-74	2.081671735	0.993	0.74	3.61373E-70	cycling lymphocytes	H2AFZ
7.55016E-74	2.015519244	0.894	0.293	2.13707E-69	cycling lymphocytes	SMC4
8.68044E-74	0.930733168	0.458	0.045	2.457E-69	cycling lymphocytes	KNSTRN
7.30522E-73	0.953425361	0.437	0.041	2.06774E-68	cycling lymphocytes	FANCI
1.23782E-72	0.990452057	0.479	0.052	3.50364E-68	cycling lymphocytes	RAD51AP1
6.32622E-71	1.502154358	0.739	0.161	1.79064E-66	cycling lymphocytes	SMC2
9.24411E-70	1.087520873	0.627	0.1	2.61654E-65	cycling lymphocytes	TACC3
8.53414E-66	0.747103202	0.408	0.04	2.41559E-61	cycling lymphocytes	SPDL1
2.30947E-65	1.000081316	0.627	0.106	6.53694E-61	cycling lymphocytes	HIRIP3
6.90149E-65	0.998052041	0.458	0.054	1.95347E-60	cycling lymphocytes	FBXO5
1.74865E-64	0.912532362	0.423	0.044	4.94955E-60	cycling lymphocytes	ARHGAP11A
1.25034E-63	0.898049132	0.486	0.063	3.5391E-59	cycling lymphocytes	GGH
7.49184E-63	1.29422249	0.775	0.187	2.12057E-58	cycling lymphocytes	PHF19

6.57656E-58	1.439487742	0.669	0.153	1.8615E-53	cycling lymphocytes	KIF20B
7.63253E-58	1.360463184	0.993	0.918	2.16039E-53	cycling lymphocytes	HMGB1
9.07703E-57	1.180294233	0.634	0.133	2.56925E-52	cycling lymphocytes	HMGB3
2.29825E-56	3.580037739	0.915	0.477	6.50521E-52	cycling lymphocytes	HIST1H4C
1.11448E-54	1.168623954	0.507	0.085	3.15454E-50	cycling lymphocytes	FEN1
1.9502E-53	1.226620788	0.641	0.141	5.52004E-49	cycling lymphocytes	TMEM106C
4.03123E-53	1.493823945	0.845	0.303	1.14104E-48	cycling lymphocytes	TMPO
1.59419E-52	1.874326623	0.93	0.438	4.51237E-48	cycling lymphocytes	NUCB2
3.24653E-52	0.735806057	0.43	0.059	9.18932E-48	cycling lymphocytes	CCDC34
1.60616E-51	0.740729321	0.408	0.054	4.54624E-47	cycling lymphocytes	CDT1
9.26429E-51	0.996148372	0.592	0.12	2.62226E-46	cycling lymphocytes	CDKN2A
1.00399E-50	0.823156515	0.465	0.073	2.8418E-46	cycling lymphocytes	CENPH
2.18362E-50	1.434962657	0.542	0.108	6.18074E-46	cycling lymphocytes	HIST1H1D
2.02862E-48	0.937670342	0.599	0.13	5.74202E-44	cycling lymphocytes	KIF22
2.40294E-48	1.610067218	0.965	0.601	6.80153E-44	cycling lymphocytes	HMGN2
1.2248E-47	1.623925634	0.866	0.364	3.4668E-43	cycling lymphocytes	TUBA1C
3.77013E-47	0.682347974	0.43	0.065	1.06714E-42	cycling lymphocytes	NCAPD2
5.12419E-47	1.370226634	0.972	0.592	1.4504E-42	cycling lymphocytes	H2AFV
5.59127E-47	1.142903927	0.768	0.232	1.58261E-42	cycling lymphocytes	SKA2
6.95026E-47	1.411410079	0.754	0.227	1.96727E-42	cycling lymphocytes	SNRNP25
9.2961E-47	0.992517401	0.437	0.072	2.63126E-42	cycling lymphocytes	DHFR
1.50571E-46	1.216380749	0.606	0.146	4.26192E-42	cycling lymphocytes	MCM7
1.65779E-45	1.354394476	0.859	0.337	4.69239E-41	cycling lymphocytes	CKS2
1.86799E-45	0.96580182	0.528	0.108	5.28734E-41	cycling lymphocytes	RRM1
4.63739E-45	0.797314015	0.479	0.083	1.31261E-40	cycling lymphocytes	CDCA4
6.46572E-45	0.603989781	0.43	0.068	1.83012E-40	cycling lymphocytes	C14orf80
1.11179E-44	1.353545982	0.979	0.748	3.14693E-40	cycling lymphocytes	RAN
1.16309E-44	1.238136149	0.845	0.317	3.29213E-40	cycling lymphocytes	H2AFX
1.21382E-44	0.781395969	0.415	0.065	3.43572E-40	cycling lymphocytes	ORC6
1.97151E-44	1.386473695	0.908	0.438	5.58036E-40	cycling lymphocytes	IDH2
6.44529E-44	0.894484436	0.556	0.118	1.82434E-39	cycling lymphocytes	CENPK
6.79011E-44	0.963918177	0.606	0.139	1.92194E-39	cycling lymphocytes	CDKN2C
8.98771E-44	0.764727916	0.528	0.107	2.54397E-39	cycling lymphocytes	TTF2
1.41421E-43	1.648073206	0.775	0.28	4.00293E-39	cycling lymphocytes	KPNA2
1.37498E-42	1.132253378	0.803	0.283	3.89188E-38	cycling lymphocytes	RPA3
2.25366E-42	1.310835012	0.979	0.655	6.37899E-38	cycling lymphocytes	NUCKS1
2.39802E-42	1.207735113	1	0.959	6.78759E-38	cycling lymphocytes	ACTG1
2.7615E-42	0.811529921	1	0.994	7.81643E-38	cycling lymphocytes	PTMA

6.42948E-42	1.303857299	0.951	0.584	1.81986E-37	cycling lymphocytes	CALM3
6.62315E-42	1.654725186	0.859	0.391	1.87468E-37	cycling lymphocytes	DUT
3.44387E-41	1.479637107	0.915	0.454	9.74787E-37	cycling lymphocytes	UBE2S
3.9271E-41	1.306746169	0.958	0.576	1.11157E-36	cycling lymphocytes	ANP32B
5.90538E-41	0.898237988	1	0.991	1.67152E-36	cycling lymphocytes	ACTB
1.51419E-40	0.778828135	0.5	0.103	4.28591E-36	cycling lymphocytes	CKAP5
5.28979E-39	1.026631405	0.599	0.163	1.49727E-34	cycling lymphocytes	SAE1
8.90565E-39	1.083387591	1	0.954	2.52074E-34	cycling lymphocytes	GAPDH
2.4701E-38	0.99010404	0.718	0.231	6.99161E-34	cycling lymphocytes	NUDT1
2.67229E-38	1.204674723	0.93	0.514	7.56393E-34	cycling lymphocytes	SNRPD1
3.74895E-38	0.739879609	0.521	0.12	1.06114E-33	cycling lymphocytes	RNASEH2A
5.0627E-38	0.880351806	0.43	0.085	1.433E-33	cycling lymphocytes	SAC3D1
8.60824E-38	1.227318968	0.782	0.267	2.43656E-33	cycling lymphocytes	TESC
1.06536E-37	1.019935809	0.556	0.138	3.0155E-33	cycling lymphocytes	EZH2
1.78989E-37	1.053746296	0.979	0.751	5.06629E-33	cycling lymphocytes	COX8A
4.3019E-37	0.88965105	0.648	0.187	1.21765E-32	cycling lymphocytes	MZT1
4.90217E-37	0.722796824	0.458	0.096	1.38756E-32	cycling lymphocytes	BCL2L12
6.58862E-37	0.96091846	0.993	0.891	1.86491E-32	cycling lymphocytes	CLIC1
1.50645E-36	1.360621781	0.951	0.6	4.26401E-32	cycling lymphocytes	TUBB4B
2.26047E-36	0.613134744	0.43	0.083	6.39825E-32	cycling lymphocytes	NCAPD3
4.97356E-36	0.950793048	0.62	0.178	1.40777E-31	cycling lymphocytes	LMNB1
1.83651E-35	0.923335224	1	0.881	5.19825E-31	cycling lymphocytes	CHCHD2
2.04433E-35	1.450585357	0.655	0.225	5.78646E-31	cycling lymphocytes	PCNA
2.06137E-35	0.778027546	1	0.959	5.8347E-31	cycling lymphocytes	PFN1
2.30764E-35	1.097823153	0.986	0.812	6.53179E-31	cycling lymphocytes	CORO1A
3.20462E-35	1.04756917	0.972	0.695	9.07067E-31	cycling lymphocytes	SLC25A5
3.29811E-35	0.777659156	0.401	0.076	9.3353E-31	cycling lymphocytes	CDC25B
5.4612E-35	0.915372769	0.542	0.14	1.54579E-30	cycling lymphocytes	CKAP2
6.01345E-35	1.127525819	0.796	0.319	1.70211E-30	cycling lymphocytes	CARHSP1
8.97306E-35	1.042059509	0.972	0.506	2.53983E-30	cycling lymphocytes	ARPC5L
1.73529E-34	0.676062958	0.542	0.134	4.91174E-30	cycling lymphocytes	YEATS4
2.33623E-34	0.773084312	0.423	0.087	6.61269E-30	cycling lymphocytes	ATAD5
2.88171E-34	0.882999703	0.69	0.22	8.15668E-30	cycling lymphocytes	CCDC167
1.07745E-33	0.953085832	0.986	0.749	3.04973E-29	cycling lymphocytes	MZT2B
1.10756E-33	0.623244948	0.415	0.085	3.13495E-29	cycling lymphocytes	RFC4
1.68695E-33	1.270408313	0.901	0.496	4.77492E-29	cycling lymphocytes	HN1
3.2599E-33	0.827863073	0.676	0.219	9.22715E-29	cycling lymphocytes	MAD2L2
3.53438E-33	1.087112479	0.979	0.775	1.0004E-28	cycling lymphocytes	ENO1

4.82857E-33	0.697490939	0.458	0.104	1.36673E-28	cycling lymphocytes	WHSC1
9.71202E-33	0.982853031	0.704	0.254	2.74899E-28	cycling lymphocytes	USP1
1.02529E-32	0.759080542	0.592	0.165	2.90207E-28	cycling lymphocytes	TEX30
1.05825E-32	0.930899971	0.472	0.115	2.99537E-28	cycling lymphocytes	HIST1H1E
1.40922E-32	1.367012177	0.923	0.471	3.9888E-28	cycling lymphocytes	GZMA
4.26593E-32	1.086543915	0.803	0.357	1.20747E-27	cycling lymphocytes	DDX39A
5.29512E-32	1.100159069	0.493	0.127	1.49878E-27	cycling lymphocytes	ATAD2
1.39941E-31	0.99000641	0.831	0.39	3.96102E-27	cycling lymphocytes	RNASEH2C
5.70531E-31	1.410605043	0.993	0.803	1.61489E-26	cycling lymphocytes	COTL1
6.5299E-31	0.671736207	1	0.952	1.84829E-26	cycling lymphocytes	CFL1
7.39791E-31	0.97957818	0.986	0.789	2.09398E-26	cycling lymphocytes	TPI1
2.18609E-30	1.226297287	0.746	0.275	6.18774E-26	cycling lymphocytes	GZMB
3.43237E-30	1.047199792	0.838	0.397	9.71532E-26	cycling lymphocytes	ANP32E
3.86107E-30	0.634033291	0.507	0.134	1.09287E-25	cycling lymphocytes	VRK1
4.48388E-30	1.014143536	0.606	0.202	1.26916E-25	cycling lymphocytes	POP4
5.4458E-30	0.882274066	0.69	0.25	1.54143E-25	cycling lymphocytes	EBP
9.31094E-30	0.995072085	0.852	0.409	2.63546E-25	cycling lymphocytes	LSM4
2.80048E-29	1.103455374	0.648	0.226	7.92676E-25	cycling lymphocytes	CDKN2D
3.98265E-29	1.020772399	0.979	0.759	1.12729E-24	cycling lymphocytes	LDHA
5.81748E-29	0.936722872	0.859	0.415	1.64664E-24	cycling lymphocytes	ILF2
1.07104E-28	1.488114244	0.979	0.823	3.03159E-24	cycling lymphocytes	GSTP1
1.70659E-28	0.893568472	0.669	0.25	4.8305E-24	cycling lymphocytes	CBX5
1.82146E-28	0.919677655	0.789	0.36	5.15564E-24	cycling lymphocytes	VDAC3
3.21684E-28	1.273458217	0.606	0.224	9.10526E-24	cycling lymphocytes	HIST1H1C
4.19926E-28	0.893288727	0.93	0.545	1.1886E-23	cycling lymphocytes	ANAPC11
5.89103E-28	0.872944819	0.915	0.546	1.66745E-23	cycling lymphocytes	MZT2A
5.99477E-28	0.986862067	0.866	0.469	1.69682E-23	cycling lymphocytes	BUB3
1.73237E-27	0.940668743	0.838	0.408	4.90348E-23	cycling lymphocytes	LSM5
2.81994E-27	0.702794543	0.514	0.143	7.98184E-23	cycling lymphocytes	APOBEC3H
4.46821E-27	0.724805121	0.606	0.208	1.26473E-22	cycling lymphocytes	SSRP1
5.02497E-27	0.75633536	0.986	0.908	1.42232E-22	cycling lymphocytes	ARPC2
9.44747E-27	0.838127148	0.993	0.885	2.67411E-22	cycling lymphocytes	PPIA
1.50038E-26	0.631936709	0.465	0.125	4.24682E-22	cycling lymphocytes	BARD1
1.94791E-26	0.88504185	0.803	0.402	5.51357E-22	cycling lymphocytes	PPM1G
2.71E-26	1.078671469	0.789	0.355	7.67066E-22	cycling lymphocytes	ITM2A
8.93506E-26	1.123342967	0.852	0.511	2.52907E-21	cycling lymphocytes	RANBP1
1.05847E-25	0.81804069	0.613	0.212	2.99599E-21	cycling lymphocytes	FAM111A
1.94339E-25	0.84252686	0.852	0.435	5.50078E-21	cycling lymphocytes	DCTN3

2.4321E-25	0.873925693	0.958	0.693	6.88406E-21	cycling lymphocytes	RAC2
3.20699E-25	0.803724574	0.873	0.494	9.07739E-21	cycling lymphocytes	LSM3
3.44994E-25	0.788932597	0.486	0.148	9.76504E-21	cycling lymphocytes	GMNN
1.07282E-24	0.727925242	1	0.891	3.03663E-20	cycling lymphocytes	ARHGDIB
1.13681E-24	0.735872288	0.676	0.267	3.21774E-20	cycling lymphocytes	COMMD4
4.3695E-24	0.842201667	0.901	0.6	1.23679E-19	cycling lymphocytes	CBX3
5.41956E-24	0.820645589	0.965	0.7	1.53401E-19	cycling lymphocytes	SNRPB
5.51415E-24	0.780039642	0.641	0.254	1.56078E-19	cycling lymphocytes	TIMM10
8.75793E-24	0.983868812	0.915	0.639	2.47893E-19	cycling lymphocytes	DEK
1.77141E-23	0.843903882	0.915	0.586	5.01397E-19	cycling lymphocytes	PPP1CA
1.85806E-23	0.962341789	0.782	0.393	5.25925E-19	cycling lymphocytes	RAD21
2.98744E-23	0.645735048	0.493	0.157	8.45596E-19	cycling lymphocytes	C19orf48
3.5894E-23	0.849888491	0.937	0.616	1.01598E-18	cycling lymphocytes	COX5A
7.2454E-23	0.910840116	0.915	0.607	2.05081E-18	cycling lymphocytes	TPM4
9.47453E-23	0.769586266	0.697	0.309	2.68177E-18	cycling lymphocytes	HDGF
1.23553E-22	0.813758308	0.718	0.329	3.49716E-18	cycling lymphocytes	FDPS
1.66329E-22	0.683608326	0.718	0.308	4.70793E-18	cycling lymphocytes	SNRPA1
3.07427E-22	0.841707962	0.838	0.477	8.70172E-18	cycling lymphocytes	PLP2
5.1074E-22	0.64166505	0.521	0.177	1.44565E-17	cycling lymphocytes	MAGOHB
6.08194E-22	0.729406643	0.944	0.656	1.72149E-17	cycling lymphocytes	PSMB9
6.19562E-22	0.801455215	0.577	0.229	1.75367E-17	cycling lymphocytes	ZDHHC12
9.31729E-22	0.942647647	0.697	0.323	2.63726E-17	cycling lymphocytes	NME1
9.76598E-22	0.844094734	0.458	0.148	2.76426E-17	cycling lymphocytes	MCM3
1.03117E-21	0.773272614	0.782	0.376	2.91872E-17	cycling lymphocytes	CYC1
1.48947E-21	0.699637375	0.796	0.375	4.21595E-17	cycling lymphocytes	PIN1
2.07953E-21	0.755238484	0.852	0.449	5.88612E-17	cycling lymphocytes	RALY
2.22409E-21	0.607916153	0.556	0.197	6.29528E-17	cycling lymphocytes	DBF4
3.33141E-21	0.779579739	0.951	0.69	9.42957E-17	cycling lymphocytes	TAGLN2
3.63258E-21	0.717287072	0.711	0.323	1.0282E-16	cycling lymphocytes	ACAA2
3.67005E-21	0.634045791	0.514	0.169	1.03881E-16	cycling lymphocytes	KIR2DL4
4.05622E-21	0.820725697	0.887	0.527	1.14811E-16	cycling lymphocytes	SNRPE
4.17041E-21	1.343635355	0.789	0.46	1.18044E-16	cycling lymphocytes	GNLY
4.38876E-21	0.813737955	0.908	0.619	1.24224E-16	cycling lymphocytes	SNRPG
5.29771E-21	0.928231322	0.873	0.464	1.49952E-16	cycling lymphocytes	CTSW
8.90796E-21	0.880218828	0.831	0.488	2.5214E-16	cycling lymphocytes	SIVA1
1.1529E-20	0.653944556	0.62	0.239	3.26327E-16	cycling lymphocytes	RAB27A
1.5525E-20	0.700827146	0.859	0.47	4.39434E-16	cycling lymphocytes	NAA38
2.20732E-20	0.719116072	0.894	0.583	6.24781E-16	cycling lymphocytes	ERH

9.15643E-20	1.047558121	0.754	0.39	2.59173E-15	cycling lymphocytes	IGFBP2
1.25933E-19	0.603626305	0.746	0.357	3.56452E-15	cycling lymphocytes	PSMC3
1.70154E-19	0.729712061	0.901	0.61	4.81622E-15	cycling lymphocytes	PSMB8
1.86707E-19	0.861680438	0.81	0.41	5.28475E-15	cycling lymphocytes	TRDC
1.95896E-19	0.707356705	0.972	0.73	5.54483E-15	cycling lymphocytes	PARK7
2.05588E-19	0.688064293	0.972	0.724	5.81916E-15	cycling lymphocytes	ATP5G3
3.34793E-19	0.794737904	0.472	0.172	9.47633E-15	cycling lymphocytes	PAICS
6.32081E-19	0.698509943	0.669	0.313	1.78911E-14	cycling lymphocytes	RBBP7
7.80262E-19	0.743241325	0.923	0.693	2.20853E-14	cycling lymphocytes	EIF5A
8.02663E-19	0.667842754	0.585	0.24	2.27194E-14	cycling lymphocytes	IMPDH2
8.7645E-19	0.645910201	0.937	0.706	2.48079E-14	cycling lymphocytes	ATPIF1
1.65298E-18	0.787512201	0.676	0.324	4.67876E-14	cycling lymphocytes	SMC1A
3.25537E-18	0.814934594	0.718	0.374	9.21431E-14	cycling lymphocytes	SMC3
3.99671E-18	0.743165934	0.937	0.7	1.13127E-13	cycling lymphocytes	PSME2
4.29223E-18	0.756728034	0.782	0.439	1.21491E-13	cycling lymphocytes	PSMB2
5.48658E-18	0.656400235	0.535	0.202	1.55298E-13	cycling lymphocytes	POLR3K
6.1499E-18	0.808931062	0.859	0.516	1.74073E-13	cycling lymphocytes	HNRNPAB
2.63351E-17	0.732603577	0.465	0.174	7.45416E-13	cycling lymphocytes	MCM5
6.71537E-17	0.684724765	0.88	0.595	1.90079E-12	cycling lymphocytes	SNRPF
7.63282E-17	0.775242674	0.831	0.452	2.16047E-12	cycling lymphocytes	GLIPR2
8.63395E-17	0.620832298	0.754	0.391	2.44384E-12	cycling lymphocytes	MAZ
8.89613E-17	0.64960303	0.768	0.407	2.51805E-12	cycling lymphocytes	TMEM160
1.50063E-16	0.677625902	0.655	0.312	4.24752E-12	cycling lymphocytes	SASH3
1.52893E-16	0.652071674	0.817	0.451	4.32764E-12	cycling lymphocytes	UBALD2
1.54019E-16	0.666900766	0.415	0.147	4.3595E-12	cycling lymphocytes	RFC2
1.57795E-16	0.724639113	0.761	0.436	4.4664E-12	cycling lymphocytes	CCT8
1.69836E-16	0.605748687	0.528	0.204	4.80721E-12	cycling lymphocytes	SYNGR1
1.93317E-16	0.681025849	0.662	0.315	5.47184E-12	cycling lymphocytes	STRA13
4.82012E-16	0.676931824	0.817	0.5	1.36433E-11	cycling lymphocytes	WDR1
5.50577E-16	0.601097961	0.923	0.513	1.55841E-11	cycling lymphocytes	NKG7
6.1167E-16	0.63498411	0.831	0.51	1.73133E-11	cycling lymphocytes	BANF1
7.47558E-16	0.615062377	0.62	0.284	2.11596E-11	cycling lymphocytes	PMF1
8.76794E-16	0.638448775	0.458	0.177	2.48176E-11	cycling lymphocytes	GMPS
2.73018E-15	0.645957714	0.979	0.795	7.72778E-11	cycling lymphocytes	CALM2
3.21101E-15	0.62700745	0.88	0.582	9.08875E-11	cycling lymphocytes	PSMA4
3.82703E-15	1.112345893	0.958	0.806	1.08324E-10	cycling lymphocytes	LGALS1
3.90184E-15	0.650102962	0.521	0.214	1.10442E-10	cycling lymphocytes	EOMES
4.41933E-15	0.769107859	0.852	0.606	1.25089E-10	cycling lymphocytes	PA2G4

9.75964E-15	0.644273631	0.88	0.588	2.76247E-10	cycling lymphocytes	DDT
1.15893E-14	0.616373377	0.423	0.162	3.28034E-10	cycling lymphocytes	HIST2H2AC
1.29237E-14	0.612181546	0.57	0.262	3.65804E-10	cycling lymphocytes	ALYREF
1.34808E-14	0.605913779	0.831	0.536	3.81575E-10	cycling lymphocytes	SRI
1.36554E-14	0.610305479	0.732	0.352	3.86516E-10	cycling lymphocytes	KLRC1
1.56088E-14	0.671803135	0.704	0.375	4.41808E-10	cycling lymphocytes	LSM2
2.13929E-14	0.60045164	0.556	0.261	6.05525E-10	cycling lymphocytes	HPRT1
3.16202E-14	0.644121674	0.901	0.605	8.9501E-10	cycling lymphocytes	OSTF1
5.80061E-14	0.602133301	0.613	0.306	1.64186E-09	cycling lymphocytes	PSMD14
5.96895E-14	0.631613873	0.894	0.645	1.68951E-09	cycling lymphocytes	ANXA2
5.99047E-14	0.622072797	0.577	0.262	1.6956E-09	cycling lymphocytes	DCTPP1
6.50022E-13	0.600287877	0.669	0.357	1.83989E-08	cycling lymphocytes	NDUFV1
1.14961E-12	0.666863976	0.754	0.501	3.25398E-08	cycling lymphocytes	NASP
1.45588E-12	0.649550881	0.725	0.427	4.12086E-08	cycling lymphocytes	DNMT1
1.52112E-12	0.632396019	0.845	0.561	4.30553E-08	cycling lymphocytes	SNRPD3
1.8781E-12	0.603181516	0.838	0.566	5.31596E-08	cycling lymphocytes	45906
2.61945E-12	0.602990326	0.669	0.362	7.41434E-08	cycling lymphocytes	PRKDC
2.88617E-12	0.622577167	0.697	0.411	8.16929E-08	cycling lymphocytes	NOP56
4.95551E-11	0.816157694	0.711	0.454	1.40266E-06	cycling lymphocytes	ARL6IP1
7.77006E-08	0.7516512	0.683	0.408	0.002199316	cycling lymphocytes	CRIP1
1.1568E-06	0.602390671	0.634	0.42	0.032743187	cycling lymphocytes	PPP1R14B
5.4078E-263	2.209062497	0.743	0.007	1.5307E-258	ILC3	PCDH9
1.9761E-249	2.084158213	0.73	0.008	5.5933E-245	ILC3	IL23R
1.8674E-243	2.455617324	0.865	0.018	5.2855E-239	ILC3	KIT
3.161E-145	1.568428474	0.5	0.009	8.9472E-141	ILC3	LINC00299
1.0312E-131	1.883156917	0.716	0.035	2.9189E-127	ILC3	TOX2
3.707E-103	3.488826337	0.797	0.076	1.04928E-98	ILC3	ALDOC
1.63508E-92	1.582986429	0.473	0.02	4.62808E-88	ILC3	RORC
1.37303E-87	1.76672047	0.676	0.056	3.88636E-83	ILC3	LIF
8.11474E-84	1.530759222	0.541	0.035	2.29688E-79	ILC3	ENPP1
1.11199E-81	1.787320261	0.797	0.084	3.14749E-77	ILC3	AQP3
1.3458E-81	1.892466112	0.77	0.083	3.80928E-77	ILC3	TNFRSF25
6.09023E-72	1.658710922	0.649	0.066	1.72384E-67	ILC3	AFF3
3.59369E-70	1.490182221	0.554	0.045	1.0172E-65	ILC3	CPNE7
2.76058E-69	1.374489779	0.554	0.047	7.81383E-65	ILC3	GRAMD3
2.78058E-64	1.654719458	0.676	0.083	7.87043E-60	ILC3	IL1R1
1.03227E-62	1.648661163	0.635	0.074	2.92183E-58	ILC3	CA2
7.69558E-61	2.023173235	0.473	0.038	2.17823E-56	ILC3	LTA

8.31004E-59	1.159497469	0.541	0.054	2.35216E-54	ILC3	SVIL
2.2104E-53	1.812443315	0.77	0.131	6.25653E-49	ILC3	IL4I1
7.88015E-50	2.969172639	0.986	0.356	2.23048E-45	ILC3	LTB
1.08299E-49	1.612725751	0.486	0.054	3.06541E-45	ILC3	SLC41A1
1.31355E-48	1.527596886	0.905	0.18	3.71801E-44	ILC3	IL7R
6.81912E-48	2.453874431	0.986	0.342	1.93015E-43	ILC3	LST1
9.86707E-48	1.558079805	0.459	0.049	2.79287E-43	ILC3	DLL1
1.37011E-47	2.413821659	0.851	0.237	3.87808E-43	ILC3	NCOA7
1.37497E-47	2.269131367	0.905	0.281	3.89185E-43	ILC3	AHR
4.76615E-47	2.096147218	0.838	0.203	1.34906E-42	ILC3	KRT86
4.38318E-46	1.153116174	0.527	0.064	1.24066E-41	ILC3	IKZF2
1.33853E-45	1.126605431	0.419	0.042	3.78872E-41	ILC3	CTD-3203P2.3
2.76189E-44	1.831084409	0.716	0.144	7.81752E-40	ILC3	JMY
6.41766E-44	2.094261257	0.824	0.225	1.81652E-39	ILC3	NRIP1
4.23039E-42	2.012975857	0.932	0.329	1.19741E-37	ILC3	GOLGA8A
4.89176E-42	1.303276669	0.554	0.083	1.38461E-37	ILC3	PRR5
7.51257E-41	2.000858547	0.568	0.091	2.12643E-36	ILC3	RRAD
9.60063E-41	1.302994795	0.662	0.114	2.71746E-36	ILC3	SPINK2
5.96792E-40	2.022713671	0.811	0.214	1.68922E-35	ILC3	KRT81
2.32211E-39	2.112238832	0.878	0.311	6.57274E-35	ILC3	PNP
3.3166E-39	0.933628961	0.405	0.044	9.38765E-35	ILC3	MAST4
7.16555E-39	1.158199321	0.446	0.055	2.02821E-34	ILC3	PLAT
1.17258E-38	1.119855614	0.473	0.063	3.319E-34	ILC3	CRY1
5.47105E-38	1.716847001	0.919	0.329	1.54858E-33	ILC3	GOLGA8B
2.688E-35	1.689198915	0.622	0.129	7.60837E-31	ILC3	PLK2
6.04907E-35	1.990896156	1	0.711	1.71219E-30	ILC3	ZFP36L1
1.11406E-34	0.981358739	0.459	0.064	3.15334E-30	ILC3	F2R
6.59947E-34	1.270367032	0.77	0.174	1.86798E-29	ILC3	SPOCK2
1.3002E-33	1.690745343	0.865	0.312	3.68022E-29	ILC3	PREX1
2.16651E-33	1.720120943	0.946	0.365	6.1323E-29	ILC3	TRBC1
2.87855E-32	1.106251264	0.486	0.084	8.14773E-28	ILC3	CEP83
1.25336E-31	0.997368807	0.459	0.076	3.54765E-27	ILC3	TNS3
1.4005E-31	1.371076791	0.824	0.249	3.96412E-27	ILC3	TMIGD2
1.62776E-31	2.026635013	0.878	0.363	4.60739E-27	ILC3	TIPARP
1.6544E-31	1.701694611	0.554	0.116	4.68279E-27	ILC3	RASD1
1.80556E-31	1.301690517	0.676	0.178	5.11063E-27	ILC3	DCAF11
1.94951E-31	1.260982044	0.77	0.208	5.51807E-27	ILC3	TCF7
4.24755E-31	1.511507749	0.595	0.133	1.20227E-26	ILC3	VEGFA

4.78916E-31	1.236288699	0.649	0.161	1.35557E-26	ILC3	ARHGAP10
7.71642E-31	1.147727667	0.514	0.094	2.18413E-26	ILC3	CITED4
1.8257E-29	0.801794136	0.446	0.069	5.16764E-25	ILC3	ADAM19
2.94979E-28	1.680097769	0.986	0.777	8.34938E-24	ILC3	FOSB
2.98909E-28	1.665488407	0.811	0.294	8.46063E-24	ILC3	TNF
3.12604E-28	1.221409592	0.486	0.098	8.84827E-24	ILC3	LTC4S
4.47572E-28	1.267102847	0.635	0.154	1.26685E-23	ILC3	GADD45G
1.09106E-27	1.385484178	0.811	0.275	3.08825E-23	ILC3	TSPYL2
2.68372E-27	1.442125497	0.892	0.41	7.59627E-23	ILC3	ANP32E
3.64702E-27	1.736224635	0.905	0.557	1.03229E-22	ILC3	H2AFY
4.33298E-27	1.227415188	0.568	0.131	1.22645E-22	ILC3	PERP
5.31551E-27	1.082825175	0.486	0.094	1.50455E-22	ILC3	ATHL1
9.32203E-27	1.110347079	0.419	0.076	2.6386E-22	ILC3	CD300LF
9.71695E-27	1.900688819	0.865	0.429	2.75038E-22	ILC3	CITED2
1.2448E-26	1.495908357	0.459	0.086	3.52339E-22	ILC3	PTCH2
1.41403E-26	1.622105333	0.973	0.657	4.00242E-22	ILC3	CD52
3.59044E-26	0.944683207	0.405	0.068	1.01627E-21	ILC3	ELOVL6
7.4244E-26	0.908565505	1	0.99	2.10148E-21	ILC3	TPT1
8.23986E-26	1.86346173	0.608	0.172	2.33229E-21	ILC3	RNU12
3.72308E-25	1.381659277	0.892	0.407	1.05382E-20	ILC3	NFKB1
6.54689E-25	1.084348798	0.554	0.137	1.8531E-20	ILC3	ITPR1
5.64958E-24	0.993014559	0.446	0.089	1.59911E-19	ILC3	CDC14A
1.14647E-23	1.553009039	0.932	0.543	3.24508E-19	ILC3	ZFAND5
1.74681E-23	1.143079038	0.757	0.263	4.94434E-19	ILC3	MGAT4A
2.18375E-23	1.35317465	0.757	0.301	6.1811E-19	ILC3	SPTY2D1
2.61736E-23	0.95245109	0.419	0.078	7.40844E-19	ILC3	CCR6
4.98627E-23	1.418401414	0.581	0.161	1.41136E-18	ILC3	TNFRSF4
7.06511E-23	1.763611223	0.73	0.273	1.99978E-18	ILC3	TMEM107
7.18176E-23	1.310435753	0.811	0.312	2.0328E-18	ILC3	TNFRSF18
2.74251E-22	0.95978097	0.405	0.082	7.76268E-18	ILC3	NFATC1
4.61323E-22	1.534439862	0.797	0.337	1.30577E-17	ILC3	ARL4A
5.60509E-22	1.307677564	0.865	0.469	1.58652E-17	ILC3	RAB11FIP1
5.77711E-22	0.92569526	0.541	0.143	1.63521E-17	ILC3	MAN1A1
1.43599E-21	1.394481331	0.986	0.871	4.06458E-17	ILC3	JUN
2.27551E-21	1.120933843	1	0.952	6.44084E-17	ILC3	DDX5
2.85235E-21	1.577709907	0.959	0.814	8.07359E-17	ILC3	ID2
3.08342E-21	1.155062447	0.784	0.335	8.72763E-17	ILC3	SMAP1
3.14849E-21	0.824896314	0.595	0.169	8.91179E-17	ILC3	IFI44

3.693E-21	1.291362737	0.865	0.369	1.0453E-16	ILC3	GADD45A
9.63526E-21	0.98142675	0.473	0.12	2.72726E-16	ILC3	CHKA
1.37385E-20	0.862325199	0.5	0.121	3.88867E-16	ILC3	TOX
1.43914E-20	0.856161174	0.459	0.102	4.07349E-16	ILC3	CAMK4
1.54493E-20	1.314882084	0.716	0.273	4.37292E-16	ILC3	ANKRD28
1.74126E-20	1.335767912	0.811	0.376	4.92864E-16	ILC3	MDFIC
3.15175E-20	1.3002024	0.635	0.218	8.92102E-16	ILC3	TNFSF13B
3.15618E-20	1.103353667	0.797	0.327	8.93356E-16	ILC3	PPP1R15B
5.64882E-20	1.111581418	0.77	0.306	1.5989E-15	ILC3	PTPN22
5.72408E-20	1.242592334	0.932	0.593	1.6202E-15	ILC3	BST2
6.21426E-20	1.236047899	0.892	0.471	1.75895E-15	ILC3	UBE2S
1.2349E-19	1.052444352	0.608	0.197	3.49538E-15	ILC3	BRD1
1.34287E-19	1.342943922	0.649	0.247	3.80098E-15	ILC3	RP11-160E2.6
3.14924E-19	1.886515048	0.824	0.5	8.91392E-15	ILC3	EIF4A3
3.50611E-19	0.988456364	0.662	0.231	9.92404E-15	ILC3	CXXC5
5.21109E-19	0.923459744	0.5	0.14	1.475E-14	ILC3	PLXNC1
7.13209E-19	1.336263006	0.919	0.584	2.01874E-14	ILC3	RTN4
7.29274E-19	1.13232543	0.676	0.262	2.06421E-14	ILC3	NUDT4
8.53208E-19	1.241976421	0.595	0.201	2.41501E-14	ILC3	CTA-29F11.1
1.42739E-18	0.964517017	0.622	0.209	4.04023E-14	ILC3	ERN1
1.66796E-18	0.955892064	0.581	0.169	4.72117E-14	ILC3	AC006129.2
1.73435E-18	1.251456248	0.986	0.47	4.90906E-14	ILC3	KLRB1
2.05585E-18	1.19810298	0.662	0.255	5.81908E-14	ILC3	PHACTR2
3.71716E-18	1.365110993	0.432	0.107	1.05214E-13	ILC3	RNU11
3.74802E-18	1.213732053	0.838	0.455	1.06088E-13	ILC3	IRF2BP2
5.22162E-18	1.140939697	0.676	0.274	1.47798E-13	ILC3	CLINT1
5.54633E-18	0.85993098	0.446	0.115	1.56989E-13	ILC3	CERK
9.01589E-18	0.954322051	0.973	0.736	2.55195E-13	ILC3	DDX3X
9.70525E-18	1.154560814	0.662	0.266	2.74707E-13	ILC3	HEXIM1
2.03598E-17	1.043287144	0.973	0.736	5.76285E-13	ILC3	PPP1R15A
4.23745E-17	1.285381442	0.743	0.349	1.19941E-12	ILC3	NEU1
5.46715E-17	1.410488254	0.73	0.332	1.54748E-12	ILC3	HIST2H2AA4
7.15313E-17	0.92682152	0.486	0.145	2.02469E-12	ILC3	SERTAD2
1.16735E-16	1.078092913	0.824	0.485	3.30419E-12	ILC3	NAA38
1.34338E-16	0.916403081	0.986	0.818	3.80243E-12	ILC3	GNAS
1.34471E-16	1.412792943	0.703	0.326	3.80619E-12	ILC3	HIST2H2AA3
2.57248E-16	0.948647374	0.5	0.156	7.2814E-12	ILC3	TGM2
3.35886E-16	0.958924556	0.608	0.205	9.50724E-12	ILC3	RP11-489E7.4

6.43029E-16	1.004978754	0.946	0.767	1.82009E-11	ILC3	CCNL1
8.34864E-16	1.341343034	0.608	0.23	2.36308E-11	ILC3	SPRY1
8.69072E-16	0.950861417	0.919	0.649	2.45991E-11	ILC3	DEK
9.66229E-16	0.935054231	0.892	0.476	2.73491E-11	ILC3	CXCR4
1.31431E-15	0.862905522	0.622	0.227	3.72015E-11	ILC3	FKBP11
1.38486E-15	0.892896046	0.986	0.84	3.91986E-11	ILC3	RBM39
1.46019E-15	0.928311692	0.959	0.698	4.13306E-11	ILC3	BTG2
1.53166E-15	0.979436334	0.986	0.826	4.33537E-11	ILC3	SRSF5
1.59892E-15	0.888742066	0.986	0.769	4.52576E-11	ILC3	NAP1L1
1.90481E-15	1.02234266	0.568	0.212	5.39158E-11	ILC3	TOB2
2.23489E-15	1.316165384	0.716	0.339	6.32587E-11	ILC3	PRMT9
2.57167E-15	0.940580799	0.635	0.248	7.27912E-11	ILC3	MAF
2.88004E-15	0.780865041	0.419	0.115	8.15195E-11	ILC3	CENPV
3.30002E-15	1.045422428	0.703	0.313	9.34069E-11	ILC3	SPTAN1
3.53726E-15	1.008788016	0.959	0.9	1.00122E-10	ILC3	JUND
3.53866E-15	1.055728845	0.811	0.444	1.00162E-10	ILC3	IFRD1
4.09454E-15	0.909366336	0.473	0.146	1.15896E-10	ILC3	PSTPIP2
4.1414E-15	0.953918142	0.527	0.182	1.17222E-10	ILC3	PER1
1.05724E-14	0.997538685	0.797	0.435	2.99253E-10	ILC3	GOLGB1
1.78924E-14	1.066437021	0.851	0.534	5.06446E-10	ILC3	IER5
1.80956E-14	1.055465462	0.851	0.511	5.12196E-10	ILC3	JMJD1C
2.09014E-14	0.993855695	0.595	0.238	5.91616E-10	ILC3	REV3L
2.70298E-14	0.867463967	0.432	0.13	7.65078E-10	ILC3	PLPP1
2.70463E-14	0.872822286	0.77	0.382	7.65546E-10	ILC3	SH3KBP1
3.21106E-14	0.762716887	0.432	0.128	9.08892E-10	ILC3	GOLGA8N
3.32834E-14	0.771291911	0.946	0.697	9.42088E-10	ILC3	RBM25
3.38443E-14	0.963310054	0.73	0.34	9.57963E-10	ILC3	H2AFX
3.39184E-14	1.077630516	0.554	0.217	9.60061E-10	ILC3	ID1
3.84841E-14	0.725191324	0.486	0.154	1.08929E-09	ILC3	RGPD5
3.86317E-14	1.044550537	0.743	0.408	1.09347E-09	ILC3	RBBP6
4.99404E-14	1.029134261	0.595	0.242	1.41356E-09	ILC3	IER5L
5.46642E-14	0.958248543	0.554	0.202	1.54727E-09	ILC3	PTGDR
5.93569E-14	0.884277519	0.851	0.503	1.6801E-09	ILC3	YME1L1
6.4607E-14	0.818232102	0.473	0.161	1.8287E-09	ILC3	RERE
7.13502E-14	0.761620919	0.986	0.827	2.01957E-09	ILC3	SKP1
8.11774E-14	1.053431571	0.486	0.179	2.29773E-09	ILC3	GDE1
9.25444E-14	1.125952184	0.757	0.428	2.61947E-09	ILC3	CHD1
1.0239E-13	1.160402381	0.878	0.63	2.89814E-09	ILC3	MAP1LC3B

1.13202E-13	0.911201123	0.986	0.905	3.20418E-09	ILC3	FOS
2.28915E-13	0.877496781	0.581	0.245	6.47944E-09	ILC3	NSMCE1
2.57307E-13	0.73973926	1	0.822	7.28309E-09	ILC3	NCL
2.80249E-13	0.827635385	0.473	0.157	7.93245E-09	ILC3	IRS2
2.84404E-13	0.814388991	0.959	0.606	8.05004E-09	ILC3	CD69
3.01189E-13	0.7510471	0.986	0.799	8.52515E-09	ILC3	HNRNPC
4.61013E-13	0.653761024	0.405	0.115	1.3049E-08	ILC3	RAB37
4.70189E-13	0.831848957	0.689	0.336	1.33087E-08	ILC3	45911
6.45933E-13	1.12336488	0.73	0.405	1.82831E-08	ILC3	MPG
6.94178E-13	0.640255815	0.446	0.138	1.96487E-08	ILC3	NR1D2
7.17476E-13	0.895237987	0.865	0.64	2.03082E-08	ILC3	EIF1AX
7.33941E-13	0.886727267	0.973	0.806	2.07742E-08	ILC3	PNRC1
9.20899E-13	1.107740706	0.622	0.271	2.6066E-08	ILC3	NFAT5
1.01976E-12	0.781162397	0.797	0.426	2.88642E-08	ILC3	SMARCA5
1.53864E-12	1.042962715	0.784	0.464	4.35512E-08	ILC3	EML4
1.59585E-12	0.980905913	0.527	0.213	4.51705E-08	ILC3	FAM46A
1.69929E-12	0.806824987	0.905	0.682	4.80983E-08	ILC3	ARGLU1
2.04584E-12	1.318205183	0.622	0.303	5.79074E-08	ILC3	CTR9
2.07038E-12	0.880681146	0.865	0.596	5.86021E-08	ILC3	BZW1
2.43299E-12	0.816661755	0.838	0.42	6.88657E-08	ILC3	CD96
2.5159E-12	0.948956597	0.824	0.551	7.12127E-08	ILC3	FNBP1
3.02567E-12	0.68946469	0.419	0.133	8.56417E-08	ILC3	CCNG2
3.20438E-12	1.163158264	0.784	0.463	9.07E-08	ILC3	CTNNB1
3.60549E-12	0.818006186	0.851	0.514	1.02053E-07	ILC3	SLTM
4.49618E-12	0.867068443	0.946	0.724	1.27264E-07	ILC3	SFPQ
5.36466E-12	1.408882436	0.811	0.549	1.51847E-07	ILC3	C12orf57
6.56406E-12	0.798896043	0.419	0.142	1.85796E-07	ILC3	MGAT5
7.16176E-12	0.846977587	0.5	0.191	2.02714E-07	ILC3	KMT2E-AS1
8.24601E-12	1.046156065	0.865	0.616	2.33403E-07	ILC3	TUBB4B
8.30191E-12	0.794886773	0.919	0.62	2.34985E-07	ILC3	PEBP1
9.92427E-12	0.876148456	0.527	0.211	2.80907E-07	ILC3	PCID2
9.95368E-12	0.966628119	0.838	0.548	2.81739E-07	ILC3	SLA
1.16773E-11	0.765812281	0.568	0.234	3.30526E-07	ILC3	SIK3
1.3554E-11	0.991059723	0.486	0.191	3.83646E-07	ILC3	BTBD7
1.42272E-11	0.730944018	0.757	0.419	4.027E-07	ILC3	PPP2CA
1.53856E-11	0.759730272	0.473	0.179	4.35488E-07	ILC3	KLHL18
1.58494E-11	0.70375512	0.405	0.133	4.48617E-07	ILC3	STK26
1.59984E-11	0.725604832	0.486	0.18	4.52834E-07	ILC3	PLXDC2

1.84422E-11	0.905677882	0.77	0.494	5.22006E-07	ILC3	YWHAQ
2.07014E-11	0.940259263	0.811	0.453	5.85954E-07	ILC3	H1FX
2.25983E-11	0.82780528	0.419	0.15	6.39645E-07	ILC3	TIAM1
2.43368E-11	0.691599407	0.405	0.14	6.88855E-07	ILC3	ATP10D
2.86675E-11	0.744522588	0.838	0.547	8.11433E-07	ILC3	CMTM6
3.28635E-11	0.882619886	0.473	0.18	9.30203E-07	ILC3	ELL2
3.36535E-11	1.087063336	0.892	0.694	9.52562E-07	ILC3	CYCS
3.57673E-11	0.744601931	0.568	0.255	1.01239E-06	ILC3	AKAP17A
3.80221E-11	0.912825232	0.824	0.51	1.07622E-06	ILC3	NFKBIZ
4.44135E-11	0.734824694	0.932	0.8	1.25713E-06	ILC3	HNRNPDL
5.08817E-11	0.784830548	0.635	0.291	1.44021E-06	ILC3	TXK
5.93194E-11	0.659902685	0.946	0.801	1.67903E-06	ILC3	TPM3
6.40299E-11	0.686969161	0.432	0.148	1.81237E-06	ILC3	PIM2
6.45812E-11	0.874927466	0.662	0.354	1.82797E-06	ILC3	PPP3CA
6.78415E-11	0.953928331	0.473	0.193	1.92025E-06	ILC3	RSBN1
9.74753E-11	0.872754914	0.824	0.53	2.75904E-06	ILC3	HNRNPAB
1.0794E-10	0.874668145	0.973	0.873	3.05525E-06	ILC3	IER2
1.13281E-10	0.868473208	0.554	0.255	3.20642E-06	ILC3	TNFSF12
1.23022E-10	0.728865956	0.541	0.231	3.48214E-06	ILC3	IGFBP4
1.39381E-10	0.695379037	0.811	0.491	3.94519E-06	ILC3	PPP1R10
1.60921E-10	0.751876172	0.568	0.254	4.55487E-06	ILC3	SLC20A1
1.93579E-10	0.969734713	0.405	0.146	5.47926E-06	ILC3	MFGE8
2.04674E-10	0.737018788	0.932	0.734	5.79329E-06	ILC3	HNRNPU
2.23476E-10	0.834360755	0.743	0.401	6.3255E-06	ILC3	RGS2
2.32612E-10	0.703557386	0.541	0.228	6.58408E-06	ILC3	SBNO1
2.41025E-10	0.612183388	0.959	0.821	6.82221E-06	ILC3	SON
2.76238E-10	0.723188156	0.892	0.766	7.81892E-06	ILC3	SET
3.17141E-10	0.795341057	0.5	0.213	8.97668E-06	ILC3	RLF
3.3305E-10	0.694771758	0.514	0.221	9.42698E-06	ILC3	DYNLL2
3.47215E-10	0.603598351	0.635	0.295	9.82792E-06	ILC3	PURA
3.67294E-10	0.921141563	0.878	0.638	1.03963E-05	ILC3	BRD2
4.10087E-10	0.75579706	0.459	0.185	1.16075E-05	ILC3	TEX30
4.22579E-10	0.729044938	0.419	0.148	1.19611E-05	ILC3	ABCB1
4.82245E-10	1.218504801	0.703	0.383	1.36499E-05	ILC3	PHLDA1
5.21359E-10	0.643369234	0.73	0.417	1.47571E-05	ILC3	INTS6
5.56647E-10	0.786916709	0.851	0.639	1.57559E-05	ILC3	MIF
7.7727E-10	0.76460211	0.946	0.68	2.20006E-05	ILC3	TNFAIP3
8.26727E-10	0.965300507	0.838	0.577	2.34005E-05	ILC3	YPEL5

1.08126E-09	0.873153843	0.459	0.188	3.0605E-05	ILC3	KDM5B
1.15454E-09	1.372008975	0.419	0.164	3.26792E-05	ILC3	CH17-373J23.1
1.23027E-09	0.703567083	0.743	0.475	3.48227E-05	ILC3	MYCBP2
1.24425E-09	0.747043139	0.811	0.508	3.52185E-05	ILC3	NASP
1.24531E-09	0.746433368	0.838	0.613	3.52486E-05	ILC3	ITGB1
1.41825E-09	0.66394586	0.581	0.288	4.01435E-05	ILC3	SLC25A36
1.49741E-09	0.621164441	0.554	0.245	4.23842E-05	ILC3	KLF10
1.57479E-09	0.648752198	0.446	0.176	4.45744E-05	ILC3	INPP4A
1.75681E-09	0.602935448	1	0.935	4.97264E-05	ILC3	BTG1
2.5038E-09	0.679529892	0.446	0.179	7.087E-05	ILC3	PFKFB3
2.51709E-09	0.804328253	0.595	0.318	7.12462E-05	ILC3	LPXN
2.65017E-09	0.704934168	0.419	0.165	7.50132E-05	ILC3	ST3GAL5
2.81665E-09	0.654572709	0.892	0.723	7.97252E-05	ILC3	SRRM1
3.02295E-09	0.722962903	0.676	0.373	8.55645E-05	ILC3	SERTAD1
3.04935E-09	0.751649523	0.743	0.448	8.63117E-05	ILC3	YTHDC1
3.0636E-09	0.826984098	0.865	0.701	8.67152E-05	ILC3	GADD45B
3.63007E-09	0.830408267	0.676	0.387	0.000102749	ILC3	PMAIP1
3.73581E-09	0.682259215	0.703	0.413	0.000105742	ILC3	GLS
3.7591E-09	0.624059634	0.419	0.157	0.000106401	ILC3	SOS1
4.65193E-09	0.741094201	0.851	0.629	0.000131673	ILC3	HNRNPA0
5.34198E-09	0.679855972	0.568	0.273	0.000151205	ILC3	MARCKSL1
5.36559E-09	0.638832153	0.649	0.314	0.000151873	ILC3	RORA
5.46388E-09	0.865052366	0.662	0.368	0.000154655	ILC3	CSRNP1
5.68547E-09	0.869529619	0.486	0.216	0.000160927	ILC3	NCR3
5.72817E-09	0.666699779	1	0.834	0.000162136	ILC3	NFKBIA
7.27597E-09	0.757883375	0.419	0.172	0.000205946	ILC3	ZCCHC2
7.5988E-09	0.693460238	0.703	0.404	0.000215084	ILC3	H2AFJ
9.55228E-09	0.746718906	0.797	0.419	0.000270377	ILC3	XCL1
9.88761E-09	0.609606681	0.851	0.564	0.000279869	ILC3	IL2RG
1.0676E-08	0.776224837	0.635	0.345	0.000302184	ILC3	PPP4R3A
1.13464E-08	0.763627745	0.784	0.544	0.000321161	ILC3	PAK2
1.23085E-08	0.846591068	0.554	0.26	0.000348392	ILC3	KLF4
1.54947E-08	0.624857001	0.716	0.407	0.000438576	ILC3	CHD2
1.63861E-08	0.637693203	0.541	0.27	0.000463809	ILC3	TMEM243
1.72518E-08	0.742922791	0.554	0.28	0.000488312	ILC3	CUL3
1.73634E-08	0.709899572	0.77	0.494	0.000491472	ILC3	TRA2A
1.75328E-08	0.637198915	0.473	0.213	0.000496266	ILC3	DBF4
2.0089E-08	0.798712646	0.608	0.344	0.000568619	ILC3	LINC00657

2.20697E-08	0.69531738	0.581	0.32	0.000624683	ILC3	PTPN18
2.23501E-08	0.821108124	0.676	0.435	0.00063262	ILC3	NUFIP2
2.36136E-08	0.805808006	0.419	0.185	0.000668383	ILC3	REEP3
2.72951E-08	0.664375066	0.689	0.413	0.000772587	ILC3	SKAP2
2.78963E-08	0.626256267	0.878	0.708	0.000789604	ILC3	DDX24
2.87875E-08	0.609308467	0.878	0.721	0.00081483	ILC3	EIF5
2.98401E-08	0.745367171	0.878	0.685	0.000844625	ILC3	SOD1
3.47242E-08	0.650594761	0.649	0.382	0.000982868	ILC3	METTL9
3.55112E-08	0.614976298	0.432	0.189	0.001005146	ILC3	PSMG3
3.66855E-08	0.64658885	0.757	0.548	0.001038383	ILC3	HMGN3
4.61518E-08	0.614573515	0.608	0.326	0.001306328	ILC3	CGGBP1
5.04582E-08	0.753085393	0.662	0.403	0.001428219	ILC3	CCDC59
5.26483E-08	0.671572551	0.635	0.347	0.001490211	ILC3	POLR2A
5.73798E-08	0.700254354	0.892	0.716	0.001624134	ILC3	FXYD5
5.86814E-08	0.618136078	0.608	0.321	0.001660976	ILC3	PRPF6
5.98509E-08	0.712608249	0.892	0.716	0.001694079	ILC3	TRA2B
6.85085E-08	0.626433428	0.432	0.189	0.001939133	ILC3	ATP8B4
6.98218E-08	0.617054908	0.446	0.2	0.001976307	ILC3	SPECC1
7.10531E-08	0.721688566	0.743	0.456	0.002011157	ILC3	IDS
7.89265E-08	0.852656081	0.541	0.284	0.002234015	ILC3	CDKN1A
7.89536E-08	0.62937701	0.419	0.176	0.002234782	ILC3	EPB41L2
8.30156E-08	0.766869392	0.608	0.346	0.002349756	ILC3	MIS18BP1
1.10432E-07	0.657903307	0.905	0.773	0.003125774	ILC3	SAP18
1.12079E-07	0.617508122	0.446	0.204	0.0031724	ILC3	CD2AP
1.133E-07	0.651409926	0.473	0.225	0.003206957	ILC3	PURB
1.26996E-07	0.806900946	0.676	0.443	0.00359461	ILC3	IVNS1ABP
1.37289E-07	0.657761983	0.662	0.405	0.003885966	ILC3	CHD4
1.38872E-07	0.640709382	0.541	0.281	0.003930781	ILC3	SNHG9
1.55132E-07	0.667611354	0.432	0.208	0.004390998	ILC3	SPTLC2
1.66113E-07	0.687177608	0.459	0.222	0.004701836	ILC3	TP53I13
1.84066E-07	0.663313105	0.514	0.264	0.005209987	ILC3	HUWE1
1.85238E-07	0.855382065	0.541	0.301	0.005243168	ILC3	MYLIP
2.02767E-07	0.698455601	0.757	0.58	0.005739332	ILC3	KTN1
2.27619E-07	0.774379409	0.703	0.42	0.006442763	ILC3	ATF3
2.61214E-07	0.747351076	0.419	0.199	0.00739365	ILC3	LPGAT1
3.14499E-07	0.644910887	0.419	0.187	0.008901887	ILC3	FAM101B
3.48024E-07	0.932447986	0.635	0.393	0.009850824	ILC3	RANBP2
4.15191E-07	0.606548095	0.743	0.509	0.011751982	ILC3	TGOLN2

4.4356E-07	0.61199435	0.824	0.598	0.012554966	ILC3	HERPUD1
4.51384E-07	0.604702531	0.905	0.719	0.012776425	ILC3	CD81
4.63826E-07	0.630372442	0.608	0.356	0.013128606	ILC3	RALBP1
4.88442E-07	0.644277415	0.703	0.503	0.013825348	ILC3	LMO4
5.30835E-07	0.647361719	0.676	0.452	0.015025276	ILC3	SYNCRIP
5.30968E-07	0.671669758	0.486	0.248	0.01502906	ILC3	HTATSF1
5.45788E-07	0.608001447	0.527	0.286	0.015448525	ILC3	PCMTD1
7.58825E-07	0.628325769	0.5	0.259	0.02147854	ILC3	ELOVL5
7.84751E-07	0.657721375	0.514	0.264	0.022212391	ILC3	ODF2L
8.93532E-07	0.654834804	0.689	0.435	0.025291435	ILC3	CHMP1B
9.04278E-07	0.846610925	0.5	0.278	0.025595579	ILC3	WDR45B
9.52225E-07	0.642068316	0.5	0.265	0.026952737	ILC3	ILF3-AS1
9.87183E-07	1.031517149	0.554	0.306	0.027942203	ILC3	AP000769.1
1.05452E-06	0.655980789	0.432	0.21	0.029848285	ILC3	CH507-42P11.8
1.19761E-06	0.680553303	0.541	0.289	0.033898254	ILC3	ARIH1
1.28447E-06	0.649219223	0.595	0.337	0.036356954	ILC3	RBL2
1.58963E-06	0.624521245	0.986	0.853	0.044994339	ILC3	KLF6
1.84161E-06	0.607023085	0.419	0.21	0.052126792	ILC3	YTHDF3
2.07917E-06	0.612964567	0.419	0.2	0.058850922	ILC3	PAXBP1
2.10422E-06	0.776228252	0.581	0.377	0.059560059	ILC3	RRBP1
2.43321E-06	0.664330019	0.5	0.274	0.068872129	ILC3	ODC1
2.60266E-06	0.690871051	0.514	0.284	0.073668341	ILC3	PRNP
2.79273E-06	0.603740591	0.595	0.356	0.079048341	ILC3	SREK1
3.43652E-06	0.712305615	0.541	0.315	0.097270837	ILC3	HIPK1
4.16821E-06	0.634268711	0.568	0.338	0.117981182	ILC3	SNHG12
4.62406E-06	0.602951935	0.405	0.209	0.13088392	ILC3	RNF138
4.96713E-06	0.615626948	0.459	0.229	0.140594565	ILC3	KCNQ1OT1
6.68046E-06	0.668064762	0.459	0.253	0.189090336	ILC3	LUZP1
7.37446E-06	0.627805565	0.459	0.262	0.208734006	ILC3	GTF2F1
7.93115E-06	0.600039374	0.554	0.332	0.224491139	ILC3	RP5-1171I10.5
8.31294E-06	0.611696219	0.473	0.265	0.235297794	ILC3	NR4A3
8.43731E-06	0.732856616	0.419	0.215	0.238818195	ILC3	NUP58
9.80551E-06	0.813338264	0.676	0.501	0.27754493	ILC3	SLC2A3
1.77301E-05	0.759081877	0.595	0.383	0.501851844	ILC3	DUSP6
2.78709E-05	0.632167592	0.527	0.313	0.788886026	ILC3	NXT1
2.91232E-05	0.6149055	0.432	0.227	0.824330808	ILC3	RGS16
4.01256E-05	0.705533495	0.419	0.234	1	ILC3	WDR74
4.44098E-05	0.639191191	0.459	0.266	1	ILC3	ATP1B1

4.85543E-05	0.637157456	0.757	0.616	1	ILC3	SNHG8
5.12431E-05	0.750108513	0.568	0.368	1	ILC3	SKIL
6.11282E-05	0.641918185	0.473	0.289	1	ILC3	TRIM44
3.5659E-223	3.180403895	0.68	0.003	1.0093E-218	B cells	VPREB3
3.2064E-216	4.365704203	1	0.013	9.0758E-212	B cells	MS4A1
2.4022E-209	2.79627114	0.8	0.007	6.7995E-205	B cells	TNFRSF13C
6.5077E-189	3.725205526	1	0.017	1.842E-184	B cells	CD79A
2.7017E-161	1.919124643	0.4	0	7.6472E-157	B cells	RP5-887A10.1
2.286E-134	1.6852105	0.44	0.002	6.4707E-130	B cells	FCRL1
4.9135E-134	1.616955785	0.48	0.003	1.3908E-129	B cells	POU2AF1
7.9658E-115	1.982603048	0.52	0.006	2.2547E-110	B cells	TNFRSF13B
2.6387E-107	3.226407819	0.52	0.007	7.469E-103	B cells	IGHM
1.94838E-89	2.259108823	0.56	0.012	5.51488E-85	B cells	LINC00926
3.65456E-80	3.531779092	0.72	0.027	1.03442E-75	B cells	IGKC
1.44271E-79	3.171614645	0.88	0.045	4.08359E-75	B cells	BANK1
1.76008E-64	2.382644791	0.68	0.031	4.98192E-60	B cells	RALGPS2
1.29377E-63	1.987926679	0.48	0.014	3.66201E-59	B cells	SPIB
2.05682E-62	1.494178543	0.4	0.009	5.82183E-58	B cells	JCHAIN
7.07009E-48	2.021768111	0.56	0.029	2.00119E-43	B cells	CD22
4.72816E-41	2.726664558	0.76	0.072	1.33831E-36	B cells	CD79B
3.26009E-28	2.248076253	0.52	0.047	9.22767E-24	B cells	ARHGAP24
1.45095E-24	2.587068422	0.64	0.081	4.10691E-20	B cells	LY9
2.06E-23	1.394917312	0.44	0.039	5.83083E-19	B cells	GNG7
1.1066E-17	2.059213066	0.8	0.208	3.13224E-13	B cells	SWAP70
2.81208E-16	1.377217838	0.44	0.057	7.9596E-12	B cells	PKIG
3.21571E-16	2.156618982	0.8	0.226	9.10206E-12	B cells	TCF4
3.25075E-16	2.691083529	1	0.701	9.20125E-12	B cells	CD37
5.44318E-16	1.722828841	0.96	0.277	1.54069E-11	B cells	HLA-DQA1
8.82015E-16	1.633384759	1	0.314	2.49654E-11	B cells	HLA-DQB1
1.59296E-15	2.079015497	0.8	0.228	4.50888E-11	B cells	BASP1
2.89848E-14	1.831695846	0.76	0.215	8.20413E-10	B cells	MEF2C
3.71697E-14	1.16778941	1	0.985	1.05209E-09	B cells	FAU
5.36987E-14	1.817508927	0.56	0.114	1.51994E-09	B cells	CD40
3.8638E-13	1.922124515	0.84	0.333	1.09365E-08	B cells	PRDM2
4.31307E-13	1.226937495	1	0.371	1.22082E-08	B cells	LTB
7.44277E-13	1.163244126	1	0.994	2.10668E-08	B cells	EEF1A1
9.37597E-13	1.576082139	0.64	0.153	2.65387E-08	B cells	FAM65B
1.82781E-12	1.723463063	1	0.931	5.17362E-08	B cells	EEF1B2

2.48049E-12	1.421643562	0.48	0.094	7.02103E-08	B cells	BTK
7.91606E-12	1.445784201	1	0.387	2.24064E-07	B cells	HLA-DRA
1.06777E-11	1.243017596	1	0.394	3.02232E-07	B cells	HLA-DPB1
3.45182E-11	1.289274787	0.44	0.083	9.77037E-07	B cells	PARP15
4.26307E-11	1.194012687	0.44	0.082	1.20666E-06	B cells	CHD7
4.29682E-11	1.760066304	0.68	0.195	1.21621E-06	B cells	HLA-DQA2
5.69528E-11	1.807473306	0.92	0.425	1.61205E-06	B cells	KLF2
7.88223E-11	2.030306375	0.56	0.154	2.23106E-06	B cells	SMIM14
8.75945E-11	1.176283386	1	0.395	2.47936E-06	B cells	HLA-DPA1
1.08508E-10	1.076690831	1	0.91	3.07133E-06	B cells	TOMM7
2.87699E-10	1.441295588	1	0.594	8.14333E-06	B cells	CD74
3.15547E-10	1.471430978	0.44	0.09	8.93157E-06	B cells	RASGRP2
4.20132E-10	1.097312859	1	0.957	1.18918E-05	B cells	AC090498.1
1.86786E-09	1.469487036	0.72	0.236	5.28698E-05	B cells	HLA-DRB5
2.88512E-09	1.480747428	0.76	0.344	8.16632E-05	B cells	IRF8
3.40345E-09	1.219637172	0.48	0.119	9.63346E-05	B cells	DAPP1
3.50813E-09	1.151341396	0.4	0.084	9.92976E-05	B cells	AFF3
3.6353E-09	0.831498774	1	0.395	0.000102897	B cells	HLA-DRB1
5.3316E-09	1.119383686	1	0.795	0.000150911	B cells	SLC25A6
6.78454E-09	1.300202275	0.52	0.146	0.000192037	B cells	BCAS4
7.27323E-09	1.528330434	0.68	0.277	0.000205869	B cells	ODC1
9.10035E-09	1.102996333	0.4	0.087	0.000257585	B cells	CLECL1
1.16614E-08	0.899599877	1	0.983	0.000330076	B cells	UBA52
1.31581E-08	1.154241804	1	0.664	0.000372441	B cells	CD52
1.88322E-08	1.678661486	0.4	0.092	0.000533044	B cells	GAPT
2.3917E-08	1.055788348	0.8	0.29	0.00067697	B cells	HLA-DMB
3.9271E-08	1.249749945	0.4	0.097	0.001111566	B cells	EAF2
4.12417E-08	1.252050098	0.4	0.094	0.001167346	B cells	GNB5
5.82482E-08	1.304739544	0.96	0.775	0.001648716	B cells	ZFAS1
8.55983E-08	0.861373487	1	0.96	0.00242286	B cells	GNB2L1
8.58659E-08	1.329438464	0.4	0.096	0.002430435	B cells	SELL
1.01576E-07	1.112645147	0.96	0.844	0.002875111	B cells	RBM39
1.02681E-07	1.152254896	0.96	0.696	0.002906389	B cells	GLTSCR2
1.32911E-07	0.880605533	0.96	0.963	0.003762053	B cells	NACA
1.35318E-07	1.828612026	0.56	0.196	0.003830176	B cells	POU2F2
1.92813E-07	1.015084454	0.92	0.56	0.005457582	B cells	LIMD2
2.03988E-07	1.853669786	0.84	0.486	0.005773882	B cells	CXCR4
2.72986E-07	1.227787007	0.84	0.548	0.007726857	B cells	CD48

3.17989E-07	1.610988544	0.52	0.172	0.00900068	B cells	45717
4.61109E-07	1.762289901	0.56	0.237	0.013051691	B cells	CCDC50
6.57817E-07	1.7017617	0.56	0.232	0.018619505	B cells	NCOA3
7.35734E-07	0.951955521	0.96	0.854	0.020824964	B cells	EEF2
8.09654E-07	1.228718906	0.92	0.556	0.02291725	B cells	EZR
9.27176E-07	0.620232822	1	0.991	0.026243719	B cells	TPT1
9.28232E-07	1.900788747	0.44	0.137	0.026273595	B cells	FCMR
2.43086E-06	1.384045039	0.52	0.197	0.068805452	B cells	PRKCB
3.32374E-06	0.910998359	0.4	0.118	0.094078549	B cells	RASSF2
4.26766E-06	1.062229531	0.52	0.197	0.12079603	B cells	PDLIM1
4.47099E-06	1.552240339	0.8	0.575	0.126551374	B cells	DDX21
8.41794E-06	0.754992474	1	0.927	0.23826987	B cells	EEF1D
8.81415E-06	1.336561279	0.72	0.46	0.249484492	B cells	EIF2S3
1.09614E-05	1.199187253	0.68	0.4	0.310262254	B cells	SMAP2
1.10947E-05	1.019427488	0.4	0.129	0.314034221	B cells	PIKFYVE
1.1353E-05	1.294924034	0.56	0.238	0.321347889	B cells	ARID5B
1.14496E-05	0.981786403	0.88	0.651	0.324081619	B cells	RSRC2
1.20336E-05	0.874098271	0.88	0.613	0.340611493	B cells	GPBP1
1.441E-05	0.904777257	1	0.908	0.4078764	B cells	NPM1
1.53967E-05	0.902183293	0.92	0.83	0.43580486	B cells	SRSF5
1.74073E-05	0.914200957	1	0.781	0.492713407	B cells	EIF4A2
1.80867E-05	1.316791643	0.52	0.239	0.511944345	B cells	FAM60A
1.8533E-05	0.781269466	0.72	0.335	0.524575329	B cells	MARCKS
1.89375E-05	0.933256177	0.72	0.331	0.536025956	B cells	HLA-DMA
2.06903E-05	0.703016912	1	0.988	0.585638489	B cells	EIF1
2.36821E-05	1.460042894	0.6	0.318	0.670322027	B cells	SNX2
3.77578E-05	0.884891339	0.92	0.765	1	B cells	PRRC2C
4.30017E-05	1.130752005	0.88	0.721	1	B cells	TRA2B
4.46045E-05	1.071199497	0.64	0.375	1	B cells	PARP1
4.95431E-05	0.686213451	1	0.974	1	B cells	UBC
5.00546E-05	0.798856674	0.68	0.309	1	B cells	CTSH
5.41566E-05	1.15303317	0.52	0.225	1	B cells	PHACTR1
6.81682E-05	0.975701486	0.48	0.193	1	B cells	LY86
7.59875E-05	0.994443152	0.68	0.408	1	B cells	GCC2
8.28665E-05	0.849122742	0.52	0.241	1	B cells	NGLY1
8.65303E-05	0.873882579	0.8	0.614	1	B cells	UXT
9.66283E-05	1.157596631	0.6	0.293	1	B cells	IKZF3
0.000102903	1.146952904	0.6	0.323	1	B cells	BIRC3

0.000107768	0.861988538	0.96	0.953	1	B cells	DDX5
0.000116696	0.847807928	0.88	0.69	1	B cells	PNISR
0.000122754	0.985385281	0.8	0.705	1	B cells	RBM25
0.000132355	1.183334284	0.56	0.305	1	B cells	SYPL1
0.000135072	0.975875228	0.44	0.185	1	B cells	MAP3K1
0.000148866	0.77151711	0.8	0.636	1	B cells	SF1
0.000151788	1.361982712	0.68	0.425	1	B cells	CD83
0.000168077	0.882479133	0.84	0.611	1	B cells	TSC22D3
0.000174168	0.955475692	0.96	0.902	1	B cells	JUND
0.000189587	1.041332416	0.56	0.28	1	B cells	MARCKSL1
0.000193223	1.198462448	0.56	0.29	1	B cells	CDKN1A
0.000194541	1.002211444	0.68	0.415	1	B cells	CHD2
0.000195079	0.905089032	0.84	0.749	1	B cells	SRRM2
0.000203444	0.997363932	0.56	0.288	1	B cells	NCF1
0.000205944	1.560190767	0.56	0.302	1	B cells	CREBRF
0.000228911	0.730982131	0.68	0.403	1	B cells	SBDS
0.000300893	0.688312525	0.92	0.823	1	B cells	GNAS
0.000318799	1.236762389	0.84	0.616	1	B cells	CD69
0.000335025	0.937111248	0.4	0.164	1	B cells	FAM214A
0.000381395	1.009791085	0.4	0.16	1	B cells	CD24
0.000445447	1.217418881	0.44	0.205	1	B cells	HVCN1
0.000511174	1.282502591	0.48	0.257	1	B cells	OSER1
0.000516511	1.014851377	0.64	0.423	1	B cells	PARP14
0.000552074	1.11546813	0.4	0.182	1	B cells	NCF4
0.000787548	0.759933302	0.92	0.917	1	B cells	BTF3
0.000911325	1.056743714	0.84	0.649	1	B cells	ERP29
0.00093419	0.818661674	0.44	0.217	1	B cells	STX7
0.000969297	0.897571838	0.76	0.517	1	B cells	PPP1R2
0.001037933	1.126455699	0.52	0.313	1	B cells	TRIM38
0.001058067	0.778319823	0.68	0.482	1	B cells	MYCBP2
0.001161265	0.670203528	0.48	0.242	1	B cells	FRYL
0.001175824	1.088752976	0.56	0.365	1	B cells	ZFAND6
0.001273754	0.743507882	0.76	0.623	1	B cells	LSM7
0.001430303	1.029012468	0.4	0.187	1	B cells	SP140
0.00147058	0.904577381	0.8	0.773	1	B cells	CCNL1
0.001539877	0.748514789	0.52	0.304	1	B cells	IST1
0.00154131	0.984092482	0.6	0.408	1	B cells	RNMT
0.001581082	0.78307922	0.92	0.685	1	B cells	REL

0.001589399	0.618316762	0.8	0.639	1	B cells	HNRNPD
0.001679402	0.748330654	0.68	0.491	1	B cells	UBE2N
0.001712722	0.95581271	0.52	0.32	1	B cells	NUB1
0.001714704	1.320913249	0.48	0.266	1	B cells	NFKBID
0.001775906	0.655537807	0.92	0.903	1	B cells	YBX1
0.001802184	1.110488085	0.56	0.347	1	B cells	UPF2
0.002079377	0.711603023	0.68	0.512	1	B cells	EPC1
0.002126115	0.75412843	0.68	0.527	1	B cells	FAM133B
0.002195146	0.624637035	0.76	0.59	1	B cells	TOMM20
0.00221293	0.844096326	0.56	0.362	1	B cells	RGS19
0.002214471	0.661935094	0.8	0.744	1	B cells	DDX3X
0.002222395	0.745022648	0.84	0.825	1	B cells	SON
0.002372336	0.700470827	0.4	0.193	1	B cells	SMN1
0.002373811	0.786536045	0.48	0.269	1	B cells	EHD1
0.002380639	0.715190457	0.44	0.225	1	B cells	SIK1
0.002385232	1.092775513	0.48	0.293	1	B cells	ALG13
0.002593217	0.815991234	0.48	0.263	1	B cells	45722
0.002620686	1.045129705	0.72	0.585	1	B cells	YPEL5
0.002664323	0.618412404	0.92	0.757	1	B cells	LAPTM5
0.002670289	0.830253051	0.68	0.514	1	B cells	YME1L1
0.002682336	0.970733863	0.64	0.505	1	B cells	CHCHD10
0.002777148	0.766692953	0.56	0.373	1	B cells	SKIL
0.002789813	0.787821387	0.4	0.2	1	B cells	ZNF721
0.002848181	0.698067723	0.6	0.43	1	B cells	PPP2CA
0.002859708	0.689059354	0.76	0.622	1	B cells	AKAP13
0.002931447	0.879210924	0.48	0.288	1	B cells	DRAM2
0.003004919	0.732465601	0.8	0.7	1	B cells	CYCS
0.003162674	0.73106646	0.52	0.338	1	B cells	MAPK1IP1L
0.003214102	0.843361899	0.64	0.484	1	B cells	TCEA1
0.003287288	0.75581616	0.44	0.237	1	B cells	EXOSC6
0.003336831	0.643346414	0.84	0.74	1	B cells	EIF3E
0.003437894	0.667134765	1	0.883	1	B cells	JUNB
0.003444294	0.937766208	0.52	0.324	1	B cells	ATF7IP
0.003851329	0.653246199	0.68	0.459	1	B cells	KDM6B
0.003899781	0.812387947	0.68	0.522	1	B cells	JMJD1C
0.003938414	0.692665017	0.44	0.232	1	B cells	PRRC2B
0.004119533	1.151516117	0.4	0.214	1	B cells	RBM38
0.004127871	0.73944154	0.44	0.217	1	B cells	LBH

0.004743145	0.602362657	0.72	0.625	1	B cells	SEC62
0.004812656	0.679734334	0.56	0.38	1	B cells	TMEM256
0.005679962	0.71650405	0.68	0.565	1	B cells	EIF3L
0.005939093	0.625130815	0.72	0.69	1	B cells	ARGLU1
0.006081695	0.747801983	0.64	0.522	1	B cells	MTPN
0.006168543	0.740720065	0.48	0.288	1	B cells	SNHG9
0.006325666	0.684851604	0.68	0.526	1	B cells	GRB2
0.006370269	1.069168865	0.6	0.453	1	B cells	BOD1L1
0.006431164	0.868102075	0.64	0.533	1	B cells	TAF7
0.006665998	0.717107903	0.56	0.353	1	B cells	45901
0.006678471	1.053195966	0.52	0.368	1	B cells	CD55
0.007079265	0.894895335	0.4	0.208	1	B cells	RP11-138A9.1
0.007213901	1.251864272	0.64	0.424	1	B cells	CRIP1
0.007428555	0.647972298	0.6	0.422	1	B cells	VPS13C
0.007569568	0.724324643	0.72	0.645	1	B cells	BRD2
0.008142103	0.997045715	0.64	0.503	1	B cells	TRA2A
0.008154819	0.924312295	0.4	0.229	1	B cells	DCK
0.008387794	0.736704898	0.4	0.218	1	B cells	CHCHD3
0.008443636	0.607460269	0.4	0.208	1	B cells	HERC4
0.008760824	0.986867443	0.44	0.278	1	B cells	TMEM243
0.00877054	0.840761536	0.48	0.278	1	B cells	SVIP
0.008929506	0.608537135	0.76	0.676	1	B cells	EIF3H
0.008932512	0.709840321	0.44	0.262	1	B cells	IMPDH2
0.009628498	0.78900314	0.6	0.488	1	B cells	EVI2B
0.009799059	0.891798689	0.72	0.605	1	B cells	HERPUD1
4.0953E-281	2.752866321	0.673	0.001	1.1592E-276	uM1	CHIT1
1.3415E-255	3.925928152	0.731	0.005	3.797E-251	uM1	CHI3L1
9.9893E-204	1.076580941	0.712	0.01	2.8275E-199	uM1	PPARG
9.8219E-202	1.238660424	0.596	0.005	2.7801E-197	uM1	LPL
3.0353E-173	0.735252016	0.462	0.002	8.5916E-169	uM1	RBP4
8.931E-163	0.603486388	0.538	0.006	2.5279E-158	uM1	KCNQ3
3.9037E-154	1.384311984	0.75	0.022	1.105E-149	uM1	DFNA5
3.7787E-149	0.951703824	0.635	0.014	1.0696E-144	uM1	PDPN
1.2164E-140	2.174758144	0.808	0.032	3.4431E-136	uM1	RAB42
1.7027E-136	2.081510976	0.981	0.055	4.8195E-132	uM1	LINC01272
2.9674E-136	0.959718898	0.577	0.012	8.3993E-132	uM1	SCIN
2.9281E-124	2.630775224	0.481	0.009	8.2879E-120	uM1	CCL18
9.6329E-120	0.854923365	0.654	0.022	2.7266E-115	uM1	AQP9

4.2042E-117	2.861179382	0.981	0.074	1.19E-112	uM1	SLC11A1
1.2221E-116	2.894512544	0.769	0.037	3.4591E-112	uM1	MARCO
2.9598E-113	0.816969143	0.5	0.012	8.3777E-109	uM1	HTRA4
5.7865E-112	1.297540463	0.731	0.033	1.6379E-107	uM1	SLC16A10
2.3394E-107	1.306605662	0.846	0.05	6.6215E-103	uM1	HK2
4.4414E-106	1.274381332	0.846	0.05	1.2571E-101	uM1	SLC1A3
1.8911E-105	0.741020618	0.538	0.016	5.3527E-101	uM1	KCNE1
2.7295E-103	1.81872911	0.865	0.058	7.7258E-99	uM1	SCD
4.3019E-102	1.340532765	0.904	0.062	1.21766E-97	uM1	FMNL2
5.4144E-102	0.698308751	0.538	0.017	1.53253E-97	uM1	STEAP3
9.1607E-102	1.854434194	0.827	0.053	2.59294E-97	uM1	SLC2A5
7.27789E-98	2.205108745	1	0.09	2.06001E-93	uM1	CYP27A1
1.84771E-97	1.971718923	0.654	0.031	5.22995E-93	uM1	CH25H
1.64589E-96	0.868907354	0.654	0.03	4.65868E-92	uM1	TNS1
1.20447E-93	1.008580577	0.75	0.044	3.40926E-89	uM1	ST14
1.58381E-93	1.132485972	0.635	0.03	4.48297E-89	uM1	LINC01094
1.15155E-92	0.852774041	0.673	0.034	3.25945E-88	uM1	TBC1D2
1.00952E-90	7.284496056	0.981	0.113	2.85744E-86	uM1	SPP1
2.059E-90	2.929977445	0.846	0.069	5.828E-86	uM1	HAMP
1.98515E-89	1.646778373	0.885	0.074	5.61898E-85	uM1	LHFPL2
1.10827E-87	2.496441789	0.981	0.1	3.13697E-83	uM1	OLR1
7.12923E-79	1.658900596	0.808	0.068	2.01793E-74	uM1	GEM
1.8614E-78	1.070975466	0.788	0.06	5.2687E-74	uM1	EMP1
1.26956E-77	1.293609343	0.827	0.071	3.5935E-73	uM1	TNS3
1.4614E-76	0.681931448	0.519	0.024	4.13649E-72	uM1	MIR3945HG
1.86815E-76	1.234674745	0.865	0.079	5.28779E-72	uM1	FAM20C
1.06004E-74	0.640205269	0.538	0.027	3.00045E-70	uM1	CXADR
3.12055E-74	3.316734032	1	0.143	8.83271E-70	uM1	GPNMB
5.27433E-74	1.045020146	0.904	0.087	1.4929E-69	uM1	S100A8
7.07979E-73	0.688482217	0.654	0.043	2.00393E-68	uM1	PAPSS2
8.42648E-72	2.482740888	0.981	0.133	2.38511E-67	uM1	IL4I1
3.24741E-71	2.449139969	0.962	0.13	9.1918E-67	uM1	FBP1
1.37404E-69	1.46723919	0.808	0.078	3.88922E-65	uM1	C3
4.39473E-69	2.191805557	0.942	0.118	1.24393E-64	uM1	TREM2
5.37032E-69	0.652124511	0.635	0.043	1.52007E-64	uM1	SCARB1
7.21924E-69	2.895303011	0.788	0.078	2.04341E-64	uM1	FN1
8.05523E-69	3.5053664	0.981	0.156	2.28003E-64	uM1	NUPR1
1.38284E-68	0.602386765	0.462	0.021	3.91413E-64	uM1	FABP3

1.53673E-68	0.798855132	0.615	0.042	4.3497E-64	uM1	RRAGD
5.10777E-68	4.398924678	1	0.174	1.44575E-63	uM1	APOC1
9.79961E-68	0.783528107	0.673	0.051	2.77378E-63	uM1	OSCAR
1.60953E-67	1.085760269	0.635	0.045	4.55578E-63	uM1	KB-1507C5.4
5.2376E-67	1.294352513	0.808	0.08	1.4825E-62	uM1	CEBPA
5.85422E-67	4.611071827	1	0.183	1.65704E-62	uM1	CTSL
4.70175E-66	0.830823115	0.788	0.072	1.33083E-61	uM1	FCHO2
4.78861E-66	1.461222907	0.885	0.102	1.35542E-61	uM1	MMP14
3.86247E-65	0.798170297	0.5	0.028	1.09327E-60	uM1	KCNMA1
7.17074E-65	1.317331441	0.846	0.092	2.02968E-60	uM1	NPL
8.83664E-65	0.869141701	0.712	0.06	2.50121E-60	uM1	NCEH1
2.06385E-64	1.758443637	0.827	0.092	5.84172E-60	uM1	PLA2G7
7.8223E-64	0.897314358	0.827	0.083	2.2141E-59	uM1	TMEM51
9.30013E-64	0.880245757	0.673	0.054	2.6324E-59	uM1	SIGLEC1
1.03669E-63	0.800546735	0.673	0.054	2.93435E-59	uM1	FAM129B
5.08023E-63	1.646647534	0.923	0.118	1.43796E-58	uM1	ABL2
7.07394E-63	0.955054138	0.712	0.062	2.00228E-58	uM1	CYB5D1
1.52722E-62	2.136559155	0.904	0.121	4.32279E-58	uM1	MSR1
4.07085E-62	1.216374105	0.769	0.077	1.15226E-57	uM1	BHLHE41
2.15043E-61	3.372712968	0.846	0.114	6.08678E-57	uM1	CCL20
5.77731E-61	1.386633226	0.769	0.081	1.63527E-56	uM1	NPC1
1.00799E-60	0.910115711	0.846	0.091	2.85311E-56	uM1	VAT1
2.20401E-60	1.035745976	0.769	0.08	6.23844E-56	uM1	SDSL
3.32747E-60	1.547024714	0.962	0.129	9.4184E-56	uM1	ABCA1
7.08804E-60	1.080926713	0.808	0.088	2.00627E-55	uM1	ACP2
8.8635E-60	0.696215585	0.654	0.054	2.50881E-55	uM1	SPHK1
1.29697E-59	0.89440487	0.769	0.078	3.67108E-55	uM1	MYOF
1.30016E-59	0.776802887	0.827	0.088	3.68011E-55	uM1	BCAT1
2.05351E-59	0.682401362	0.654	0.055	5.81247E-55	uM1	DOK3
3.71657E-59	1.429887186	0.846	0.107	1.05198E-54	uM1	GK
5.99539E-59	0.738154464	0.577	0.042	1.69699E-54	uM1	CLEC4E
8.17477E-59	1.306362043	0.865	0.108	2.31387E-54	uM1	ALOX5
9.08385E-59	1.179243834	0.75	0.077	2.57118E-54	uM1	CADM1
1.43842E-58	2.241318596	0.962	0.147	4.07144E-54	uM1	CD163
1.57903E-58	0.611555165	0.519	0.034	4.46946E-54	uM1	SLC29A3
2.60029E-58	0.632574359	0.615	0.048	7.36013E-54	uM1	KCNN4
6.0991E-58	0.637614633	0.615	0.049	1.72635E-53	uM1	KIFC3
2.09376E-57	0.629470726	0.481	0.029	5.9264E-53	uM1	COLEC12

3.04096E-57	1.81385832	0.962	0.152	8.60743E-53	uM1	LILRB4
3.33223E-57	1.525098829	0.942	0.138	9.43189E-53	uM1	GM2A
5.34912E-57	0.855513679	0.596	0.048	1.51407E-52	uM1	NR1H3
1.62868E-56	1.627839418	0.981	0.146	4.60998E-52	uM1	C5AR1
1.30805E-55	1.24014448	0.923	0.129	3.70244E-51	uM1	SLC7A7
1.95162E-55	1.175456452	0.846	0.108	5.52405E-51	uM1	SLC25A19
2.98064E-55	0.86750727	0.635	0.055	8.43669E-51	uM1	FCGBP
3.76827E-55	1.093652445	0.981	0.146	1.06661E-50	uM1	S100A9
5.63233E-55	2.584758881	0.981	0.193	1.59423E-50	uM1	C15orf48
5.8711E-54	0.954840553	0.769	0.085	1.66181E-49	uM1	KYNU
7.54174E-54	1.239684073	0.75	0.085	2.13469E-49	uM1	IFIT3
9.9141E-54	1.028720936	0.673	0.068	2.80619E-49	uM1	GPR84
2.27967E-53	1.452251256	0.942	0.148	6.45259E-49	uM1	NCF2
8.21624E-53	0.828736078	0.558	0.045	2.32561E-48	uM1	OTOA
2.02092E-52	0.730067334	0.577	0.049	5.72021E-48	uM1	DOCK4
2.78615E-52	0.86151239	0.673	0.068	7.88619E-48	uM1	CD276
3.49546E-52	0.921608483	0.788	0.092	9.89389E-48	uM1	MMP2
3.87035E-52	1.024585879	0.904	0.127	1.0955E-47	uM1	GNB4
3.89415E-52	1.420648838	0.962	0.157	1.10224E-47	uM1	CYFIP1
7.77664E-52	0.679679783	0.596	0.052	2.20118E-47	uM1	CD109
1.97777E-51	0.955764039	0.808	0.099	5.59808E-47	uM1	DMXL2
7.16212E-51	2.773235931	0.923	0.158	2.02724E-46	uM1	G0S2
7.52065E-51	1.621370684	1	0.18	2.12872E-46	uM1	DAB2
1.44061E-50	0.649761755	0.635	0.06	4.07766E-46	uM1	PPARD
2.32339E-50	0.922757018	0.846	0.108	6.57635E-46	uM1	FCGR1A
6.70851E-50	1.142363617	0.827	0.108	1.89884E-45	uM1	FCGR2B
9.60854E-50	1.051745076	0.923	0.134	2.7197E-45	uM1	SIRPA
1.21154E-49	1.634975251	0.942	0.153	3.42926E-45	uM1	SERPINA1
1.34619E-49	1.004570841	0.75	0.091	3.81038E-45	uM1	ACSL1
2.5783E-49	0.693403168	0.538	0.045	7.29789E-45	uM1	TREM1
7.20811E-49	0.926900974	0.462	0.033	2.04025E-44	uM1	PROCR
8.52656E-49	0.683823744	0.692	0.074	2.41344E-44	uM1	FRMD4A
1.25224E-48	1.532242743	0.981	0.17	3.54445E-44	uM1	CXCL16
1.25915E-48	1.095738156	0.615	0.061	3.56402E-44	uM1	SDS
1.53276E-48	0.971585657	0.75	0.092	4.33849E-44	uM1	TFEC
1.79997E-48	1.144331732	0.808	0.111	5.09483E-44	uM1	RMDN3
1.47731E-47	1.509967155	0.962	0.171	4.18151E-43	uM1	PLXDC2
2.79394E-47	0.886684319	0.692	0.08	7.90824E-43	uM1	IRAK3

4.65678E-47	1.562280951	0.808	0.12	1.3181E-42	uM1	CCND1
6.11865E-47	1.964539748	0.981	0.191	1.73188E-42	uM1	MS4A7
6.2446E-47	1.221026033	0.827	0.119	1.76753E-42	uM1	PLTP
8.76958E-47	1.953109389	0.904	0.174	2.48223E-42	uM1	ATF5
2.29675E-46	1.808017473	0.981	0.213	6.50095E-42	uM1	LTA4H
4.78505E-46	1.30772009	0.962	0.161	1.35441E-41	uM1	MS4A4A
5.26012E-46	0.717204981	0.654	0.071	1.48888E-41	uM1	ITGB5
1.25999E-45	1.260481572	0.885	0.139	3.56641E-41	uM1	ALCAM
5.33114E-45	0.619749665	0.731	0.088	1.50898E-40	uM1	ATP6V0A1
5.83112E-45	2.295477902	1	0.251	1.6505E-40	uM1	CD68
1.42698E-44	3.728687086	1	0.298	4.03906E-40	uM1	APOE
1.82999E-44	0.938862228	0.827	0.119	5.17978E-40	uM1	SLC43A3
4.44594E-44	1.262106489	0.923	0.161	1.25842E-39	uM1	RAB13
1.07401E-43	1.819020359	0.923	0.183	3.03999E-39	uM1	A2M
1.5606E-43	1.060229608	0.904	0.145	4.41727E-39	uM1	TTYH3
2.16284E-43	0.76763527	0.462	0.038	6.12193E-39	uM1	CLEC5A
3.39798E-43	1.270172896	0.788	0.115	9.61798E-39	uM1	CPM
4.20819E-43	0.68237683	0.712	0.088	1.19113E-38	uM1	SLAMF8
4.88055E-43	1.224857988	0.481	0.043	1.38144E-38	uM1	IL1A
5.04108E-43	2.352735846	1	0.257	1.42688E-38	uM1	PLAUR
6.75018E-43	1.122465112	0.885	0.15	1.91064E-38	uM1	SCARB2
8.43485E-43	1.098041901	0.865	0.138	2.38748E-38	uM1	DST
8.76807E-43	0.615242632	0.673	0.079	2.4818E-38	uM1	NRP2
1.83223E-42	1.46606805	0.769	0.108	5.18612E-38	uM1	RNASE1
4.06818E-42	0.705955936	0.615	0.069	1.1515E-37	uM1	MERTK
4.8473E-42	0.750946509	0.75	0.099	1.37203E-37	uM1	SLCO2B1
1.0131E-41	0.601856851	0.673	0.081	2.86757E-37	uM1	GNA12
2.01475E-41	2.21117031	0.981	0.208	5.70275E-37	uM1	IL1B
4.21947E-41	0.907443295	0.885	0.14	1.19432E-36	uM1	RBM47
5.48406E-41	1.177863533	0.885	0.15	1.55226E-36	uM1	TGM2
5.93476E-41	1.506232937	0.981	0.227	1.67983E-36	uM1	TIMP2
9.98602E-41	0.815228404	0.808	0.121	2.82654E-36	uM1	EPB41L3
1.35151E-40	1.490654044	0.846	0.143	3.82545E-36	uM1	FCGR3A
1.40457E-40	1.281200575	0.865	0.157	3.97563E-36	uM1	MFSD12
1.54284E-40	0.927228709	0.731	0.103	4.36702E-36	uM1	CCRL2
2.00275E-40	0.875363855	0.904	0.147	5.66878E-36	uM1	GNS
3.72796E-40	1.767449654	0.865	0.176	1.0552E-35	uM1	GCHFR
8.52031E-40	0.607612428	0.635	0.076	2.41167E-35	uM1	TUBB6

1.02905E-39	0.753073415	0.596	0.07	2.91272E-35	uM1	HTRA1
1.48377E-39	1.951128995	0.942	0.217	4.19982E-35	uM1	BASP1
3.72093E-39	0.923464766	0.788	0.123	1.05321E-34	uM1	PTAFR
6.17976E-39	0.681373193	0.673	0.088	1.74918E-34	uM1	TLR2
1.13642E-38	1.267183188	0.923	0.195	3.21663E-34	uM1	IRAK1
1.62419E-38	1.203818383	0.904	0.187	4.59726E-34	uM1	ATP6V1B2
1.73598E-38	1.55097264	0.923	0.201	4.9137E-34	uM1	RAB31
3.41258E-38	0.784847105	0.692	0.097	9.65932E-34	uM1	SAV1
5.0657E-38	0.870359499	0.865	0.147	1.43385E-33	uM1	CLN8
9.29109E-38	2.366433909	1	0.371	2.62984E-33	uM1	IFI6
9.72961E-38	0.629712625	0.712	0.099	2.75397E-33	uM1	SLC31A1
1.04438E-37	1.297284573	0.942	0.206	2.95612E-33	uM1	SQRDL
1.10188E-37	0.669684372	0.769	0.114	3.11888E-33	uM1	ADAM9
1.11072E-37	0.722123635	0.558	0.065	3.1439E-33	uM1	FPR1
1.70643E-37	2.86235234	1	0.392	4.83004E-33	uM1	CTSB
1.84558E-37	1.019328704	0.865	0.155	5.22392E-33	uM1	BMP2K
1.89079E-37	1.196483406	0.846	0.161	5.35188E-33	uM1	FNIP2
1.94156E-37	0.60093605	0.75	0.109	5.4956E-33	uM1	ADCY3
3.21527E-37	2.35384994	1	0.463	9.10083E-33	uM1	BRI3
4.60095E-37	1.288512971	0.981	0.225	1.3023E-32	uM1	GRINA
7.18772E-37	1.009448549	0.423	0.039	2.03449E-32	uM1	IL6
8.74223E-37	0.961953017	0.865	0.151	2.47449E-32	uM1	SLC8A1
2.78367E-36	0.790752835	0.577	0.071	7.87917E-32	uM1	P2RX7
5.89686E-36	1.145184184	0.865	0.159	1.66911E-31	uM1	LGMN
7.82845E-36	1.632663304	0.981	0.234	2.21584E-31	uM1	CYBB
1.48148E-35	0.838341224	0.827	0.141	4.19333E-31	uM1	RAB20
2.60357E-35	3.093577382	1	0.704	7.3694E-31	uM1	CSTB
4.77262E-35	1.326052558	0.981	0.231	1.35089E-30	uM1	LAIR1
6.11576E-35	0.997882783	0.827	0.152	1.73107E-30	uM1	MPP1
6.25208E-35	1.408134249	0.962	0.236	1.76965E-30	uM1	CCDC88A
1.03952E-34	1.620713817	0.923	0.229	2.94238E-30	uM1	IL18
1.10861E-34	2.929466827	1	0.518	3.13791E-30	uM1	PSAP
1.15912E-34	2.048506269	1	0.33	3.2809E-30	uM1	GRN
2.29233E-34	0.699673374	0.712	0.11	6.48843E-30	uM1	SLC15A3
3.297E-34	0.729021635	0.808	0.138	9.33217E-30	uM1	NFKBIE
3.34794E-34	1.665689628	0.904	0.224	9.47634E-30	uM1	ADAM8
3.57646E-34	1.173860299	1	0.22	1.01232E-29	uM1	MAFB
3.63776E-34	2.2894352	1	0.428	1.02967E-29	uM1	GLUL

4.43076E-34	2.233836536	1	0.409	1.25413E-29	uM1	TYMP
5.08311E-34	1.147171082	0.654	0.102	1.43877E-29	uM1	BNIP3
6.2707E-34	1.011046489	0.885	0.173	1.77492E-29	uM1	ELL2
8.50438E-34	1.124657739	0.962	0.221	2.40717E-29	uM1	LACTB
2.55186E-33	2.392679386	1	0.824	7.22305E-29	uM1	S100A11
3.04213E-33	2.313131799	1	0.434	8.61075E-29	uM1	LGALS3
3.1668E-33	1.742337345	0.558	0.077	8.96364E-29	uM1	MMP9
4.04217E-33	0.719887143	0.75	0.126	1.14414E-28	uM1	TMEM251
5.70714E-33	0.929943976	0.808	0.146	1.6154E-28	uM1	ABCG1
1.07286E-32	0.79435456	0.731	0.121	3.03674E-28	uM1	MIR155HG
1.09565E-32	0.71324342	0.731	0.118	3.10125E-28	uM1	PLBD1
3.58374E-32	0.823834856	0.558	0.074	1.01438E-27	uM1	RCAN1
6.40533E-32	0.601793817	0.519	0.066	1.81303E-27	uM1	GRAMD4
9.69734E-32	0.643292309	0.75	0.127	2.74483E-27	uM1	RHBDF2
1.16011E-31	2.750831464	1	0.685	3.2837E-27	uM1	CTSD
1.58463E-31	0.629537456	0.712	0.116	4.48529E-27	uM1	DUSP3
1.99862E-31	0.960639901	0.788	0.15	5.65709E-27	uM1	LRP1
3.32263E-31	2.279908959	1	0.451	9.4047E-27	uM1	IER3
8.39925E-31	0.679274247	0.885	0.172	2.37741E-26	uM1	P4HA1
1.53996E-30	2.793085815	1	0.964	4.35886E-26	uM1	FTL
2.28772E-30	1.617222854	1	0.34	6.4754E-26	uM1	FABP5
2.43257E-30	0.796678517	0.769	0.144	6.8854E-26	uM1	COLGALT1
2.49454E-30	2.304837315	1	0.606	7.06078E-26	uM1	CAPG
2.64852E-30	2.110018382	0.981	0.441	7.49665E-26	uM1	CTSZ
6.34544E-30	0.621283945	0.462	0.055	1.79608E-25	uM1	PLPP3
7.06325E-30	1.079804126	0.885	0.206	1.99925E-25	uM1	ANXA4
7.07786E-30	1.698448153	0.981	0.384	2.00339E-25	uM1	APLP2
7.2391E-30	1.711217483	1	0.408	2.04903E-25	uM1	ASAH1
7.54709E-30	1.102401303	0.558	0.083	2.1362E-25	uM1	CA2
9.38145E-30	0.70480007	0.75	0.137	2.65542E-25	uM1	EDEM2
1.13191E-29	0.619740892	0.712	0.121	3.20388E-25	uM1	PVRL2
1.21449E-29	0.864661942	0.827	0.172	3.43761E-25	uM1	GLA
2.3452E-29	1.303988592	0.904	0.261	6.63808E-25	uM1	PDXK
3.14833E-29	0.724970581	0.75	0.139	8.91135E-25	uM1	MAFG
5.68301E-29	1.651317068	1	0.525	1.60858E-24	uM1	ANXA5
5.69404E-29	0.636265934	0.712	0.124	1.6117E-24	uM1	OAS2
6.23289E-29	1.6432026	0.981	0.536	1.76422E-24	uM1	GSTO1
6.24356E-29	1.494051467	0.923	0.231	1.76724E-24	uM1	IGSF6

7.07069E-29	0.698078475	0.827	0.159	2.00136E-24	uM1	45717
7.82744E-29	1.010182315	0.923	0.233	2.21556E-24	uM1	CREG1
1.03654E-28	0.796440351	0.788	0.156	2.93392E-24	uM1	TSPAN4
1.08143E-28	0.622838512	0.615	0.097	3.06099E-24	uM1	PLXND1
1.55939E-28	1.646713897	1	0.611	4.41386E-24	uM1	ATP6V1F
2.50375E-28	0.793115995	0.788	0.163	7.08687E-24	uM1	CYB561A3
2.81754E-28	1.076081417	0.981	0.233	7.97504E-24	uM1	SPI1
3.16704E-28	1.900768873	1	0.564	8.96432E-24	uM1	PRDX1
3.4582E-28	1.79284012	1	0.718	9.78843E-24	uM1	CD81
4.109E-28	1.59985038	0.923	0.253	1.16305E-23	uM1	TGFBI
5.11701E-28	1.446648935	0.962	0.362	1.44837E-23	uM1	ATOX1
6.36583E-28	1.75194002	0.981	0.654	1.80185E-23	uM1	ANXA2
9.23376E-28	1.466282351	0.981	0.296	2.61362E-23	uM1	CTSH
1.16865E-27	0.715604873	0.827	0.171	3.30786E-23	uM1	FKBP15
1.51238E-27	1.267996032	0.942	0.285	4.28078E-23	uM1	LGALS9
1.83526E-27	0.817590221	0.904	0.202	5.19472E-23	uM1	NFIL3
2.14716E-27	1.067298345	0.923	0.249	6.07754E-23	uM1	ATP6AP1
2.23798E-27	1.324942903	0.962	0.279	6.3346E-23	uM1	BCL2A1
2.9803E-27	1.916498685	1	0.528	8.43574E-23	uM1	SOD2
3.27179E-27	0.962154332	0.885	0.208	9.26079E-23	uM1	CD84
3.89721E-27	0.756174847	0.75	0.148	1.1031E-22	uM1	PMP22
3.92825E-27	0.681108845	0.808	0.164	1.11189E-22	uM1	P2RX4
4.01137E-27	0.620991503	0.673	0.12	1.13542E-22	uM1	GAA
6.69495E-27	0.729403569	0.769	0.154	1.89501E-22	uM1	DSE
7.70822E-27	0.943092008	0.788	0.177	2.18181E-22	uM1	WARS
8.47339E-27	0.847564567	0.904	0.214	2.39839E-22	uM1	MFSD1
9.10995E-27	0.788659091	0.788	0.169	2.57857E-22	uM1	PEA15
9.76349E-27	0.809954734	0.788	0.166	2.76356E-22	uM1	ACTN1
1.25903E-26	1.510286237	1	0.94	3.56369E-22	uM1	VIM
1.49091E-26	0.74632602	0.75	0.15	4.22003E-22	uM1	PLEC
1.56222E-26	0.658496502	0.5	0.071	4.42187E-22	uM1	ASGR1
2.52371E-26	0.910993169	0.865	0.214	7.14337E-22	uM1	CORO1C
3.12705E-26	0.954449287	0.654	0.12	8.85111E-22	uM1	SPRED1
3.19673E-26	0.636729003	0.673	0.123	9.04833E-22	uM1	SLC31A2
4.56253E-26	0.684028802	0.481	0.068	1.29142E-21	uM1	TTL
6.18194E-26	1.702963719	0.962	0.505	1.7498E-21	uM1	LIMS1
6.47265E-26	1.470086425	1	0.753	1.83208E-21	uM1	LAPTM5
1.12433E-25	0.904190417	0.846	0.197	3.1824E-21	uM1	KCTD12

1.2033E-25	1.176056084	0.923	0.273	3.40595E-21	uM1	PLD3
1.58285E-25	1.553744498	1	0.616	4.48025E-21	uM1	PKM
1.95569E-25	0.763603873	0.75	0.159	5.53557E-21	uM1	CEP170
2.62384E-25	1.89283899	1	0.983	7.42679E-21	uM1	FTH1
2.89338E-25	1.585542451	0.942	0.356	8.18972E-21	uM1	GSN
2.90401E-25	0.91457363	0.769	0.179	8.2198E-21	uM1	FAM195A
2.9601E-25	1.683842816	1	0.772	8.37856E-21	uM1	S100A10
4.86663E-25	0.746166187	0.692	0.139	1.3775E-20	uM1	PLXNC1
5.64983E-25	0.665732622	0.5	0.079	1.59918E-20	uM1	RGS12
8.30262E-25	1.132044315	0.808	0.204	2.35006E-20	uM1	MX1
9.56835E-25	0.91206094	0.885	0.23	2.70832E-20	uM1	SOAT1
1.52229E-24	1.085969341	0.885	0.245	4.30883E-20	uM1	FNDC3B
1.69359E-24	0.734718697	0.808	0.175	4.79369E-20	uM1	ADAP2
1.69856E-24	1.149805716	0.885	0.276	4.80777E-20	uM1	RNF13
1.87202E-24	0.763541764	0.865	0.209	5.29875E-20	uM1	PEPD
2.08E-24	0.777089869	0.731	0.155	5.88743E-20	uM1	ALDH2
3.38887E-24	0.997610173	0.962	0.293	9.59219E-20	uM1	PLSCR1
4.9891E-24	0.766376394	0.692	0.14	1.41216E-19	uM1	IFI44L
5.3628E-24	1.603643794	1	0.843	1.51794E-19	uM1	S100A6
7.73402E-24	0.62961829	0.462	0.068	2.18911E-19	uM1	IL10
1.30738E-23	0.635334701	0.788	0.177	3.70053E-19	uM1	ABR
1.35341E-23	1.312167166	0.865	0.273	3.83082E-19	uM1	RALA
1.45863E-23	0.697015992	0.731	0.162	4.12866E-19	uM1	KIAA0930
2.73585E-23	0.675811952	0.712	0.151	7.74383E-19	uM1	DDX60L
2.7759E-23	1.357617906	0.962	0.367	7.8572E-19	uM1	ATP6V0D1
3.79936E-23	0.988858329	0.942	0.288	1.07541E-18	uM1	SYNGR2
3.97E-23	1.015528143	0.923	0.276	1.12371E-18	uM1	CNDP2
4.06709E-23	0.646039755	0.712	0.15	1.15119E-18	uM1	PALLD
6.85171E-23	1.838738466	0.558	0.11	1.93938E-18	uM1	IL1RN
7.51274E-23	0.63069651	0.577	0.106	2.12648E-18	uM1	NLRP3
9.58071E-23	0.847362207	0.827	0.211	2.71182E-18	uM1	IFNGR2
1.00183E-22	1.037007195	0.75	0.179	2.83569E-18	uM1	TNFAIP2
1.02343E-22	0.86706359	0.846	0.229	2.89681E-18	uM1	TUBGCP2
1.53014E-22	1.497312631	0.615	0.131	4.33107E-18	uM1	PTGS2
1.53336E-22	0.62403149	0.827	0.191	4.34018E-18	uM1	CECR1
1.61147E-22	0.673433587	0.904	0.235	4.56128E-18	uM1	ICAM1
1.88623E-22	0.931695987	0.673	0.142	5.33896E-18	uM1	VSIG4
2.06064E-22	0.609663521	0.788	0.177	5.83264E-18	uM1	HNMT

2.56832E-22	0.989972899	0.942	0.296	7.26964E-18	uM1	TPP1
3.21926E-22	0.646634211	0.808	0.189	9.11212E-18	uM1	ENG
3.56301E-22	0.827686042	0.846	0.22	1.00851E-17	uM1	ZMIZ1
4.35514E-22	1.312859457	1	0.561	1.23272E-17	uM1	ATP6V0B
7.6567E-22	1.312666952	0.981	0.516	2.16723E-17	uM1	GRB2
7.70727E-22	0.600769218	0.846	0.205	2.18154E-17	uM1	RAPGEF1
7.89395E-22	0.804673777	0.846	0.22	2.23438E-17	uM1	LIPA
1.01892E-21	0.864433207	0.923	0.272	2.88406E-17	uM1	STAT1
1.18765E-21	1.171519824	1	0.433	3.36165E-17	uM1	SLC16A3
2.14023E-21	1.134729779	1	0.397	6.05792E-17	uM1	MGAT1
2.36351E-21	0.878160202	0.865	0.235	6.6899E-17	uM1	HEXB
2.48035E-21	0.604216038	0.673	0.145	7.02064E-17	uM1	HBEGF
3.78066E-21	1.091415676	1	0.8	1.07012E-16	uM1	ALDOA
5.24829E-21	0.911049851	0.904	0.275	1.48553E-16	uM1	NAGK
6.05649E-21	1.297280855	0.904	0.307	1.71429E-16	uM1	PLIN2
6.87886E-21	1.183792557	1	0.562	1.94706E-16	uM1	SDCBP
7.22275E-21	0.649679852	0.712	0.168	2.0444E-16	uM1	ABHD12
1.25696E-20	1.051841418	0.962	0.324	3.55783E-16	uM1	MARCKS
2.01055E-20	1.164267121	0.962	0.414	5.69087E-16	uM1	CD83
2.23591E-20	0.704279704	0.692	0.163	6.32874E-16	uM1	SLC7A5
2.76139E-20	0.995898002	0.962	0.36	7.81612E-16	uM1	AKR1A1
6.61218E-20	0.653450714	0.904	0.248	1.87158E-15	uM1	UGCG
7.06704E-20	0.610464053	0.731	0.171	2.00033E-15	uM1	ASPH
7.14821E-20	0.921244811	0.519	0.1	2.0233E-15	uM1	ADM
8.04295E-20	1.167901532	0.981	0.515	2.27656E-15	uM1	MGST3
8.61376E-20	0.954307599	0.981	0.371	2.43812E-15	uM1	ARHGAP18
1.1639E-19	0.655620632	0.75	0.185	3.29441E-15	uM1	RIPK2
1.29679E-19	1.294036839	1	0.513	3.67057E-15	uM1	CEBPB
1.84018E-19	1.279485353	1	0.853	5.20862E-15	uM1	CD63
2.14575E-19	0.706254226	0.788	0.208	6.07353E-15	uM1	DNPH1
4.06295E-19	1.234911059	1	0.54	1.15002E-14	uM1	RNASET2
6.15947E-19	1.100993603	0.923	0.371	1.74344E-14	uM1	LAP3
8.24531E-19	0.768281883	0.885	0.269	2.33384E-14	uM1	CHST11
9.75015E-19	1.212335362	1	0.48	2.75978E-14	uM1	NPC2
1.16733E-18	1.119400175	0.942	0.333	3.30411E-14	uM1	SNX10
1.2704E-18	1.038177094	0.942	0.387	3.59586E-14	uM1	CTSA
1.28642E-18	1.034503551	0.981	0.37	3.64122E-14	uM1	HM13
1.34645E-18	1.105812729	0.885	0.298	3.81111E-14	uM1	TNF

1.627E-18	0.782511881	0.942	0.303	4.60521E-14	uM1	PPT1
2.2916E-18	0.648662767	0.885	0.252	6.48637E-14	uM1	NFIC
2.4257E-18	0.75650789	0.865	0.263	6.86596E-14	uM1	VEGFB
3.48853E-18	0.822484682	0.942	0.32	9.87427E-14	uM1	HAVCR2
3.65111E-18	0.665784948	0.865	0.259	1.03345E-13	uM1	SORL1
1.00555E-17	0.925338293	0.923	0.324	2.8462E-13	uM1	SGK1
1.34314E-17	0.68655748	0.885	0.272	3.80174E-13	uM1	ERO1A
1.55767E-17	0.612385105	0.808	0.227	4.40898E-13	uM1	ARID5B
2.03583E-17	0.708509319	0.846	0.254	5.76242E-13	uM1	UNC93B1
2.08818E-17	1.012348823	1	0.552	5.91058E-13	uM1	AP2S1
2.29674E-17	0.884699518	0.923	0.325	6.50091E-13	uM1	LYN
2.39933E-17	0.898939597	0.904	0.315	6.79131E-13	uM1	LAMP2
2.83786E-17	0.990374464	0.962	0.459	8.03255E-13	uM1	LAMP1
3.09932E-17	0.996102642	0.981	0.436	8.77263E-13	uM1	SLC3A2
4.00544E-17	0.619113754	0.885	0.269	1.13374E-12	uM1	CCL3L3
4.1124E-17	1.1565192	1	0.576	1.16402E-12	uM1	GPX1
5.62616E-17	0.707680277	0.692	0.188	1.59248E-12	uM1	DNASE2
6.3835E-17	1.280206196	1	0.661	1.80685E-12	uM1	EMP3
1.05578E-16	1.124260139	0.981	0.501	2.9884E-12	uM1	ISG15
1.15385E-16	0.91306887	0.904	0.308	3.26597E-12	uM1	HEXA
1.21792E-16	0.651950313	0.865	0.265	3.44733E-12	uM1	SCPEP1
1.2956E-16	0.713856501	0.75	0.208	3.6672E-12	uM1	SCO2
1.67843E-16	0.720532397	0.5	0.112	4.75079E-12	uM1	OSM
2.51639E-16	0.989245126	1	0.535	7.12264E-12	uM1	CTSS
2.68909E-16	0.695680263	0.962	0.333	7.61146E-12	uM1	RASGEF1B
3.40196E-16	0.928740025	0.981	0.428	9.62926E-12	uM1	FLNA
5.29325E-16	0.950473712	0.962	0.501	1.49825E-11	uM1	BCAP31
5.33993E-16	0.739758075	0.962	0.385	1.51147E-11	uM1	TUBA1C
6.05568E-16	0.753131805	0.442	0.093	1.71406E-11	uM1	FPR3
6.98995E-16	1.155872183	0.942	0.56	1.9785E-11	uM1	EGR1
8.02197E-16	1.011799719	1	0.587	2.27062E-11	uM1	ITGB2
1.77619E-15	0.852978205	0.962	0.37	5.02752E-11	uM1	GLRX
3.07154E-15	1.23111503	0.923	0.399	8.69399E-11	uM1	CD9
3.67303E-15	0.862766222	0.981	0.4	1.03965E-10	uM1	ZEB2
3.97878E-15	0.68154032	0.923	0.335	1.12619E-10	uM1	RAB10
6.985E-15	0.682912826	0.75	0.23	1.9771E-10	uM1	ASAP1
7.17358E-15	1.540477342	0.423	0.091	2.03048E-10	uM1	EREG
8.63522E-15	0.710538024	0.962	0.38	2.4442E-10	uM1	FLOT1

1.20037E-14	0.678846628	0.827	0.285	3.39763E-10	uM1	EPSTI1
1.5421E-14	0.906398603	0.962	0.485	4.36492E-10	uM1	ATP6AP2
2.23625E-14	0.946725203	0.962	0.442	6.32971E-10	uM1	HIF1A
2.64039E-14	0.790678302	0.962	0.457	7.47363E-10	uM1	TKT
2.84677E-14	0.813860858	1	0.586	8.05779E-10	uM1	RTN4
2.94006E-14	0.949186591	0.962	0.619	8.32183E-10	uM1	TSPO
3.78075E-14	0.7400944	0.942	0.435	1.07014E-09	uM1	PLEK
4.83508E-14	0.634605829	0.808	0.271	1.36857E-09	uM1	EIF4EBP1
6.59372E-14	1.169662723	1	0.907	1.86635E-09	uM1	NEAT1
8.78649E-14	0.692539054	0.923	0.368	2.48702E-09	uM1	M6PR
9.88384E-14	1.028175741	0.962	0.51	2.79762E-09	uM1	NFKBIZ
2.7159E-13	0.862307504	1	0.537	7.68735E-09	uM1	CCL3
4.81308E-13	0.747988419	0.904	0.36	1.36234E-08	uM1	QKI
4.96384E-13	0.860959761	0.981	0.769	1.40501E-08	uM1	LDHA
6.40644E-13	1.042915125	0.923	0.425	1.81334E-08	uM1	UPP1
7.04533E-13	0.666337602	0.904	0.374	1.99418E-08	uM1	BNIP3L
7.56422E-13	0.745273995	1	0.558	2.14105E-08	uM1	H2AFY
1.28171E-12	0.630555115	0.788	0.277	3.62788E-08	uM1	FAM162A
2.18768E-12	0.881490151	1	0.75	6.19223E-08	uM1	GPX4
2.78913E-12	0.903790911	0.981	0.546	7.89463E-08	uM1	ZFAND5
3.69228E-12	0.832017169	0.712	0.246	1.0451E-07	uM1	ACP5
3.9614E-12	0.717294572	0.923	0.422	1.12128E-07	uM1	PPP1R14B
5.11564E-12	0.613775226	0.885	0.344	1.44798E-07	uM1	SOCS3
6.24836E-12	0.853087522	0.769	0.299	1.7686E-07	uM1	FDX1
7.44186E-12	0.80656841	1	0.811	2.10642E-07	uM1	LGALS1
7.91636E-12	1.029072993	0.942	0.43	2.24072E-07	uM1	TIMP1
1.86794E-11	0.82439536	1	0.836	5.28722E-07	uM1	NFKBIA
2.37535E-11	0.632979017	0.942	0.416	6.72342E-07	uM1	C6orf62
2.41106E-11	0.809510229	0.962	0.581	6.8245E-07	uM1	P4HB
3.85887E-11	0.716021921	1	0.784	1.09225E-06	uM1	ENO1
4.92234E-11	0.839263697	0.942	0.714	1.39327E-06	uM1	PGK1
6.38605E-11	0.619945526	0.962	0.455	1.80757E-06	uM1	NFE2L2
7.45055E-11	0.823863008	1	0.682	2.10888E-06	uM1	TNFAIP3
1.43345E-10	0.627020622	0.981	0.528	4.05738E-06	uM1	CANX
1.79578E-10	0.672018866	1	0.695	5.08295E-06	uM1	RAC1
6.27879E-10	0.768414976	1	0.702	1.77721E-05	uM1	FCER1G
1.54232E-09	0.715780056	0.577	0.21	4.36555E-05	uM1	CXCL2
3.45481E-09	0.814703859	1	0.741	9.77885E-05	uM1	DBI

1.19118E-08	0.606979252	0.942	0.449	0.000337162	uM1	KDM6B
1.1659E-07	1.055162008	0.846	0.456	0.003300087	uM1	OSBPL8
2.59798E-07	0.643459174	0.942	0.732	0.007353589	uM1	CALR
8.5405E-254	3.749458749	0.996	0.105	2.4174E-249	uM2	C1QC
5.2095E-251	4.217055868	0.992	0.118	1.4745E-246	uM2	C1QB
2.3145E-244	4.206962988	1	0.133	6.5512E-240	uM2	C1QA
1.9003E-235	4.3621626	0.988	0.14	5.3788E-231	uM2	CD14
1.3502E-207	2.399983779	0.843	0.071	3.8217E-203	uM2	GPNMB
6.4603E-199	2.263011979	0.876	0.105	1.8286E-194	uM2	CSF1R
2.2345E-198	2.509537672	0.892	0.098	6.3249E-194	uM2	APOC1
5.1323E-196	2.353869708	0.916	0.113	1.4527E-191	uM2	MS4A7
7.0368E-190	2.588333978	0.988	0.17	1.9918E-185	uM2	CD68
2.8791E-189	2.103798446	0.843	0.101	8.1494E-185	uM2	ADAP2
2.6745E-185	2.122894843	0.863	0.11	7.5702E-181	uM2	FCGR2A
1.7815E-183	2.155890772	0.888	0.123	5.0427E-179	uM2	RNASE6
5.6922E-178	2.957470616	0.791	0.091	1.6112E-173	uM2	LGMN
4.1512E-177	2.641686346	0.984	0.214	1.175E-172	uM2	FCGRT
1.5407E-176	2.174245399	0.831	0.1	4.361E-172	uM2	TMEM176B
6.8858E-175	1.907023077	0.715	0.059	1.949E-170	uM2	TREM2
1.0536E-168	1.845173062	0.847	0.12	2.9822E-164	uM2	LY96
1.1393E-167	2.27024645	0.9	0.16	3.2247E-163	uM2	CREG1
2.4604E-167	1.925294069	0.803	0.095	6.9642E-163	uM2	MS4A4A
3.2125E-166	2.28875262	0.96	0.162	9.093E-162	uM2	MS4A6A
3.8081E-166	1.9040675	0.803	0.105	1.0779E-161	uM2	GPR34
1.4644E-165	2.550517982	0.924	0.179	4.1448E-161	uM2	TGFBI
8.9206E-165	2.535851944	0.823	0.115	2.525E-160	uM2	DAB2
5.895E-163	2.653340943	0.594	0.039	1.6686E-158	uM2	FOLR2
1.0155E-162	1.862970393	0.811	0.105	2.8745E-158	uM2	CXCL16
7.9442E-161	1.712046927	0.787	0.101	2.2486E-156	uM2	C3AR1
8.0958E-161	1.566112049	0.707	0.063	2.2915E-156	uM2	MSR1
1.187E-160	3.080446093	1	0.325	3.3599E-156	uM2	CTSB
1.402E-155	2.159641481	0.863	0.149	3.9684E-151	uM2	LIPA
3.3336E-155	2.330079798	0.811	0.118	9.4359E-151	uM2	A2M
7.3213E-147	2.788792061	1	0.422	2.0723E-142	uM2	NPC2
2.3286E-144	1.719339959	0.811	0.119	6.5911E-140	uM2	CTSL
5.2192E-144	3.74435439	0.614	0.057	1.4773E-139	uM2	RNASE1
2.6316E-143	3.312379032	0.924	0.231	7.4486E-139	uM2	APOE
1.0145E-142	1.516389945	0.771	0.112	2.8717E-138	uM2	HNMT

1.9654E-142	2.111142274	0.976	0.246	5.5632E-138	uM2	HLA-DMA
1.8644E-141	1.537596745	0.671	0.073	5.2771E-137	uM2	TMEM176A
8.0998E-141	1.367449127	0.759	0.106	2.2927E-136	uM2	C1orf54
8.1941E-141	2.226946666	0.968	0.261	2.3193E-136	uM2	GRN
5.2164E-140	3.970456085	0.695	0.089	1.4765E-135	uM2	HMOX1
2.6528E-139	1.554848763	0.727	0.095	7.5086E-135	uM2	LILRB4
3.0828E-139	1.390283047	0.743	0.1	8.7259E-135	uM2	CD86
3.1405E-139	2.2054869	0.863	0.163	8.8893E-135	uM2	IGSF6
5.4388E-139	1.848137089	0.884	0.163	1.5395E-134	uM2	FGL2
1.3937E-138	1.632280193	0.711	0.09	3.945E-134	uM2	MPEG1
4.7765E-138	1.882021605	0.667	0.076	1.352E-133	uM2	STAB1
9.3672E-138	1.818735631	0.719	0.091	2.6514E-133	uM2	CD163
2.7196E-137	2.185325395	0.9	0.213	7.6979E-133	uM2	HLA-DMB
2.3564E-136	1.861261934	0.863	0.153	6.6697E-132	uM2	MAFB
2.8238E-136	1.535561861	0.823	0.138	7.9926E-132	uM2	MEF2C
1.2421E-135	1.888048838	0.679	0.083	3.5159E-131	uM2	VSIG4
1.257E-133	2.563622001	1	0.465	3.5578E-129	uM2	PSAP
3.9832E-133	1.751777381	0.876	0.166	1.1274E-128	uM2	SPI1
1.5414E-130	2.220864459	0.863	0.209	4.3628E-126	uM2	PLD3
3.9552E-130	1.687804024	0.566	0.053	1.1195E-125	uM2	SLCO2B1
1.7605E-128	1.908015755	1	0.231	4.9832E-124	uM2	AIF1
8.9923E-127	1.845209099	0.96	0.253	2.5453E-122	uM2	MARCKS
2.1992E-125	2.373527857	1	0.529	6.225E-121	uM2	GPX1
1.322E-123	1.725643952	0.675	0.097	3.7419E-119	uM2	NRP1
2.1979E-123	1.567883318	0.739	0.121	6.2211E-119	uM2	LY86
1.4334E-121	2.285900953	0.992	0.32	4.0571E-117	uM2	HLA-DPA1
4.4361E-121	2.213106227	0.988	0.32	1.2557E-116	uM2	HLA-DPB1
5.1064E-121	1.521931672	0.691	0.095	1.4454E-116	uM2	C5AR1
1.4653E-119	1.320633442	0.811	0.132	4.1474E-115	uM2	MNDA
1.5405E-119	1.579735645	0.871	0.167	4.3604E-115	uM2	CYBB
3.1335E-119	2.064443376	0.96	0.349	8.8695E-115	uM2	ASAH1
7.4241E-119	2.838236413	1	0.96	2.1014E-114	uM2	FTL
2.4108E-118	1.261566529	0.691	0.104	6.8239E-114	uM2	45717
4.9966E-118	1.34523001	0.791	0.139	1.4143E-113	uM2	RAB31
4.2401E-117	2.134390083	1	0.311	1.2002E-112	uM2	HLA-DRA
1.6899E-116	1.514803323	0.795	0.155	4.7833E-112	uM2	TNFSF13B
1.8847E-113	2.906142308	0.59	0.077	5.3347E-109	uM2	SLC40A1
7.9147E-113	1.548663149	0.952	0.234	2.2403E-108	uM2	HLA-DQB1

1.5251E-111	2.096121788	0.984	0.492	4.3168E-107	uM2	RNASET2
3.1398E-109	2.370642779	1	0.543	8.8872E-105	uM2	CD74
3.5814E-109	1.233302694	0.631	0.093	1.0137E-104	uM2	RAB20
2.3696E-108	1.426376035	0.747	0.139	6.7072E-104	uM2	KCTD12
2.385E-108	1.390263002	0.711	0.125	6.7508E-104	uM2	LPAR6
7.2733E-108	1.214120101	0.614	0.09	2.0587E-103	uM2	SIRPA
4.6656E-107	1.346530523	0.647	0.093	1.3206E-102	uM2	FCGR3A
8.7034E-107	1.081648979	0.61	0.084	2.4635E-102	uM2	SLC7A7
5.7255E-106	1.268192666	0.566	0.074	1.6206E-101	uM2	SPRED1
1.4764E-105	0.975199887	0.486	0.047	4.1788E-101	uM2	ETV5
2.9751E-105	1.251057552	0.635	0.096	8.421E-101	uM2	PILRA
4.5434E-105	1.863685866	0.992	0.321	1.286E-100	uM2	HLA-DRB1
8.1215E-104	1.098010984	0.486	0.048	2.2988E-99	uM2	FPR3
8.3209E-104	1.266557354	0.546	0.068	2.3552E-99	uM2	FCGR1A
1.357E-102	3.765884501	0.602	0.104	3.84087E-98	uM2	SEPP1
2.602E-102	1.704625177	0.707	0.13	7.36482E-98	uM2	HLA-DQA2
4.2105E-102	0.872801695	0.422	0.031	1.19177E-97	uM2	CMKLR1
1.9813E-101	1.179530417	0.506	0.057	5.60799E-97	uM2	NPL
2.2681E-101	1.410325483	0.434	0.036	6.41979E-97	uM2	VMO1
2.4334E-99	1.58069865	0.562	0.078	6.88786E-95	uM2	PLTP
7.7046E-99	1.781450626	0.948	0.351	2.18079E-94	uM2	TYMP
2.88171E-98	1.261961342	0.647	0.112	8.15669E-94	uM2	CYFIP1
2.39622E-97	1.380385725	0.851	0.237	6.78251E-93	uM2	TPP1
1.2526E-96	1.036844333	0.474	0.05	3.54549E-92	uM2	GATM
1.48948E-95	1.925478273	0.996	0.725	4.21596E-91	uM2	SAT1
7.75821E-95	1.725610632	0.47	0.053	2.19596E-90	uM2	F13A1
2.0598E-94	1.500136333	1	0.721	5.83026E-90	uM2	TYROBP
8.2731E-93	1.240825715	0.767	0.179	2.3417E-88	uM2	LAIR1
2.22471E-92	1.283486687	0.602	0.104	6.29703E-88	uM2	TTYH3
2.22473E-92	1.598207557	1	0.478	6.29709E-88	uM2	CST3
2.23759E-92	0.893911485	0.406	0.033	6.33351E-88	uM2	HPGDS
2.6624E-92	1.0914114	0.41	0.037	7.53592E-88	uM2	MERTK
1.35967E-90	1.596251469	0.727	0.159	3.84855E-86	uM2	PHACTR1
7.82371E-90	1.176052199	0.687	0.149	2.2145E-85	uM2	TBXAS1
8.08033E-90	0.957279034	0.458	0.052	2.28714E-85	uM2	TMEM51
1.37487E-89	1.015163482	0.55	0.083	3.89158E-85	uM2	PTAFR
6.94878E-89	2.213320811	0.98	0.653	1.96685E-84	uM2	CTSD
1.17567E-88	1.146681102	0.598	0.106	3.32773E-84	uM2	LRP1

1.33092E-88	1.540725867	0.976	0.487	3.76717E-84	uM2	CTSS
6.49294E-88	1.018861714	0.482	0.059	1.83783E-83	uM2	PLA2G7
1.64261E-87	1.031720381	0.731	0.157	4.64942E-83	uM2	IFNGR2
3.63357E-87	1.164608472	0.651	0.13	1.02848E-82	uM2	LGALS3BP
7.1618E-87	1.740553987	1	0.982	2.02715E-82	uM2	FTH1
8.78523E-86	1.078685283	0.566	0.095	2.48666E-81	uM2	AXL
2.73168E-85	1.160127808	0.695	0.14	7.73203E-81	uM2	CPVL
3.40098E-85	1.076781695	0.602	0.11	9.62646E-81	uM2	HCK
3.49331E-85	0.984059352	0.482	0.065	9.88781E-81	uM2	LRRC25
1.6479E-84	1.485331236	0.884	0.264	4.66438E-80	uM2	SGK1
6.14475E-84	1.534830374	0.659	0.137	1.73927E-79	uM2	IFI30
8.67868E-84	1.566906215	0.819	0.212	2.4565E-79	uM2	HLA-DQA1
1.7744E-83	0.903312122	0.47	0.062	5.02243E-79	uM2	CD33
2.91463E-83	1.13915619	0.755	0.171	8.24985E-79	uM2	HLA-DRB5
4.02173E-83	1.079618037	0.586	0.111	1.13835E-78	uM2	MPP1
2.91379E-82	1.222327654	0.723	0.171	8.24747E-78	uM2	CD4
3.0834E-82	1.345047029	0.719	0.181	8.72758E-78	uM2	CCR1
9.3026E-81	2.200482996	0.755	0.219	2.6331E-76	uM2	CCL3L3
1.02771E-80	1.16232688	0.414	0.043	2.90894E-76	uM2	HAMP
2.42527E-79	1.22308061	0.787	0.234	6.86472E-75	uM2	LGALS9
3.21879E-79	1.079923595	0.582	0.115	9.1108E-75	uM2	TSPAN4
1.72421E-78	1.009697952	0.486	0.076	4.88038E-74	uM2	SLC15A3
8.54503E-78	1.261426761	0.992	0.726	2.41867E-73	uM2	LAPTM5
9.6489E-78	1.181149462	0.687	0.168	2.73112E-73	uM2	MFSD1
1.30477E-76	1.490190536	0.526	0.09	3.69315E-72	uM2	MRC1
5.66127E-76	0.836036888	0.438	0.058	1.60242E-71	uM2	HLA-DOA
1.334E-75	1.313447583	0.996	0.912	3.77589E-71	uM2	ITM2B
1.5057E-75	1.084491725	0.835	0.26	4.26188E-71	uM2	NINJ1
7.87647E-75	0.692999877	0.406	0.049	2.22943E-70	uM2	RENBP
2.53152E-74	1.380149236	0.767	0.237	7.16547E-70	uM2	BLVRB
3.62637E-74	0.875271491	0.498	0.083	1.02644E-69	uM2	GAA
3.67322E-74	1.329674015	0.703	0.162	1.03971E-69	uM2	IL1B
2.07132E-73	0.707421379	0.478	0.072	5.86288E-69	uM2	EPS8
1.26995E-72	0.987690473	0.622	0.131	3.59458E-68	uM2	PLXDC2
2.09106E-72	0.877190072	0.526	0.093	5.91873E-68	uM2	IL13RA1
2.63343E-72	0.950900839	0.55	0.105	7.45393E-68	uM2	RBM47
3.56507E-72	1.200534911	0.755	0.225	1.00909E-67	uM2	RB1
7.8416E-72	1.541068286	0.912	0.391	2.21957E-67	uM2	CTSZ

1.5632E-71	0.999222818	0.554	0.109	4.42465E-67	uM2	PMP22
3.02226E-71	1.485392186	0.984	0.654	8.5545E-67	uM2	CTSC
5.0828E-71	1.005175088	0.699	0.181	1.43869E-66	uM2	GRINA
7.81897E-71	1.035958707	0.458	0.071	2.21316E-66	uM2	CD93
1.19812E-70	1.399573272	0.908	0.408	3.39129E-66	uM2	RGS10
1.20165E-70	1.082217471	0.562	0.119	3.40126E-66	uM2	BMP2K
2.2529E-70	1.192128265	0.884	0.372	6.37682E-66	uM2	RNF130
4.01118E-70	1.017977517	0.41	0.056	1.13536E-65	uM2	FAM20C
4.23183E-70	0.960693953	0.418	0.058	1.19782E-65	uM2	ENPP2
4.25851E-70	1.415806971	0.763	0.21	1.20537E-65	uM2	SFRP4
5.6892E-70	1.033535607	0.618	0.147	1.61033E-65	uM2	ENG
6.76529E-69	1.163885555	0.888	0.331	1.91492E-64	uM2	APLP2
7.03093E-69	0.877868947	0.542	0.104	1.9901E-64	uM2	ALCAM
2.01324E-68	0.946433954	0.582	0.13	5.69848E-64	uM2	RASSF4
2.02986E-68	1.124359577	0.743	0.228	5.74552E-64	uM2	DRAM2
3.44132E-68	0.966200489	0.578	0.118	9.74065E-64	uM2	CSTA
1.56526E-67	1.070941142	0.667	0.176	4.43048E-63	uM2	RAB32
8.5892E-67	1.100979096	0.727	0.218	2.43117E-62	uM2	SCPEP1
1.31098E-66	1.259926155	0.847	0.339	3.71073E-62	uM2	CTSA
4.62568E-66	1.217671889	0.715	0.199	1.3093E-61	uM2	MAF
4.96137E-66	1.071339702	0.438	0.068	1.40432E-61	uM2	CYP27A1
6.25533E-66	1.17358124	0.996	0.796	1.77057E-61	uM2	CYBA
3.80324E-65	0.98719026	0.454	0.077	1.07651E-60	uM2	PKIB
4.58604E-65	1.085101943	0.671	0.193	1.29808E-60	uM2	HEXB
1.16598E-64	1.178185812	1	0.669	3.30031E-60	uM2	FCER1G
2.53429E-64	0.793415311	0.558	0.114	7.17332E-60	uM2	NCF2
3.05278E-64	1.103416893	0.984	0.663	8.6409E-60	uM2	RAC1
6.46457E-64	1.191584791	0.739	0.212	1.8298E-59	uM2	PLAUR
7.71961E-64	1.079078079	0.932	0.414	2.18503E-59	uM2	BRI3
1.16236E-63	2.224352258	0.458	0.086	3.29005E-59	uM2	CXCL3
1.6273E-63	1.158438589	0.791	0.247	4.60607E-59	uM2	CTSH
2.40436E-63	0.909509395	0.586	0.139	6.80553E-59	uM2	THEMIS2
4.54782E-63	0.854847125	0.554	0.12	1.28726E-58	uM2	ADAM28
6.62101E-63	1.141744293	0.743	0.251	1.87408E-58	uM2	AKR1B1
2.51337E-62	0.8213578	0.578	0.13	7.11411E-58	uM2	NCF4
1.20862E-61	1.37175597	0.859	0.384	3.42099E-57	uM2	GLUL
2.04349E-61	1.155669227	0.663	0.188	5.78409E-57	uM2	TIMP2
3.34064E-61	1.491078183	0.884	0.382	9.45568E-57	uM2	TIMP1

5.41739E-61	1.147642887	0.932	0.513	1.53339E-56	uM2	AP2S1
7.82716E-61	1.128228815	0.751	0.259	2.21548E-56	uM2	PPT1
1.2141E-60	1.068162715	0.643	0.172	3.4365E-56	uM2	FAM26F
1.71437E-60	0.804678499	0.498	0.1	4.85253E-56	uM2	CSF2RA
2.21537E-60	1.478614686	0.847	0.351	6.27061E-56	uM2	CD9
4.35247E-60	1.103008123	0.767	0.259	1.23197E-55	uM2	CXCL8
7.19097E-60	1.138386042	0.743	0.265	2.03541E-55	uM2	HEXA
3.93474E-58	0.697890439	0.892	0.292	1.11373E-53	uM2	LST1
4.2615E-58	0.887869072	0.691	0.194	1.20622E-53	uM2	CCDC88A
1.27213E-57	0.724296144	0.442	0.082	3.60075E-53	uM2	TMEM106A
2.26186E-57	0.946700749	0.566	0.14	6.40218E-53	uM2	IDH1
4.19824E-57	0.943016005	0.45	0.083	1.18831E-52	uM2	MMP11
9.49774E-57	0.705831818	0.41	0.071	2.68834E-52	uM2	RHOBTB3
1.60218E-56	0.866367401	0.51	0.118	4.53498E-52	uM2	GNS
6.24932E-56	1.453965936	0.944	0.494	1.76887E-51	uM2	CCL3
8.48075E-56	0.808003593	0.442	0.088	2.40048E-51	uM2	ADAM9
1.57176E-55	1.034504329	0.618	0.171	4.44886E-51	uM2	CD84
2.59539E-55	0.772693697	0.502	0.11	7.34627E-51	uM2	GM2A
2.94158E-55	1.076490434	0.94	0.522	8.32613E-51	uM2	ATP6V0B
5.28637E-55	0.867554855	0.622	0.178	1.49631E-50	uM2	MKNK1
1.41007E-54	0.725007036	0.61	0.154	3.9912E-50	uM2	CLEC7A
4.11334E-54	1.215481875	0.426	0.084	1.16428E-49	uM2	FCGR2B
6.8488E-54	0.676353258	0.454	0.09	1.93855E-49	uM2	LPCAT2
7.55955E-54	0.766644319	0.43	0.083	2.13973E-49	uM2	NAIP
9.0042E-54	0.698237333	0.43	0.084	2.54864E-49	uM2	DRAM1
1.51897E-53	1.230494045	1	0.937	4.29945E-49	uM2	SRGN
1.60106E-53	0.777388695	0.474	0.106	4.53181E-49	uM2	RAB34
1.81765E-53	0.786995296	0.586	0.147	5.14486E-49	uM2	POU2F2
4.62499E-53	0.717260822	0.434	0.085	1.3091E-48	uM2	CLEC4A
6.25085E-53	0.732119967	0.454	0.095	1.7693E-48	uM2	EPB41L3
6.30333E-53	0.817577466	0.683	0.214	1.78416E-48	uM2	TNFRSF1A
1.1007E-52	1.045825938	0.952	0.575	3.11554E-48	uM2	ATP6V1F
1.13245E-51	0.643104899	0.422	0.081	3.2054E-47	uM2	MMP14
3.18349E-51	0.965566934	0.651	0.215	9.01087E-47	uM2	UNC93B1
6.17049E-51	0.775548945	1	0.933	1.74656E-46	uM2	OAZ1
6.27546E-51	1.789365116	0.739	0.303	1.77627E-46	uM2	CCL4L2
1.01173E-50	0.7754398	0.635	0.196	2.86369E-46	uM2	SPG21
1.06643E-50	0.685923206	0.438	0.092	3.01853E-46	uM2	CSF3R

1.24796E-50	1.364007603	0.799	0.359	3.53235E-46	uM2	RGS2
3.57175E-50	0.6226589	0.466	0.101	1.01098E-45	uM2	CD302
1.26676E-49	0.689371909	0.426	0.089	3.58557E-45	uM2	ODF3B
2.15744E-49	0.687941706	0.414	0.084	6.10663E-45	uM2	SCIMP
2.93119E-49	1.010227876	0.743	0.275	8.29675E-45	uM2	C1orf162
9.96148E-49	0.802162744	0.598	0.176	2.8196E-44	uM2	GALM
1.2162E-48	1.025155592	0.855	0.43	3.44245E-44	uM2	RHOG
1.58476E-48	0.965157362	0.799	0.328	4.48566E-44	uM2	TMEM14C
1.83724E-48	0.915920421	0.679	0.237	5.20031E-44	uM2	NAGK
2.4071E-48	0.968279657	0.562	0.16	6.81329E-44	uM2	OGFRL1
1.3473E-47	1.033630512	0.932	0.525	3.81353E-43	uM2	PRDX1
1.55571E-47	0.798829399	0.43	0.096	4.40343E-43	uM2	SLC31A2
2.26592E-47	1.011566478	0.904	0.485	6.41369E-43	uM2	PYCARD
3.27618E-47	0.650024497	0.442	0.098	9.27322E-43	uM2	LMO2
9.79068E-47	0.709273278	0.446	0.105	2.77125E-42	uM2	GNB4
1.74826E-46	0.866847463	0.707	0.267	4.94845E-42	uM2	SNX2
2.46818E-46	0.786601091	0.627	0.196	6.98617E-42	uM2	FRMD4B
9.18209E-46	0.709188329	0.546	0.145	2.59899E-41	uM2	TNFAIP2
1.81858E-45	0.61900205	0.41	0.091	5.14748E-41	uM2	RNF135
1.8861E-45	0.674065088	0.426	0.097	5.33861E-41	uM2	SLC43A3
4.74048E-45	0.761489495	0.651	0.213	1.34179E-40	uM2	SPINT2
5.38905E-45	0.896920582	0.811	0.357	1.52537E-40	uM2	MGAT1
9.91215E-45	0.82598953	0.426	0.1	2.80563E-40	uM2	CLEC11A
1.15123E-44	0.689285414	0.43	0.097	3.25855E-40	uM2	ENTPD1
1.28831E-44	0.860535079	0.815	0.363	3.64656E-40	uM2	CNPY3
5.32272E-44	0.644116769	0.434	0.102	1.50659E-39	uM2	RHBDF2
6.39713E-44	0.822923732	0.96	0.728	1.81071E-39	uM2	GPX4
1.15147E-43	1.117306654	0.839	0.412	3.25923E-39	uM2	IER3
1.75275E-43	1.035528956	0.454	0.117	4.96117E-39	uM2	HBEGF
2.50768E-43	0.98050172	0.896	0.499	7.09799E-39	uM2	GSTO1
4.938E-43	0.641652789	0.438	0.107	1.3977E-38	uM2	TNFAIP8L2
6.24262E-43	0.736822756	0.904	0.481	1.76697E-38	uM2	LAPTM4A
7.13479E-43	0.861130746	0.699	0.279	2.0195E-38	uM2	LAMP2
1.82997E-42	1.044289865	0.996	0.897	5.17972E-38	uM2	NEAT1
1.92861E-42	0.644957094	0.434	0.108	5.45892E-38	uM2	NAGA
2.44012E-42	1.095947652	0.876	0.465	6.90676E-38	uM2	CEBPD
5.38836E-42	0.814676829	0.699	0.256	1.52517E-37	uM2	PLSCR1
8.64638E-42	0.66968043	0.422	0.1	2.44736E-37	uM2	METTL7A

1.0531E-41	0.878677605	0.936	0.55	2.98079E-37	uM2	ITGB2
1.97067E-41	0.709298228	0.739	0.284	5.57797E-37	uM2	LYN
2.75847E-41	0.893425686	0.916	0.525	7.80784E-37	uM2	SDCBP
7.76907E-41	0.685971824	0.478	0.13	2.19903E-36	uM2	PLEKHO2
1.06007E-40	0.67721908	0.546	0.17	3.00054E-36	uM2	SH2B3
1.38762E-40	0.715554907	0.771	0.316	3.92765E-36	uM2	GSN
1.99505E-40	0.667635994	0.47	0.128	5.647E-36	uM2	SLC8A1
2.16519E-40	0.826763126	0.45	0.119	6.12858E-36	uM2	ANKH
4.89578E-40	0.722272755	0.586	0.196	1.38575E-35	uM2	FEZ2
5.90878E-40	0.743347176	0.992	0.684	1.67248E-35	uM2	ZFP36L1
8.46427E-40	0.805308953	0.659	0.241	2.39581E-35	uM2	RNF13
1.20926E-39	0.602611717	0.406	0.096	3.42282E-35	uM2	PLBD1
1.66472E-39	0.838193765	0.655	0.25	4.712E-35	uM2	NENF
1.96592E-39	1.186084439	0.502	0.158	5.56454E-35	uM2	EGR2
2.21905E-39	0.624364753	0.466	0.127	6.28102E-35	uM2	SCARB2
2.37606E-39	0.72922783	0.562	0.182	6.72544E-35	uM2	SMIM4
3.05163E-39	0.720729415	0.618	0.218	8.63764E-35	uM2	ATP6AP1
5.24513E-39	0.776248857	0.49	0.143	1.48463E-34	uM2	EPB41L2
1.01862E-38	0.836618938	0.478	0.139	2.8832E-34	uM2	RAB13
1.08613E-38	0.956095051	0.514	0.168	3.0743E-34	uM2	FUCA1
1.16043E-38	0.928125466	0.518	0.164	3.28459E-34	uM2	IGF1
1.40693E-38	0.728776237	0.442	0.114	3.98231E-34	uM2	IFI44L
6.62349E-38	0.757517981	0.406	0.1	1.87478E-33	uM2	CCND1
1.10249E-37	1.026637282	0.811	0.375	3.1206E-33	uM2	CD83
3.52992E-37	0.685939176	0.586	0.199	9.99143E-33	uM2	IL18
5.08587E-37	0.796236841	1	0.837	1.43956E-32	uM2	CD63
1.04857E-36	0.671997601	0.627	0.238	2.96797E-32	uM2	OAZ2
1.45775E-36	0.788621702	0.831	0.451	4.12616E-32	uM2	ATP6AP2
1.9698E-36	0.963950738	0.735	0.339	5.57551E-32	uM2	IFI6
9.92998E-36	1.03590473	0.635	0.257	2.81068E-31	uM2	LINC00936
1.30214E-35	0.766551089	0.498	0.167	3.68571E-31	uM2	AP1B1
1.42039E-35	0.670143497	0.659	0.255	4.02042E-31	uM2	SYNGR2
1.78481E-35	0.615955548	0.534	0.176	5.0519E-31	uM2	CRTAP
2.00888E-35	0.899460163	0.803	0.391	5.68613E-31	uM2	NAMPT
2.57206E-35	0.784985969	0.988	0.725	7.28021E-31	uM2	ATP6V0E1
2.73242E-35	0.748250643	0.743	0.327	7.73412E-31	uM2	ATOX1
3.28192E-35	0.739162472	0.888	0.541	9.28947E-31	uM2	CLTA
1.11525E-34	0.875419143	0.562	0.209	3.1567E-30	uM2	ICAM1

1.39301E-34	0.86404306	0.747	0.349	3.9429E-30	uM2	PTPRE
1.43222E-34	0.879000134	0.859	0.478	4.05391E-30	uM2	CEBPB
2.22272E-34	0.692698882	0.823	0.358	6.2914E-30	uM2	ZEB2
2.93589E-34	0.735227223	0.859	0.471	8.31004E-30	uM2	LAMTOR1
6.94174E-34	0.806610398	0.707	0.329	1.96486E-29	uM2	AKR1A1
1.08432E-33	0.668133616	0.502	0.166	3.06916E-29	uM2	CECR1
1.20779E-33	0.757111984	0.827	0.422	3.41866E-29	uM2	LAMP1
2.6579E-33	0.930100238	0.795	0.4	7.52318E-29	uM2	SLC16A3
2.7222E-33	0.823974557	0.462	0.143	7.70518E-29	uM2	CFD
5.77773E-33	0.646175468	0.418	0.121	1.63539E-28	uM2	GNPDA1
2.25016E-32	0.649334842	0.751	0.337	6.36908E-28	uM2	BNIP3L
4.4442E-32	0.817513631	0.51	0.174	1.25793E-27	uM2	OTUD1
1.34481E-31	1.19479989	0.819	0.473	3.80648E-27	uM2	ALOX5AP
1.48894E-31	1.157354211	0.498	0.181	4.21445E-27	uM2	CXCL2
2.42321E-31	0.651828375	0.462	0.153	6.8589E-27	uM2	PGD
2.5696E-31	0.601600005	0.675	0.285	7.27325E-27	uM2	CORO1B
3.09811E-31	0.667794899	0.892	0.488	8.76921E-27	uM2	ANXA5
6.05531E-31	0.767279411	0.727	0.34	1.71395E-26	uM2	ARHGAP18
1.38749E-30	0.684606415	0.59	0.239	3.92728E-26	uM2	BLVRA
2.81547E-30	0.71644	0.964	0.711	7.96919E-26	uM2	VAMP8
8.07666E-30	0.806406161	1	0.951	2.2861E-25	uM2	GAPDH
9.13459E-30	0.70442023	0.775	0.397	2.58555E-25	uM2	LAMTOR2
1.20345E-29	0.682588553	0.96	0.787	3.40636E-25	uM2	CALM2
1.29502E-29	0.740083458	0.606	0.256	3.66556E-25	uM2	EPSTI1
3.51106E-29	1.317017124	0.671	0.313	9.93806E-25	uM2	FABP5
4.11044E-29	0.643492256	0.647	0.281	1.16346E-24	uM2	PTTG1IP
4.36071E-29	0.612825226	0.679	0.295	1.2343E-24	uM2	ERGIC3
7.66011E-29	0.744897357	0.566	0.227	2.1682E-24	uM2	NFKBID
1.30876E-28	0.676221055	0.755	0.367	3.70444E-24	uM2	H2AFJ
1.98487E-28	0.636749425	0.406	0.129	5.61817E-24	uM2	FUOM
2.35843E-28	0.66559434	0.711	0.334	6.67554E-24	uM2	ARRB2
3.02368E-28	0.695767919	0.542	0.218	8.55854E-24	uM2	ITPR2
4.3404E-28	0.682179973	0.783	0.415	1.22855E-23	uM2	TMEM219
7.16981E-28	0.807893491	0.562	0.23	2.02942E-23	uM2	KLF4
1.31192E-27	0.647831024	0.667	0.294	3.71339E-23	uM2	C10orf54
2.98222E-27	0.856577222	0.884	0.59	8.44118E-23	uM2	PKM
4.17041E-27	0.651250905	0.45	0.157	1.18043E-22	uM2	ATF5
1.30923E-26	0.641307893	0.663	0.32	3.70579E-22	uM2	OS9

1.49512E-26	0.874480465	0.719	0.39	4.23193E-22	uM2	ATF3
1.51204E-26	0.720636165	0.482	0.175	4.27984E-22	uM2	C15orf48
2.24829E-26	0.661344619	0.635	0.283	6.36378E-22	uM2	IFNGR1
1.22048E-25	0.71218988	0.952	0.797	3.45458E-21	uM2	DUSP1
1.46145E-25	0.72751494	0.775	0.411	4.13665E-21	uM2	HIF1A
1.8288E-25	0.703330299	0.811	0.497	5.17643E-21	uM2	SNX6
3.14695E-25	0.653932155	0.791	0.46	8.90743E-21	uM2	DPP7
9.67228E-25	0.781262884	0.771	0.465	2.73774E-20	uM2	C6orf48
1.48431E-24	0.607841894	0.695	0.359	4.20134E-20	uM2	SSR1
1.86795E-24	0.666562726	0.594	0.279	5.28724E-20	uM2	ABI3
1.94347E-24	0.677142504	0.683	0.344	5.50098E-20	uM2	LAP3
2.28762E-24	0.620970558	0.956	0.785	6.47512E-20	uM2	ALDOA
5.131E-24	0.625108132	0.582	0.267	1.45233E-19	uM2	CASP1
1.36849E-23	0.610164592	0.53	0.227	3.87351E-19	uM2	OXA1L
2.13639E-23	0.601005073	0.542	0.236	6.04706E-19	uM2	ATP1B1
1.07626E-21	0.717473514	0.892	0.654	3.04637E-17	uM2	C4orf3
1.42573E-21	0.669350976	0.964	0.78	4.03552E-17	uM2	TPI1
2.02801E-21	0.689289409	0.831	0.533	5.74029E-17	uM2	EGR1
1.29092E-20	0.62116225	0.755	0.454	3.65395E-16	uM2	RBPJ
2.48784E-20	0.649134792	0.502	0.224	7.04183E-16	uM2	ACP5
3.3806E-20	0.605932886	0.618	0.32	9.56878E-16	uM2	CLTC
7.93021E-20	0.641391468	0.888	0.664	2.24465E-15	uM2	RGS1
3.94817E-19	0.631744309	0.622	0.336	1.11753E-14	uM2	CD59
4.1459E-18	0.693335133	0.835	0.575	1.1735E-13	uM2	HERPUD1
4.78963E-12	0.785176612	0.542	0.331	1.3557E-07	uM2	PRDM1
2.29731E-10	0.698448586	0.699	0.487	6.50255E-06	uM2	ISG15
9.3514E-185	2.344331812	0.621	0.042	2.6469E-180	CD8_T	CD3G
8.4008E-178	2.634425489	0.702	0.091	2.3778E-173	CD8_T	CD3D
8.4567E-140	2.634850864	0.736	0.193	2.3937E-135	CD8_T	TRAC
2.262E-123	1.679080743	0.575	0.086	6.4027E-119	CD8_T	SPOCK2
8.8915E-109	1.836500723	0.834	0.318	2.5167E-104	CD8_T	IL32
9.7328E-104	1.592822878	0.418	0.042	2.7549E-99	CD8_T	BCL11B
8.7635E-99	2.043308616	0.754	0.269	2.48051E-94	CD8_T	LTB
1.12527E-85	1.427832187	0.625	0.183	3.18508E-81	CD8_T	LCK
8.91044E-83	2.561287914	0.505	0.119	2.5221E-78	CD8_T	IL7R
5.39686E-82	1.795315297	0.765	0.358	1.52758E-77	CD8_T	CD2
2.32638E-72	1.347042053	0.512	0.134	6.58481E-68	CD8_T	LBH
3.16471E-72	0.968219577	0.967	0.844	8.95771E-68	CD8_T	PTPRC

1.9993E-71	1.288186743	0.804	0.401	5.659E-67	CD8_T	CD3E
7.42705E-68	1.533823153	0.569	0.197	2.10223E-63	CD8_T	SYNE2
1.39976E-63	1.629969799	0.752	0.414	3.96203E-59	CD8_T	TRBC2
2.34352E-59	1.554060398	0.538	0.219	6.63334E-55	CD8_T	CLEC2D
5.27265E-57	1.16444255	0.712	0.362	1.49242E-52	CD8_T	ETS1
5.5836E-54	1.135597983	0.869	0.61	1.58044E-49	CD8_T	CD52
1.01409E-51	1.368611871	0.582	0.252	2.87039E-47	CD8_T	RORA
6.78818E-51	1.387949631	0.771	0.582	1.92139E-46	CD8_T	ANKRD12
5.17526E-46	1.22826858	0.569	0.264	1.46486E-41	CD8_T	TUBA4A
1.84909E-43	1.432717732	0.532	0.252	5.23384E-39	CD8_T	AP000769.1
3.81868E-43	1.122959959	0.492	0.205	1.08088E-38	CD8_T	LAT
7.70641E-43	1.028664444	0.826	0.674	2.1813E-38	CD8_T	MBNL1
1.26497E-42	1.265056776	0.484	0.203	3.58049E-38	CD8_T	RP11-138A9.2
1.86894E-42	1.161218121	0.658	0.423	5.29002E-38	CD8_T	EML4
1.95177E-42	1.142099719	0.638	0.399	5.52449E-38	CD8_T	PPP2R5C
9.07913E-42	1.27131095	0.479	0.209	2.56985E-37	CD8_T	BCL2
1.07854E-41	1.041906523	0.752	0.592	3.0528E-37	CD8_T	AES
2.24739E-40	1.107493669	0.61	0.332	6.36124E-36	CD8_T	FAM107B
6.18644E-39	1.118112841	0.414	0.161	1.75107E-34	CD8_T	RCAN3
1.16304E-38	0.985655143	0.678	0.468	3.29199E-34	CD8_T	CDC42SE2
3.08597E-38	1.132544409	0.49	0.233	8.73484E-34	CD8_T	LINC-PINT
1.36858E-37	1.138313303	0.725	0.495	3.87378E-33	CD8_T	CH507-513H4.5
2.31572E-37	0.819048097	0.963	0.885	6.55466E-33	CD8_T	JUND
2.58051E-37	1.14552933	0.706	0.507	7.30414E-33	CD8_T	CD48
1.0074E-36	1.251784748	0.606	0.36	2.85146E-32	CD8_T	AHNAK
3.45134E-35	1.099127828	0.423	0.172	9.76903E-31	CD8_T	TCF7
7.55919E-35	0.787950974	0.904	0.81	2.13963E-30	CD8_T	SRSF7
3.57411E-34	0.981687849	0.427	0.18	1.01165E-29	CD8_T	PIK3IP1
1.11522E-33	0.886864245	0.81	0.744	3.15664E-29	CD8_T	SARAF
2.08455E-33	1.050886947	0.741	0.588	5.90032E-29	CD8_T	RNF213
2.8819E-32	0.90329805	0.68	0.437	8.15722E-28	CD8_T	ARL4C
3.87271E-32	1.107016458	0.601	0.398	1.09617E-27	CD8_T	ZC3HAV1
1.1693E-31	1.459371076	0.584	0.329	3.3097E-27	CD8_T	TRBC1
1.171E-31	0.778507005	0.889	0.825	3.31451E-27	CD8_T	FUS
3.18105E-31	0.864538836	0.765	0.609	9.00396E-27	CD8_T	STK4
3.58305E-31	0.824622504	0.802	0.643	1.01418E-26	CD8_T	STK17B
3.98018E-31	1.042402919	0.664	0.483	1.12659E-26	CD8_T	NKTR
4.81551E-31	0.945585459	0.547	0.293	1.36303E-26	CD8_T	GOLGA8B

7.52802E-31	0.61561617	0.98	0.994	2.13081E-26	CD8_T	TPT1
7.57189E-31	0.924267521	0.54	0.302	2.14322E-26	CD8_T	45901
2.68883E-30	0.783501449	0.776	0.697	7.61073E-26	CD8_T	DDX24
2.31923E-29	1.04928096	0.479	0.244	6.56458E-25	CD8_T	IKZF3
1.3524E-28	0.727098168	0.749	0.523	3.82796E-24	CD8_T	IL2RG
9.0809E-28	0.711102431	0.819	0.72	2.57035E-23	CD8_T	HNRNPH1
3.2411E-26	0.896565127	0.569	0.381	9.17392E-22	CD8_T	GLS
3.89227E-26	0.723237885	0.824	0.751	1.10171E-21	CD8_T	PRRC2C
4.80195E-26	0.952358986	0.59	0.408	1.35919E-21	CD8_T	SMCHD1
9.59513E-26	0.739602316	0.719	0.614	2.7159E-21	CD8_T	SF1
1.04341E-25	0.98055812	0.932	0.859	2.95338E-21	CD8_T	JUN
1.19637E-25	0.976636194	0.649	0.507	3.38633E-21	CD8_T	AAK1
2.78194E-25	0.775543788	0.98	0.998	7.87427E-21	CD8_T	EEF1A1
5.72942E-24	0.741174849	0.599	0.403	1.62171E-19	CD8_T	FYN
5.8681E-24	0.901794247	0.455	0.27	1.66096E-19	CD8_T	ARHGAP15
7.37673E-24	0.887428387	0.795	0.731	2.08798E-19	CD8_T	DDX3X
7.76465E-24	0.89726645	0.588	0.417	2.19778E-19	CD8_T	CH507-513H4.6
8.16316E-24	0.737322759	0.728	0.514	2.31058E-19	CD8_T	ACAP1
2.8653E-23	1.131350536	0.595	0.441	8.11023E-19	CD8_T	KIAA1551
3.87786E-23	0.762410175	0.662	0.531	1.09763E-18	CD8_T	FNBP1
4.43145E-23	0.751196375	0.442	0.226	1.25432E-18	CD8_T	ISG20
8.59627E-23	0.948483743	0.466	0.28	2.43318E-18	CD8_T	CNOT6L
9.72065E-22	0.785236187	0.754	0.579	2.75143E-17	CD8_T	CD69
1.52757E-21	0.793081984	0.477	0.278	4.32377E-17	CD8_T	PTPN22
1.77005E-21	0.900152244	0.453	0.275	5.01013E-17	CD8_T	GNG2
1.77114E-21	0.928361794	0.815	0.727	5.0132E-17	CD8_T	TXNIP
2.03756E-21	0.815106057	0.503	0.306	5.7673E-17	CD8_T	GOLGA8A
3.44262E-21	0.858105175	0.462	0.287	9.74435E-17	CD8_T	TTC39C
5.25603E-21	0.832088119	0.617	0.481	1.48772E-16	CD8_T	CYTIP
1.15722E-20	0.972247655	0.499	0.33	3.27551E-16	CD8_T	KMT2A
1.49266E-20	0.844757524	0.41	0.226	4.22498E-16	CD8_T	OXNAD1
1.66377E-20	0.759326906	0.667	0.555	4.7093E-16	CD8_T	ARID4B
3.11176E-20	0.723053374	0.745	0.666	8.80783E-16	CD8_T	N4BP2L2
5.92903E-20	0.610908646	0.693	0.523	1.67821E-15	CD8_T	PDCD4
7.17972E-20	0.84878835	0.407	0.234	2.03222E-15	CD8_T	ODF2L
3.2267E-19	0.692476705	0.675	0.512	9.13319E-15	CD8_T	CCL5
3.94375E-19	0.816566388	0.595	0.484	1.11628E-14	CD8_T	BPTF
4.77425E-19	0.808163917	0.575	0.457	1.35135E-14	CD8_T	LEPROTL1

6.12664E-19	0.785885578	0.564	0.395	1.73415E-14	CD8_T	SLFN5
8.03463E-19	0.845063729	0.61	0.471	2.2742E-14	CD8_T	PPP1R10
1.11136E-18	0.762957335	0.656	0.531	3.14571E-14	CD8_T	SLC38A2
1.14779E-18	0.678031619	0.686	0.555	3.24881E-14	CD8_T	45906
1.15601E-18	1.102684141	0.425	0.257	3.27208E-14	CD8_T	TSPYL2
1.88534E-18	0.609524893	0.743	0.675	5.33647E-14	CD8_T	ARGLU1
5.51014E-18	0.706159515	0.405	0.229	1.55964E-13	CD8_T	RASGRP1
1.10564E-17	0.602683253	0.519	0.353	3.12951E-13	CD8_T	OCIAD2
1.24068E-17	0.764191301	0.447	0.292	3.51174E-13	CD8_T	SPTAN1
1.82651E-17	0.720791626	0.673	0.6	5.16995E-13	CD8_T	GPBP1
2.12766E-17	0.996513244	0.527	0.394	6.02233E-13	CD8_T	ATM
6.21522E-17	0.795474817	0.521	0.364	1.75922E-12	CD8_T	RHOH
8.02755E-17	0.785566321	0.49	0.334	2.2722E-12	CD8_T	TLE4
9.46346E-17	0.764475922	0.619	0.511	2.67863E-12	CD8_T	ANKRD11
2.18529E-16	0.676158177	0.741	0.73	6.18546E-12	CD8_T	SFPQ
5.94105E-16	0.739073317	0.651	0.559	1.68162E-11	CD8_T	MACF1
1.113E-15	0.623919159	0.908	0.877	3.15035E-11	CD8_T	JUNB
1.5471E-15	0.720318359	0.542	0.431	4.37908E-11	CD8_T	DDX6
1.7168E-15	0.794820375	0.427	0.295	4.8594E-11	CD8_T	ITGA4
2.01397E-15	0.704097429	0.505	0.377	5.70054E-11	CD8_T	EMB
2.17224E-15	0.81070242	0.453	0.306	6.14852E-11	CD8_T	OGT
3.28461E-15	1.114461603	0.612	0.546	9.29708E-11	CD8_T	EZR
3.38138E-15	0.696423309	0.436	0.289	9.57098E-11	CD8_T	PARP8
6.60085E-15	0.720217344	0.501	0.352	1.86837E-10	CD8_T	TBC1D10C
7.3603E-15	0.693033114	0.59	0.499	2.08333E-10	CD8_T	PPP1R2
8.61362E-15	0.663667935	0.508	0.356	2.43809E-10	CD8_T	SLC38A1
1.0066E-14	1.002102601	0.584	0.484	2.84918E-10	CD8_T	GIMAP7
1.81511E-14	0.735147299	0.861	0.855	5.13767E-10	CD8_T	S100A4
2.22596E-14	0.629456554	0.58	0.491	6.30059E-10	CD8_T	TERF2IP
4.66082E-14	0.854372613	0.481	0.366	1.31924E-09	CD8_T	PCSK7
9.96895E-14	0.608007268	0.63	0.552	2.82171E-09	CD8_T	MYH9
1.32312E-13	0.693650975	0.619	0.547	3.74508E-09	CD8_T	ATRX
1.4712E-13	0.764744028	0.547	0.451	4.16422E-09	CD8_T	TNRC6B
1.81308E-13	0.712064291	0.521	0.429	5.13191E-09	CD8_T	WHSC1L1
7.07392E-13	0.753212519	0.56	0.482	2.00227E-08	CD8_T	G3BP2
1.32838E-12	0.722838032	0.521	0.438	3.75999E-08	CD8_T	USP15
1.71123E-12	0.723739168	0.601	0.458	4.84364E-08	CD8_T	CXCR4
3.53544E-12	0.675090605	0.438	0.311	1.00071E-07	CD8_T	PDE7A

4.63897E-12	0.638582353	0.431	0.323	1.31306E-07	CD8_T	DIAPH1
5.13405E-12	0.608097878	0.431	0.304	1.45319E-07	CD8_T	OPTN
1.28933E-11	0.696445004	0.571	0.489	3.64944E-07	CD8_T	SLC2A3
1.32459E-11	0.607940755	0.54	0.434	3.74926E-07	CD8_T	CYLD
1.76532E-11	0.606942863	0.525	0.428	4.99675E-07	CD8_T	45909
1.84704E-11	0.622922832	0.46	0.354	5.22804E-07	CD8_T	MGEA5
1.94664E-11	0.653105714	0.56	0.487	5.50997E-07	CD8_T	HLA-F
3.7708E-11	0.700641307	0.575	0.514	1.06732E-06	CD8_T	AMD1
4.23901E-11	0.65020841	0.63	0.575	1.19985E-06	CD8_T	YPEL5
6.25782E-11	0.766024272	0.516	0.424	1.77128E-06	CD8_T	CITED2
6.4694E-11	0.727975913	0.414	0.301	1.83116E-06	CD8_T	BIRC3
9.37805E-11	0.738878913	0.481	0.389	2.65446E-06	CD8_T	ASH1L
1.09764E-10	0.692267205	0.49	0.399	3.10686E-06	CD8_T	FOXP1
1.30012E-10	0.610777541	0.44	0.32	3.67999E-06	CD8_T	RBL2
6.13789E-10	0.666498435	0.51	0.438	1.73733E-05	CD8_T	BOD1L1
1.14321E-09	0.72929178	0.44	0.354	3.23585E-05	CD8_T	ANKRD44
1.18589E-09	0.686031343	0.512	0.431	3.35666E-05	CD8_T	CH507-513H4.4
1.25916E-09	0.662452223	0.471	0.394	3.56406E-05	CD8_T	GCC2
2.85181E-09	0.620319301	0.527	0.449	8.07204E-05	CD8_T	IDS
2.95874E-09	0.67291812	0.442	0.349	8.37471E-05	CD8_T	CH507-513H4.3
6.07568E-09	0.605718216	0.41	0.309	0.000171972	CD8_T	RNF19A
9.14084E-09	0.648358394	0.553	0.505	0.000258732	CD8_T	YME1L1
9.31194E-09	0.687659379	0.495	0.422	0.000263574	CD8_T	TRAF3IP3
1.02356E-08	0.878346679	0.488	0.412	0.000289718	CD8_T	INTS6
1.93172E-08	0.633405539	0.505	0.443	0.000546773	CD8_T	IFRD1
3.22314E-08	0.678930776	0.431	0.371	0.000912311	CD8_T	WNK1
3.37645E-08	0.700449166	0.462	0.408	0.000955705	CD8_T	NR3C1
4.40976E-08	0.674326625	0.495	0.439	0.001248181	CD8_T	IVNS1ABP
6.84707E-08	0.606064056	0.49	0.43	0.001938064	CD8_T	NUFIP2
1.5045E-07	0.808144198	0.405	0.341	0.0042585	CD8_T	NABP1
2.20875E-07	0.603624457	0.449	0.397	0.006251877	CD8_T	FNBP4
5.49744E-07	0.724726834	0.684	0.692	0.015560511	CD8_T	TNFAIP3
9.6136E-07	0.677196554	0.447	0.401	0.027211291	CD8_T	IKZF1
1.74787E-06	0.640862638	0.444	0.401	0.049473585	CD8_T	NIPBL
8.42413E-06	0.638293088	0.468	0.439	0.23844489	CD8_T	POLR2J3
9.71696E-06	0.676025355	0.434	0.397	0.275038578	CD8_T	LINC00152
1.1472E-05	0.694471489	0.486	0.466	0.324715602	CD8_T	CNOT2
1.84602E-05	0.610354599	0.403	0.351	0.522517243	CD8_T	NEU1

3.15956E-05	0.626756605	0.464	0.443	0.894314285	CD8_T	GOLGB1
0.000167607	0.677815211	0.42	0.402	1	CD8_T	GIMAP4
0.001676658	0.712638848	0.451	0.449	1	CD8_T	CREM
1.956E-172	4.435201917	0.889	0.197	5.5365E-168	DCs	LYZ
6.6131E-169	2.525623912	0.954	0.214	1.8718E-164	DCs	AIF1
3.7069E-151	1.962389388	0.475	0.019	1.0492E-146	DCs	LGALS2
9.5381E-151	2.611703615	0.99	0.29	2.6998E-146	DCs	HLA-DRA
1.0623E-148	3.275872138	0.475	0.021	3.0069E-144	DCs	FCN1
1.8203E-145	2.744426797	0.97	0.303	5.1525E-141	DCs	HLA-DRB1
1.5426E-135	2.83094462	0.974	0.466	4.3665E-131	DCs	CST3
1.1889E-133	2.096651615	0.551	0.053	3.3651E-129	DCs	CLEC10A
1.9463E-133	3.498841058	0.508	0.042	5.5089E-129	DCs	RP11-1143G9.4
3.1463E-133	2.336760066	0.977	0.301	8.9055E-129	DCs	HLA-DPA1
3.9588E-133	2.084274621	0.918	0.268	1.1205E-128	DCs	LST1
9.7538E-128	2.596607268	0.82	0.192	2.7608E-123	DCs	HLA-DQA1
2.8155E-127	1.956077441	0.698	0.124	7.9693E-123	DCs	CLEC7A
4.3491E-124	2.317503041	0.957	0.304	1.231E-119	DCs	HLA-DPB1
1.4449E-123	2.703745181	0.862	0.227	4.0898E-119	DCs	HLA-DQB1
6.7105E-120	3.366674416	0.813	0.234	1.8994E-115	DCs	CXCL8
1.0593E-114	1.910412425	0.787	0.167	2.9983E-110	DCs	MS4A6A
1.0066E-110	2.545351881	0.711	0.143	2.8492E-106	DCs	IL1B
5.673E-110	2.129534397	0.987	0.531	1.6057E-105	DCs	CD74
6.6081E-109	2.366290535	0.777	0.212	1.8704E-104	DCs	BCL2A1
8.8486E-107	1.26267969	1	0.99	2.5046E-102	DCs	TMSB10
3.0219E-105	2.04987744	0.659	0.137	8.5534E-101	DCs	MNDA
3.743E-104	1.62867813	0.593	0.101	1.0594E-99	DCs	CSTA
4.9862E-102	1.470165089	0.754	0.164	1.41134E-97	DCs	SPI1
1.2478E-99	1.56230945	0.731	0.166	3.53199E-95	DCs	FGL2
1.87132E-98	1.832215737	0.636	0.133	5.29676E-94	DCs	CPVL
6.77909E-97	1.129999519	0.502	0.07	1.91882E-92	DCs	ZNF385A
1.39646E-96	1.664132502	0.633	0.128	3.95268E-92	DCs	JAML
7.93345E-94	2.61366771	0.58	0.106	2.24556E-89	DCs	G0S2
3.00708E-89	2.139814209	0.413	0.044	8.51154E-85	DCs	EREG
3.69714E-89	1.706270074	0.708	0.194	1.04648E-84	DCs	KLF4
1.9876E-87	1.002397492	0.403	0.042	5.62589E-83	DCs	GAPT
5.05997E-86	2.545540246	0.889	0.478	1.43222E-81	DCs	SOD2
1.05721E-85	1.353529195	0.544	0.103	2.99245E-81	DCs	ALDH2
3.21749E-85	1.609783459	0.698	0.175	9.10711E-81	DCs	CYBB

5.3596E-84	1.559035345	0.803	0.253	1.51703E-79	DCs	HLA-DMA
2.14968E-83	1.530744586	0.652	0.154	6.08468E-79	DCs	PHACTR1
2.95356E-82	1.49403505	0.603	0.129	8.36005E-78	DCs	IFI30
3.71294E-81	2.32137732	0.639	0.172	1.05095E-76	DCs	HLA-DRB5
1.4028E-80	1.726704167	0.711	0.199	3.97063E-76	DCs	PLAUR
3.96891E-80	1.338567995	0.97	0.519	1.1234E-75	DCs	GPX1
2.07732E-79	4.157553702	0.407	0.055	5.87986E-75	DCs	S100A8
4.71233E-79	2.439828474	0.764	0.3	1.33383E-74	DCs	GPR183
1.782E-78	1.621015892	0.531	0.11	5.04395E-74	DCs	SERPINA1
2.89018E-76	1.196834156	0.984	0.801	8.18065E-72	DCs	S100A11
7.04563E-76	1.156930131	0.692	0.17	1.99426E-71	DCs	IGSF6
1.31429E-75	1.492187847	0.984	0.718	3.72008E-71	DCs	SAT1
3.6311E-74	0.917160833	0.446	0.072	1.02778E-69	DCs	CLEC4A
6.30089E-74	1.147248379	0.482	0.09	1.78347E-69	DCs	CSF2RA
8.30142E-73	2.243758858	0.593	0.154	2.34972E-68	DCs	CXCL2
3.70061E-72	1.656461092	0.826	0.374	1.04746E-67	DCs	NAMPT
1.0564E-70	4.139357063	0.495	0.11	2.99014E-66	DCs	S100A9
5.9051E-70	1.409416013	0.426	0.069	1.67144E-65	DCs	OLR1
1.13652E-68	1.101089095	0.466	0.09	3.21693E-64	DCs	CD302
1.62383E-68	1.724916661	0.734	0.27	4.59626E-64	DCs	SGK1
1.95147E-68	1.265266037	0.502	0.111	5.52363E-64	DCs	DSE
3.48434E-68	0.683053584	0.997	0.959	9.86241E-64	DCs	FTL
9.1984E-67	1.193983717	0.554	0.142	2.60361E-62	DCs	PAK1
1.90927E-66	1.180835483	1	0.981	5.4042E-62	DCs	FTH1
5.95827E-66	1.019585917	0.807	0.266	1.68649E-61	DCs	GRN
7.0978E-66	1.273451956	0.489	0.109	2.00903E-61	DCs	TRIB1
8.39669E-65	1.057354484	0.502	0.111	2.37668E-60	DCs	HCK
9.84364E-65	2.02060816	0.81	0.404	2.78624E-60	DCs	IER3
2.71612E-64	1.606422536	0.561	0.154	7.68797E-60	DCs	OTUD1
1.888E-63	1.632347648	0.593	0.172	5.344E-59	DCs	BASP1
4.23295E-63	1.220070528	0.718	0.243	1.19814E-58	DCs	CTSH
9.10283E-63	1.20091025	0.826	0.389	2.57656E-58	DCs	CTSZ
9.30952E-62	1.130520639	0.892	0.423	2.63506E-57	DCs	NPC2
1.29179E-61	1.547508626	0.79	0.365	3.6564E-57	DCs	CD83
1.54506E-61	0.961281355	0.426	0.083	4.37328E-57	DCs	CSF3R
2.82683E-61	1.803217261	0.767	0.392	8.00133E-57	DCs	PLEK
3.46621E-61	1.480060949	0.416	0.08	9.81111E-57	DCs	PHLDA2
4.95592E-61	1.235271598	0.63	0.202	1.40277E-56	DCs	SPINT2

8.41643E-61	1.066139019	0.711	0.224	2.38227E-56	DCs	HLA-DMB
1.13526E-58	0.945973774	0.416	0.084	3.21336E-54	DCs	PLBD1
1.71329E-57	1.377799295	0.511	0.138	4.84946E-53	DCs	TNFAIP2
9.13805E-57	1.577021525	0.61	0.224	2.58653E-52	DCs	PPIF
1.34389E-56	1.229185933	0.836	0.485	3.80387E-52	DCs	ANXA5
3.14241E-56	0.968267173	0.475	0.114	8.89459E-52	DCs	NCF2
3.24654E-56	1.396104037	0.731	0.271	9.18932E-52	DCs	MARCKS
8.0281E-56	1.170432903	0.711	0.265	2.27235E-51	DCs	C1orf162
8.86171E-56	0.913412337	0.475	0.116	2.50831E-51	DCs	SLC8A1
1.24194E-55	1.192098652	0.564	0.171	3.51531E-51	DCs	FAM26F
6.91669E-55	1.127370355	0.551	0.154	1.95777E-50	DCs	KCTD12
8.96241E-55	1.526574995	0.833	0.496	2.53681E-50	DCs	CTSS
1.38471E-54	1.115350881	0.672	0.246	3.91941E-50	DCs	YBX3
8.83362E-54	1.16961785	0.439	0.1	2.50035E-49	DCs	FBP1
4.22291E-53	0.903593448	0.974	0.793	1.19529E-48	DCs	CYBA
6.32367E-53	1.028298055	0.643	0.232	1.78991E-48	DCs	CDKN1A
1.21198E-52	1.100602954	0.43	0.1	3.43052E-48	DCs	VEGFA
4.66189E-52	1.45764183	0.711	0.336	1.31955E-47	DCs	AP1S2
3.35271E-51	1.20489568	0.58	0.2	9.48986E-47	DCs	ETS2
6.26844E-51	1.373865757	0.643	0.244	1.77428E-46	DCs	LINC00936
6.75095E-51	0.84422463	0.41	0.093	1.91086E-46	DCs	LMO2
1.01818E-50	1.158339192	0.42	0.094	2.88196E-46	DCs	MRC1
1.16324E-50	1.479159493	0.511	0.146	3.29256E-46	DCs	HLA-DQA2
4.76023E-50	0.881034167	0.462	0.113	1.34738E-45	DCs	MPEG1
1.60879E-49	0.74442077	0.702	0.239	4.55369E-45	DCs	FCGRT
3.05064E-48	0.847052243	0.508	0.142	8.63483E-44	DCs	LY86
8.36032E-48	1.256683815	0.41	0.096	2.36639E-43	DCs	PTGS2
8.75993E-48	0.631844226	0.672	0.199	2.4795E-43	DCs	CD68
1.00007E-47	1.462372621	0.777	0.385	2.83071E-43	DCs	TIMP1
5.47523E-47	1.044109024	0.469	0.127	1.54976E-42	DCs	CD86
1.24522E-46	1.051615879	0.462	0.128	3.52459E-42	DCs	FNIP2
2.40884E-46	1.400910997	0.557	0.184	6.81824E-42	DCs	MAFB
2.28549E-43	1.30762154	0.797	0.477	6.46908E-39	DCs	CEBPB
3.72087E-43	0.973484993	0.511	0.169	1.05319E-38	DCs	DPYSL2
1.68758E-42	1.673475931	0.472	0.155	4.7767E-38	DCs	VCAN
2.02545E-42	0.964887709	0.498	0.158	5.73304E-38	DCs	OGFRL1
3.8732E-42	0.672596596	0.413	0.109	1.09631E-37	DCs	EMILIN2
6.84819E-42	1.101843815	0.931	0.75	1.93838E-37	DCs	S100A10

6.05344E-41	0.909813589	0.518	0.166	1.71342E-36	DCs	RAB31
2.53437E-39	1.183743724	0.934	0.832	7.17355E-35	DCs	S100A6
2.55974E-39	0.966702294	0.748	0.367	7.24535E-35	DCs	TYMP
4.19791E-39	0.881252966	0.551	0.202	1.18822E-34	DCs	CCDC88A
4.59415E-39	1.097863095	0.439	0.137	1.30038E-34	DCs	CFD
9.94088E-39	1.993586325	0.479	0.166	2.81377E-34	DCs	C15orf48
1.08319E-38	0.92569536	0.767	0.426	3.06597E-34	DCs	BRI3
8.41642E-37	0.717969884	0.508	0.165	2.38227E-32	DCs	RNASE6
1.16296E-36	0.912927515	0.508	0.177	3.29177E-32	DCs	IFNGR2
7.03071E-36	1.084372534	0.741	0.397	1.99004E-31	DCs	LGALS3
7.49972E-36	0.833221151	0.439	0.141	2.12279E-31	DCs	RASSF4
1.86213E-35	1.031912675	0.951	0.902	5.27077E-31	DCs	NEAT1
1.30574E-34	0.835237225	0.446	0.146	3.6959E-30	DCs	PLXDC2
1.75911E-34	0.611899601	0.505	0.172	4.97915E-30	DCs	MEF2C
2.05005E-34	1.05535566	0.643	0.322	5.80268E-30	DCs	CD55
3.17249E-34	0.750216218	0.479	0.154	8.97972E-30	DCs	FCGR2A
3.95612E-34	0.865707425	0.872	0.672	1.11978E-29	DCs	RAC1
4.43806E-34	0.952848957	0.646	0.326	1.25619E-29	DCs	QKI
1.02166E-33	0.888057983	0.734	0.377	2.89181E-29	DCs	ATF3
2.18372E-33	1.015923577	0.718	0.359	6.18103E-29	DCs	RGS2
6.57789E-33	1.047319067	0.662	0.371	1.86187E-28	DCs	ZEB2
1.35178E-32	1.625657478	0.544	0.239	3.82621E-28	DCs	CCL3L3
1.43667E-32	0.915554215	0.689	0.348	4.0665E-28	DCs	APLP2
2.8807E-32	1.223979317	0.489	0.185	8.15384E-28	DCs	PLAC8
3.47395E-32	0.788987452	0.489	0.191	9.83302E-28	DCs	RAB32
2.02315E-31	0.629597916	0.964	0.892	5.72652E-27	DCs	YBX1
5.53958E-31	0.759038854	0.436	0.146	1.56798E-26	DCs	TMEM176B
1.14612E-30	0.999343924	0.705	0.399	3.2441E-26	DCs	CHMP1B
5.67361E-30	0.919768857	0.689	0.421	1.60592E-25	DCs	SAMHD1
9.6688E-30	0.803459878	0.695	0.376	2.73675E-25	DCs	GLIPR1
2.52066E-29	0.767706695	0.59	0.272	7.13474E-25	DCs	PPT1
4.88879E-29	0.835596811	0.734	0.422	1.38377E-24	DCs	RGS10
7.33417E-29	0.795795655	0.787	0.535	2.07594E-24	DCs	ATP6V0B
1.43101E-28	0.70501428	0.607	0.276	4.05048E-24	DCs	IFNGR1
1.76121E-28	0.835497807	0.502	0.213	4.98509E-24	DCs	KLF10
2.22021E-28	0.843760923	0.649	0.354	6.28431E-24	DCs	PTPRE
1.5601E-27	1.358338852	0.561	0.28	4.41586E-23	DCs	PLIN2
7.73444E-27	1.12452804	0.708	0.458	2.18923E-22	DCs	YWHAH

3.27341E-26	0.621756468	0.567	0.258	9.2654E-22	DCs	AHR
3.36726E-26	0.742347049	0.659	0.356	9.53102E-22	DCs	PLEKHO1
1.54452E-25	0.820119363	0.748	0.499	4.37177E-21	DCs	PYCARD
1.61374E-25	0.735146183	0.872	0.719	4.5677E-21	DCs	VAMP8
2.42146E-25	1.021086095	0.43	0.185	6.85395E-21	DCs	MXD1
2.56323E-25	1.04724951	0.908	0.828	7.25522E-21	DCs	NFKBIA
3.34811E-25	0.751482823	0.856	0.628	9.47683E-21	DCs	ANXA2
8.28245E-25	1.112819692	0.548	0.272	2.34435E-20	DCs	SERPINB9
1.07785E-24	0.686783356	0.41	0.162	3.05085E-20	DCs	RIPK2
1.84676E-24	0.669513492	0.797	0.529	5.22726E-20	DCs	H2AFY
1.87148E-24	0.882010159	0.597	0.316	5.29723E-20	DCs	SOCS3
2.74072E-24	0.85719443	0.574	0.299	7.75761E-20	DCs	LYN
4.20012E-24	0.768770067	0.479	0.213	1.18884E-19	DCs	GPCPD1
1.38196E-23	0.817451508	0.761	0.522	3.91164E-19	DCs	ZFAND5
2.31112E-23	0.667705984	0.6	0.327	6.54162E-19	DCs	ATG3
4.22698E-23	0.7782368	0.593	0.322	1.19645E-18	DCs	ATP2B1
1.07353E-22	0.75373922	0.626	0.346	3.03863E-18	DCs	BNIP3L
1.36593E-22	0.696142519	0.872	0.678	3.86626E-18	DCs	GNG5
2.35319E-22	0.904566419	0.82	0.687	6.66069E-18	DCs	GADD45B
4.48598E-22	0.694751062	0.469	0.214	1.26976E-17	DCs	UBE2D1
1.235E-21	0.634737324	0.41	0.169	3.49566E-17	DCs	ATP6V1B2
1.26001E-21	1.033049337	0.557	0.29	3.56645E-17	DCs	NINJ1
3.60374E-21	0.984248307	0.705	0.489	1.02004E-16	DCs	PPA1
3.74059E-21	0.715827369	0.472	0.224	1.05877E-16	DCs	MGST2
7.78699E-21	1.058365195	0.597	0.332	2.20411E-16	DCs	GSN
8.05417E-21	0.61961789	0.469	0.221	2.27973E-16	DCs	PICALM
8.24693E-21	0.6259585	0.462	0.206	2.33429E-16	DCs	GRINA
1.0583E-20	0.948097897	0.711	0.488	2.99552E-16	DCs	NFKBIZ
1.2911E-20	0.608207371	0.554	0.286	3.65445E-16	DCs	PTTG1IP
3.02579E-20	0.77068063	0.823	0.642	8.56451E-16	DCs	EMP3
5.19364E-20	0.619411621	0.531	0.272	1.47006E-15	DCs	PLSCR1
1.55017E-19	0.942961532	0.462	0.228	4.38777E-15	DCs	INSIG1
1.5889E-19	0.805941272	0.492	0.24	4.49738E-15	DCs	SOX4
1.77885E-19	0.878768857	0.761	0.604	5.03504E-15	DCs	TSPO
7.05288E-19	0.639433411	0.728	0.456	1.99632E-14	DCs	HSBP1
7.65226E-19	0.632452533	0.866	0.702	2.16597E-14	DCs	COX7B
7.9345E-19	1.538328423	0.439	0.211	2.24586E-14	DCs	WFDC2
9.30968E-19	0.838006309	0.531	0.302	2.63511E-14	DCs	SPAG9

3.87461E-18	0.62803294	0.567	0.3	1.09671E-13	DCs	C10orf54
1.30948E-17	0.744796732	0.561	0.327	3.70649E-13	DCs	PDE4B
1.64481E-17	0.703920286	0.446	0.218	4.65563E-13	DCs	ICAM1
4.6606E-17	1.137721789	0.728	0.518	1.31918E-12	DCs	CCL3
1.22619E-16	0.683016009	0.823	0.731	3.47072E-12	DCs	PPP1R15A
1.25844E-16	0.754289745	0.613	0.391	3.56201E-12	DCs	NFKB1
1.46101E-16	0.631609923	0.711	0.495	4.13538E-12	DCs	GRB2
3.03786E-16	0.840446242	0.774	0.586	8.59866E-12	DCs	SNX3
4.06618E-16	0.646001902	0.659	0.435	1.15093E-11	DCs	IRF2BP2
5.04603E-16	0.737538873	0.646	0.438	1.42828E-11	DCs	TKT
9.91222E-16	0.732262634	0.793	0.658	2.80565E-11	DCs	CD44
1.27528E-15	0.643011203	0.761	0.542	3.60967E-11	DCs	PRDX1
1.69276E-15	0.601035252	0.721	0.517	4.79137E-11	DCs	SERPINB1
2.48788E-15	0.651704648	0.505	0.284	7.04194E-11	DCs	RILPL2
3.21659E-15	0.624255574	0.679	0.459	9.10455E-11	DCs	VMP1
4.33963E-15	0.608878789	0.58	0.342	1.22833E-10	DCs	ATOX1
5.82085E-15	0.902025606	0.679	0.486	1.64759E-10	DCs	ALOX5AP
6.18491E-15	0.690706158	0.757	0.619	1.75064E-10	DCs	MAP1LC3B
7.7226E-15	0.650986185	0.4	0.203	2.18588E-10	DCs	LTA4H
2.3718E-14	0.657251548	0.413	0.217	6.71339E-10	DCs	IL18
2.79175E-14	0.73890549	0.852	0.857	7.90205E-10	DCs	S100A4
2.70888E-12	0.68852223	0.466	0.289	7.66748E-08	DCs	MAP2K3
3.147E-12	1.132419308	0.859	0.728	8.90759E-08	DCs	TXN
7.55503E-12	0.878555917	0.518	0.328	2.13845E-07	DCs	CCL4L2
1.15404E-11	0.629238079	0.505	0.328	3.26652E-07	DCs	LMNA
1.73053E-11	0.630437207	0.643	0.451	4.89826E-07	DCs	MAFF
3.62259E-11	0.693563372	0.643	0.489	1.02537E-06	DCs	EIF4A3
4.4298E-11	0.608293643	0.607	0.429	1.25386E-06	DCs	HIF1A
4.63765E-11	0.600299009	0.613	0.446	1.31269E-06	DCs	TNFAIP8
1.62863E-10	0.680061747	0.672	0.54	4.60982E-06	DCs	CFLAR
2.01429E-10	0.764075192	0.472	0.311	5.70144E-06	DCs	EIF4E
4.82418E-09	0.653774796	0.498	0.323	0.000136548	DCs	IRF8
9.17568E-09	0.64317991	0.554	0.422	0.000259718	DCs	MAP3K8
3.14092E-08	0.684228674	0.652	0.48	0.000889037	DCs	MT2A
5.6705E-88	3.797569289	0.403	0.022	1.60504E-83	Mast cells	RGS5
5.3679E-86	4.125869964	0.538	0.053	1.51938E-81	Mast cells	ADIRF
2.45193E-64	3.972214642	0.479	0.059	6.94018E-60	Mast cells	IGFBP5
5.20088E-55	3.215945552	0.429	0.054	1.47211E-50	Mast cells	IGFBP6

3.73536E-51	3.65677351	0.622	0.148	1.05729E-46	Mast cells	SPARCL1
3.98926E-46	3.211211822	0.588	0.146	1.12916E-41	Mast cells	MYL9
2.15707E-44	4.214469335	0.605	0.165	6.10557E-40	Mast cells	TAGLN
1.80686E-40	3.284726058	0.622	0.201	5.11433E-36	Mast cells	CALD1
5.91324E-40	2.974801125	0.605	0.183	1.67374E-35	Mast cells	TPM2
2.07791E-37	2.60785604	0.479	0.111	5.88154E-33	Mast cells	TIMP3
2.01976E-34	3.342234215	0.504	0.138	5.71692E-30	Mast cells	ACTA2
9.89605E-34	3.008619843	0.445	0.106	2.80108E-29	Mast cells	MGP
1.40511E-30	2.802657651	0.462	0.126	3.97717E-26	Mast cells	C11orf96
6.62348E-29	3.237588076	0.756	0.454	1.87478E-24	Mast cells	IGFBP7
8.2667E-24	2.587214314	0.756	0.49	2.33989E-19	Mast cells	MT2A
1.41718E-20	2.023001223	0.513	0.211	4.01133E-16	Mast cells	SELM
9.03834E-19	1.736351417	0.79	0.613	2.5583E-14	Mast cells	PPP1CB
9.51695E-19	0.649191523	0.992	0.994	2.69377E-14	Mast cells	PTMA
1.75519E-18	1.120804686	0.95	0.956	4.96806E-14	Mast cells	UBB
3.32105E-18	2.075145362	0.412	0.155	9.40024E-14	Mast cells	TSC22D1
5.13257E-18	0.752532194	1	0.986	1.45277E-13	Mast cells	H3F3B
3.16796E-17	3.285116788	0.403	0.143	8.96692E-13	Mast cells	HES1
3.02259E-16	1.542541719	0.496	0.226	8.55543E-12	Mast cells	ARID5B
7.54602E-15	2.16574334	0.513	0.281	2.1359E-10	Mast cells	SPARC
8.41332E-15	1.664626312	0.731	0.627	2.38139E-10	Mast cells	IFITM3
9.45333E-15	1.711961307	0.664	0.525	2.67576E-10	Mast cells	LAPTM4A
1.17728E-13	1.021077006	0.824	0.807	3.33229E-09	Mast cells	CALM2
4.38521E-13	1.151937517	0.941	0.871	1.24123E-08	Mast cells	JUN
2.57117E-12	1.774117016	0.571	0.341	7.27769E-08	Mast cells	LMNA
2.64064E-12	2.201707353	0.622	0.479	7.47433E-08	Mast cells	DSTN
8.47219E-12	0.641037547	0.95	0.958	2.39805E-07	Mast cells	AC090498.1
1.34718E-11	1.212603312	0.756	0.725	3.81321E-07	Mast cells	MORF4L1
3.81848E-11	2.028245674	0.429	0.235	1.08082E-06	Mast cells	TPM1
1.51106E-10	1.481877335	0.42	0.232	4.27705E-06	Mast cells	IGFBP4
3.42558E-10	0.903763583	0.866	0.846	9.69611E-06	Mast cells	S100A6
8.9849E-10	1.087570269	0.756	0.741	2.54318E-05	Mast cells	EIF3E
1.01916E-09	0.763359884	0.924	0.882	2.88472E-05	Mast cells	JUNB
1.26266E-08	1.465475389	0.454	0.28	0.000357395	Mast cells	TCEAL4
2.60976E-08	1.696591599	0.664	0.61	0.000738691	Mast cells	TSC22D3
3.63722E-08	0.801369262	0.782	0.784	0.001029515	Mast cells	EIF4A2
4.33623E-08	0.922545288	0.807	0.835	0.00122737	Mast cells	SKP1
3.99683E-07	1.036787776	0.613	0.493	0.011313039	Mast cells	RGCC

9.21812E-07	0.653568114	0.798	0.859	0.026091879	Mast cells	EEF2
1.21493E-06	0.75367274	0.908	0.939	0.034388489	Mast cells	BTG1
2.40795E-06	0.722161384	0.958	0.905	0.068156977	Mast cells	FOS
4.84372E-06	0.810062188	0.739	0.783	0.137101553	Mast cells	CIRBP
7.43974E-06	1.194716011	0.613	0.575	0.210581972	Mast cells	RSL24D1
1.25449E-05	0.692735286	0.714	0.731	0.355083642	Mast cells	SEC61G
2.38661E-05	1.505215685	0.513	0.434	0.675530929	Mast cells	RHOB
3.08956E-05	1.406436897	0.521	0.445	0.874500359	Mast cells	CREM
0.000124411	0.664620191	0.765	0.743	1	Mast cells	PPP1R15A
0.00013117	0.769467037	0.874	0.85	1	Mast cells	ZFP36
0.000285656	0.768712368	0.546	0.487	1	Mast cells	CXCR4
0.000828541	0.875599065	0.613	0.585	1	Mast cells	YPEL5
0.001611443	1.286932764	0.613	0.567	1	Mast cells	EGR1
0.003489419	0.719810264	0.655	0.727	1	Mast cells	TRA2B
0.004738921	1.10652443	0.462	0.443	1	Mast cells	SYAP1
0.005472745	0.834836285	0.588	0.629	1	Mast cells	SEC62
0.005868616	0.899947851	0.429	0.405	1	Mast cells	SBDS
0.005969867	0.883707507	0.689	0.745	1	Mast cells	HNRNPH1
0.008025738	0.639039282	0.58	0.612	1	Mast cells	RABAC1
0.008668238	0.704977863	0.731	0.706	1	Mast cells	GADD45B
0.009600672	0.874526647	0.555	0.574	1	Mast cells	SYF2

Table S3 Correlational analysis of the intersecting genes between EOMES and the single-ce

Gene	Correlation
IL2RB	0.19473811
NKG7	0.179789183
KLRC2	0.152950556
CHST12	0.156720572
MCTP2	0.163353996
APOBEC3G	0.166121621
HCST	0.05751777
CMC1	0.075166345
ADGRG3	-0.017656789
CST7	0.141561374
GNPTAB	0.059835608
SYNGR1	0.080390635
EIF3G	0.169587393
SAMD3	0.216452128
KLRD1	0.143201981
DAPK2	0.056223478
DPF3	0.082380508
KIR2DL4	0.062183014
ARPC5L	0.251830191
MATK	0.158957496
CD247	0.13673603
CD7	0.069382547
EVL	0.128478543
PRF1	0.115472237
EPAS1	0.108203354
GFOD1	0.080401282
HOPX	0.063638012
ITGA1	0.134562847
GZMA	0.063431106
GZMB	0.130905696
CTSW	0.13246325
SH2D2A	0.086428029
NCAM1	0.091505305
FASLG	0.133080909
ORAI2	0.056600128
ITGAD	0.119845607

ITGAX	0.121008743
UBASH3B	0.002474679
ARHGEF1	0.153473379
TXK	0.182637624
SH2D1B	0.036464491
B3GNT7	0.141878528
SKAP1	0.105945106
CAPN12	0.026854139
TESC	0.122539059
ACTN4	0.180488016
FAM46C	0.145093053
AGTRAP	0.163877402
ZAP70	0.005379899
STARD3NL	0.115152376
SYNRG	0.207676701
TSPAN5	0.120427486
SEMA4D	0.176447977
NDFIP2	0.032172927
GZMH	0.149515777
COTL1	0.05396906
LINC00996	0.094717218
CXCR3	0.08631569
CASP3	0.103216791
SLC44A1	0.079306652
RHOC	0.096300474
PTGDR	0.156116248
MNAT1	0.03022226
FGR	0.048952056
KIR2DL3	0.06450575
MYO1E	0.161575695
ITM2A	0.064044593
SFMBT2	0.057612468
TRG-AS1	0.055731663
HERC1	0.180965735
AFAP1L2	0.203565544
PTPN7	7.26809E-05
RNF187	0.052175248
RRAS2	0.039976876

TMIGD2	0.040202122
ECI2	0.036104787
ARHGAP9	0.118521945
PSTPIP1	0.062163103
KRT86	-0.051169134
RAC2	0.054739806
SRGAP3	0.074469665
SACM1L	0.061122618
NUCB2	0.120305154
GLIPR2	0.069809291
CORO1A	0.022759006
GSTP1	0.059148004
TNFRSF18	0.102087834
CD300A	0.155138612
IGFBP2	0.079696442
SH3BP1	0.127419661
XCL2	0.096800966
KRT81	-0.040757476
DOK2	0.167249621
ECH1	0.122439487
RUNX3	0.139477295
SLA	0.080883366
XCL1	0.121609645
LASP1	0.12628194
PTGER2	0.187945675
AREG	0.177237708
ACAA2	0.106096272
SSBP4	0.064704842
NT5C	0.096614046
DDIT4	0.112741974
CPNE1	0.069313604
MAP2K2	0.141737631
PIK3R1	0.170922303
DR1	0.143227852
TADA3	0.04558621
CKLF	0.143217267
DUSP2	0.073360775
TOR1A	0.122274966

SOCS1	0.245966987
TSTD1	0.106669395
ZFP36L2	0.18177573
POLR2G	-0.035774595
PLA2G16	0.095997793
TRAF5	0.120501631
GYG1	0.059646379
CD2BP2	0.111441305
PLP2	0.070498648
TRAPPC4	0.103692429
FCER1G	0.077856887
SYTL3	0.126447357
ID2	0.148441411
SYK	0.10925876
ANXA6	0.09647881
RAB1B	0.070812221
APOBEC3C	0.035746327
MPG	0.16698989
PRKX	0.023105247
CLIC1	0.187748037
DCTN2	0.053815368
PPIE	0.040756569
CCL4	0.2408026
45546	0.139008626
PSMA5	0.176903692
CSF1	0.107344773
TSTA3	-0.005011533
LY6E	0.083641763
IAH1	0.01906376
EBP	0.125692519
OSTF1	0.102479976
PMF1	0.012535197
IDH2	0.041040948
DENND2D	0.062617058
NUDT14	-0.038970609
CCND3	0.041080694
IRF8	0.075021691
RGS16	0.135494243

HPCAL1	0.128716364
SLC16A3	0.03071134
EOMES	0.081859199
PRELID1	0.05661677
IQGAP2	0.158386668
BHLHE40	0.061783574
PPP1R18	0.059594981
ZFHX3	0.15744867
ATXN10	0.168670332
SFT2D1	0.073049726
WDR1	0.093104754
TAGLN2	0.057461502
SUCLG1	0.088238704
IGFBP7	0.052914774
TMEM261	0.025725265
CD63	0.183376841
HAVCR2	0.142168982
BAX	0.11682924
UROS	0.137561418
SNRNP25	0.06711459
C11orf73	0.024048156
TIMM10	0.04127479
CAPG	0.057596162
TRAPPC1	0.021457603
TMEM147	-0.081516285
CALM3	0.057162807
COPZ1	0.025318904
COPB2	0.135108195
ACTG1	0.09298468
PSMB8	0.096122248
LGALS1	0.005637966
ACTR3	0.162524634
ITGB1BP1	0.052873797
SRP72	0.076293338
NDUFS8	-0.048968489
STOML2	-0.041601911
PTPN6	0.150222304
UBE2F	0.017061712

CLPTM1	0.13558309
NDUFS3	0.12505163
URM1	-9.11657E-05
SEC11A	0.11062649

ll marker genes for uNK2 and uNK3.

Adjusted P value
0.014559061
0.017952025
0.035763954
0.032739326
0.027736963
0.025608404
0.414512626
0.304510575
0.78853862
0.049727329
0.405039251
0.26973252
0.025068538
0.005443356
0.049727329
0.417005433
0.264304675
0.391002415
0.001029662
0.031836327
0.058300243
0.340050765
0.07361579
0.102717326
0.129175216
0.26973252
0.385766132
0.060113203
0.385766132
0.067934019
0.064180992
0.235485631
0.20176294
0.063419635
0.415615263
0.088353061

0.087761152
0.975378314
0.035758417
0.017952025
0.590106276
0.049727329
0.135036012
0.693830711
0.086292272
0.017952025
0.048772609
0.027736963
0.944143338
0.102799874
0.008282478
0.087761152
0.018405137
0.633343503
0.04072614
0.432803455
0.184890604
0.235485631
0.147135952
0.274597815
0.178107066
0.032823556
0.651991265
0.471592038
0.382779307
0.028506219
0.384902456
0.414512626
0.419693362
0.017952025
0.00924455
0.99897814
0.442923686
0.552991634

0.552991634
0.590106276
0.092399813
0.391002415
0.451603042
0.428028095
0.307244035
0.396721254
0.087761152
0.340050765
0.730188384
0.407140602
0.150420321
0.033615613
0.27352226
0.076067093
0.178107066
0.549779712
0.025401857
0.086292272
0.054072958
0.26973252
0.087613367
0.077628992
0.017952025
0.018405137
0.135036012
0.382779307
0.178107066
0.11243629
0.340050765
0.049727329
0.024372615
0.049727329
0.509070509
0.049727329
0.315452212
0.086292272

0.001029662
0.134239954
0.017952025
0.590106276
0.178107066
0.087761152
0.405039251
0.117253473
0.336111511
0.146040674
0.285373199
0.077628992
0.042001402
0.125218292
0.178107066
0.335660661
0.590106276
0.025401857
0.729457777
0.017952025
0.432803455
0.549779712
0.001060402
0.054223222
0.018405137
0.132175347
0.944387225
0.255680709
0.773147235
0.078514701
0.14977537
0.851795404
0.549779712
0.391002415
0.562406936
0.549779712
0.304510575
0.059618018

0.07361579
0.64916493
0.266457949
0.415615263
0.031836327
0.392293873
0.405039251
0.032459895
0.025205806
0.315873945
0.193115162
0.414512626
0.224485325
0.437809214
0.705382811
0.017952025
0.049727329
0.098157534
0.057095686
0.360270788
0.720483965
0.549779712
0.414512626
0.744074193
0.267037195
0.414998737
0.706992402
0.059625222
0.193115162
0.178107066
0.944143338
0.028007428
0.437809214
0.297510275
0.471592038
0.549779712
0.040285313
0.792564252

0.059618018
0.079608808
0.99897814
0.119800655

Table S3 Correlational analysis of the intersecting genes between ELF4 and the single-cell marker genes for uNK2 and uNK3.

Gene	Correlation	Adjusted P value
TESC	0.122539059	0.080898446
COTL1	0.05396906	0.406452804
ARPC5L	0.251830191	0.000471928
GSTP1	0.059148004	0.378621092
PPP1R18	0.059594981	0.378621092
EVL	0.128478543	0.070890305
ZAP70	0.005379899	0.935099819
CPNE1	0.069313604	0.309239287
MPG	0.16698989	0.020120889
CD2BP2	0.111441305	0.113139316
AREG	0.177237708	0.016871375
PPP1R7	-0.041563576	0.520035278
APOBEC3G	0.166121621	0.020120889
MNAT1	0.03022226	0.622561104
GZMA	0.063431106	0.3563391
CD247	0.13673603	0.052414161
SEMA4D	0.176447977	0.016871375
WDR1	0.093104754	0.187496661
BCL7C	0.095465564	0.183570953
DOK2	0.167249621	0.020120889
PTPN7	7.26809E-05	0.99897814
NDFIP2	0.032172927	0.605046529
ARHGEF1	0.153473379	0.02868123
SRI	0.127908085	0.070890305
EIF3G	0.169587393	0.020120889
ECH1	0.122439487	0.080898446
TSTD1	0.106669395	0.134096536
LDLRAD4	0.043728983	0.50372048
ORAI2	0.056600128	0.388917754
IGFBP2	0.079696442	0.258579609
IL2RB	0.19473811	0.007785053
KIR2DL4	0.062183014	0.363644287
SACM1L	0.061122618	0.369088928
DDIT4	0.112741974	0.110030559
ATXN10	0.168670332	0.020120889
CTSW	0.13246325	0.062101053

SYNGR1	0.080390635	0.258579609
AGTRAP	0.163877402	0.020323878
XCL2	0.096800966	0.182073636
AFAP1L2	0.203565544	0.005084502
RUNX3	0.139477295	0.050740133
KLRC1	0.214872126	0.002806466
SOCS1	0.245966987	0.000471928
NCAM1	0.091505305	0.190611077
GFOD1	0.080401282	0.258579609
NKG7	0.179789183	0.016871375
RHOC	0.096300474	0.182073636
OSTF1	0.102479976	0.154455851
NT5C	0.096614046	0.182073636
TSPAN5	0.120427486	0.083441868
CHST12	0.156720572	0.025272462
45546	0.139008626	0.050740133
POLR2G	-0.035774595	0.573967217
SH2D2A	0.086428029	0.219237421
ADGRG3	-0.017656789	0.773256864
RAB1B	0.070812221	0.305690643
C17orf89	-0.07295847	0.295296867
NUDT14	-0.038970609	0.541316676
NUDT5	0.093640597	0.187496661
MYO1E	0.161575695	0.020323878
CST7	0.141561374	0.048691343
SUCLG1	0.088238704	0.209893779
IRF8	0.075021691	0.291596064
MCTP2	0.163353996	0.020323878
HCST	0.05751777	0.388917754
TIMM10	0.04127479	0.520035278
ITM2A	0.064044593	0.355583715
SFT2D1	0.073049726	0.295296867
DUSP2	0.073360775	0.295296867
FAM49A	0.233335954	0.000896193
SERPINB1	0.091819365	0.190611077
CISD3	0.121229363	0.082888097
SH3BP1	0.127419661	0.070890305
UROS	0.137561418	0.052337712

ACTR3	0.162524634	0.020323878
MPST	0.053396807	0.406452804
C7orf73	0.053549531	0.406452804
NDUFS3	0.12505163	0.076505776
COPZ1	0.025318904	0.67857408
SLC44A1	0.079306652	0.258579609
SEC14L1	0.034988211	0.576745004
PRF1	0.115472237	0.100696267
PRELID1	0.05661677	0.388917754
KLRD1	0.143201981	0.046925966
PSMA2	0.070756112	0.305690643
GLIPR2	0.069809291	0.309239287
FGR	0.048952056	0.449356887
LINC00996	0.094717218	0.184548214

Table S3 Correlational analysis of the intersecting genes between ELK4 and the single-cell marker genes for uNK2 and uNK3.

Gene	Correlation	Adjusted P value
ZRANB2	0.105903589	0.129686582
AAK1	-0.023131068	0.780546813
TMC8	0.125891909	0.114533494
MPHOSPH8	0.102932316	0.129686582
DGKZ	0.132257	0.10648099
SKAP1	0.028312144	0.751917007
TTC14	0.114625508	0.127979864
TRAF3IP3	-0.004522023	0.941262582
CPNE1	0.103469805	0.129686582
UTRN	0.135763238	0.10648099
ITGB1	0.058160393	0.423564414
DOCK8	0.10812766	0.129686582
B4GALT1	0.17019671	0.027363257
RBM6	0.119754432	0.117106488
PRKACB	0.123350715	0.114533494
FOSL2	0.109922302	0.129686582
ARAP2	0.17122661	0.027363257
SAMD3	0.269958415	0.000155107
PTPN4	0.064761315	0.381690653
N4BP2L2	0.177533982	0.027363257
CYLD	0.018784574	0.797499862

Table S3 Correlational analysis of the intersecting genes between IRF1 and the single-cell marker genes for uNK2 and uNK3.

Gene	Correlation	Adjusted_P_value
JUND	0.274939107	5.12414E-05
KMT2E	0.248967251	0.0001944
SYNRG	0.074331319	0.376773099
MBP	0.062423668	0.442180157
OGT	0.149874204	0.047442344
UTRN	0.128358174	0.090154871
UBE2M	-0.014799342	0.809786211
CELF2	-0.021781271	0.809786211
PRKACB	0.11634034	0.115247463
IL16	0.016026061	0.809786211

Table S4 A regulatory network enriched with TFs.

AHDC1(18g)	http://motifcollectio COL4A2,TJP1,BGN,TBX2,PXDN,GUCY1A2,PMEPA1,C1QTNF1,PEG3,PDGFA,HACL1,LINGO1,COL18A1,T
AHR(31g)	http://motifcollectio NRIP1,IRF2BP2,GNAS,AFF3,FAM46A,MID1IP1,PLK2,PHACTR2,BTBD7,DUSP6,ELK3,TNFSF12,ERN1,KD
AR(73g)	http://motifcollectio PMEPA1,NR2F2-AS1,SPATA6,APP,IGFBP7,GNG11,MEIS2,ANTXR1,INTU,CALD1,ZNF462,ESR1,LHFP,RO
ARID3A(203g)	http://motifcollectio ZFYVE16,FCHSD2,CFLAR,RHOU,FAM65A,ARL8B,SH3BP5,ACTN1,SH3GL1,PON2,ARHGAP31,QKI,AGA
ARID5B(20g)	http://motifcollectio ANKRD12,CXADR,MXI1,PMEPA1,NPC1,PLEKHF2,TMEM184B,TMEM38B,FOXP1,S1PR2,CHD7,TPRG1L,
ARNT(241g)	http://motifcollectio EIF4G3,HERC3,HECTD1,LRCH1,STT3B,POC5,USO1,DPY19L3,PLEKHA8,RAP1A,CERS5,GLCCI1,POMP,S
ATF1(31g)	http://motifcollectio RNF138,PCNA,HNRNPUL2,TXNDC16,LARS,SNRNP200,MCM7,CDK4,CLSPN,TRA2B,CPSF7,MCM3AP,CI
ATF2(115g)	http://motifcollectio ENOSF1,ST8SIA4,LCOR,NEK1,PPFIA1,GFPT1,ZDHHC17,ROCK1,ERAP1,CBLB,PUM2,ABCB10,CC2D1B,U
ATF3(958g)	http://motifcollectio CD83,NAMPT,PNRC1,KCNJ5,IER3,DUSP1,PDGFB,PFKFB3,KLF6,ARMCX1,GLA,MB21D2,BAG3,ATP1B1,
ATF4(1021g)	http://motifcollectio H3F3B,IRF1,CTNNB1,BCLAF1,TAF1D,EIF4A2,VIMP,SMARCA5,HNRNPC,ITGB1,NIPA2,KTN1,IQGAP1,C
ATF5(357g)	http://motifcollectio BHLHE41,LGALS9,CCND1,NABP1,ICOSLG,CSTB,MAX,ETV5,HHEX,APOC1,ATF3,ARID5B,FAM20C,INF
ATF7(17g)	http://motifcollectio PDXDC1,SEC31A,SUSD1,GRIPAP1,GIGYF2,B3GALT6,MAN2B2,SMAP1,VAPA,MEF2A,PPP1R21,CSTF3,T
BACH1(390g)	http://motifcollectio PPIF,TRPS1,SHTN1,TJP2,MAFG,USP12,MAP4K4,CDKN1A,TLE3,DSE,INSIG1,EDEM1,GZF1,TET2,SLC24A
BACH2(50g)	http://motifcollectio SATB1,CDK17,ANKRD12,RCAN3,FOXP1,BCL11B,LIFR,PDE4D,PGAP1,ETS1,ZCCHC7,FAM160B1,DUSP4
BATF(21g)	http://motifcollectio IL32,GRAP2,TLK1,PDCD1,CD6,PLCG1,FBLN7,ZC2HC1A,RAB30,CAMK2G,AP4E1,AHSP,TBC1D19,SYNJ2
BCL11A(36g)	http://motifcollectio CD55,TMEM158,IL1R2,RASGRP2,DEFB1,IL23A,PDE2A,CST3,CFP,NCOA3,TCF4,IGSF9,TFPI2,SPIB,CFAP4
BCL11B(241g)	http://motifcollectio CD3G,CD3D,CD6,NELL2,SYNE2,SPOCK2,LCK,SIT1,THEMIS,CD5,SIRPG,PPP2R5C,ICOS,CD2,TCF7,RCAN
BCL3(68g)	http://motifcollectio EDEM1,CD40,ETV3,CD1A,DAPP1,BIRC3,SLC25A33,NRARP,HES4,TIFAB,N4BP2L1,KLHL21,SEC24D,TRA
BCL6(81g)	http://motifcollectio IQSEC1,OSGIN2,CLMN,SULF2,OLR1,FAM124A,MSANTD3,PDSS1,RNH1,CAHM,DHX32,NFIL3,DPYD,AB
BCLAF1(2482g)	http://motifcollectio HNRNPA2B1,HNRNPD,SPCS3,HNRNPK,SRSF3,RBM39,AQR,HNRNPA3,XPO1,PRPF38B,PSMD2,TARS,ST
BHLHE40(18g)	http://motifcollectio FOSL2,PHACTR4,TAF10,JARID2,HNRNPU,TPM3,SLC25A33,GABARAPL1,FAM102B,SEC14L1,DNTTIP2,S
BHLHE41(1080g)	http://motifcollectio CD74,HLA-DMA,GPR84,HLA-DRA,FCGR2B,CTNND1,RGS10,FCGR1A,SLAMF8,ADORA3,RNASET2,LGA
BPTF(69g)	http://motifcollectio MBNL1,NKTR,DDX6,MIA3,UBR5,SON,USP33,ASH1L,PHF20L1,UBN1,FMR1,HELZ,PHF3,DDX17,PRKAR
BRCA1(583g)	http://motifcollectio MCM10,MCM7,CLSPN,RANBP1,PPM1G,NASP,PCNA,BRCA2,GINS2,TK1,ORC6,ATAD5,FEN1,CCNE2,DS
CEBPA(388g)	http://motifcollectio CYBB,TFEC,ABCA1,KCTD12,IGSF6,ATP6V1B2,SCIMP,PLXDC2,MARCKS,DRAM1,LRP1,CCND1,LILRB4
CEBPB(582g)	http://motifcollectio SOD2,SOCS3,HBEGF,IER3,OTUD1,SGK1,CXCL2,ABCA1,PPP1R15A,QKI,APLP2,TFEC,NFKBIZ,KCTD12,N
CEBPD(362g)	http://motifcollectio MEF2C,CSF1R,CD14,C1QC,RGS2,SLC40A1,SLCO2B1,C1QA,ITM2B,DAB2,SCARF1,GPR34,HRH1,CMKLR
CHD1(1064g)	http://motifcollectio JMY,IFRD1,CSRNP1,CLINT1,LINC-PINT,PTP4A1,USP38,SIK3,NUFIP2,DDX3X,SPTAN1,PPP4R3A,LPGAT
CHURC1(243g)	http://motifcollectio CD47,MAN1B1,COMMD6,DHRS7,AES,POM121C,CCNC,TNRC6A,PFDN5,MPP7,ADD3,C2orf74,MBNL1,SA
CLOCK(99g)	http://motifcollectio AP2A1,NSD1,PSTPIP2,SRPK2,LEMD3,CRYBG3,SLC7A1,C2CD4B,LINC00299,PLK2,FOXN3,IQCE,KLHL42
CREB1(1055g)	http://motifcollectio ILVBL,GYPC,CMTR2,PANK2,CRTC3,LMBRD2,PRRC2A,TPD52L2,RABEP1,TRIM33,C16orf58,MINPP1,CC
CREB3(131g)	http://motifcollectio TNFAIP1,ARMCX2,SPATA2,ABCC4,ABHD17C,ZNF397,ZBTB14,KIAA0556,DCUN1D5,GATSL3,FIRRE,LI
CREB3L2(46g)	http://motifcollectio GBAS,HNRNPUL2,TCF12,STX4,PCTP,PDIA4,IL15RA,SEC16A,SNX14,WDR75,LONP1,ZFX,SEC61A1,IFT74
CREM(905g)	http://motifcollectio PBX4,PGAP1,EZR,ATP1B3,ELF1,SELK,G3BP2,USP36,CNOT6L,PDE4D,FAM177A1,CDC42SE2,PDE3B,TM
CTCF(12g)	http://motifcollectio E2F8,CALM1,BFAR,SMARCAD1,MIER1,MYH9,BNIP1,AGK,PARP4,CEP250,SPG11,ZNF195
CXXC1(79g)	http://motifcollectio POM121,AMMECR1L,EDIL3,DPH6,FAM124A,ELOVL7,GCLM,EPC2,SMARCA2,RALGAPB,GABPA,C18or
DBP(49g)	http://motifcollectio TMUB2,CCDC144A,STK38,TTC17,TSPAN32,DHFRL1,NLRP1,HTATIP2,MINPP1,TREM1,BCL9,TSPAN3,N

E2F1(821g)	http://motifcollectio	UBL4A,MCM6,CDCA7,DTL,PAICS,SLBP,CCDC28B,RFC5,TIPIN,UNG,MCM7,MCM5,CCNE1,IL18R1,CDC(
E2F2(370g)	http://motifcollectio	ATP2A3,RFC3,ZNF576,POLE3,CENPH,CLSPN,GINS2,TICRR,RBBP4,CCNE1,EP400NL,CSTF2,PRDX2,HEL
E2F3(1027g)	http://motifcollectio	RBMS1,DCP1B,STX2,UNC119B,COPB2,TAF6,NNT,PSIP1,RABL6,TXNDC15,TXLNA,YIPF4,ADH5,SGCB,C
E2F4(14g)	http://motifcollectio	RRP9,NOC4L,MARCH3,ZNF444,ZNF571,BRPF1,REXO4,VPRBP,TLE6,ZNF37A,NPTXR,E2F4,PACSIN3,SEI
E2F5(30g)	http://motifcollectio	CDC7,SMIM14,DENND5B,METTL22,TBPL1,HIST1H2AJ,SNHG9,RBM38,RALGPS2,MAGOH,MAPK6,BLK
E2F6(152g)	http://motifcollectio	SYT15,CNOT7,GMPR2,NHSL1,AGRP,CCNL1,FAM214B,BHLHE40,NAAA,PPM1D,LINC00243,SGMS2,CD3
E2F7(396g)	http://motifcollectio	FAM111B,SAMD1,C12orf75,GPX7,DEFB1,HIST1H2AG,C11orf80,CNOT10,WDR76,LIG1,BRIP1,HIST3H2BI
E2F8(825g)	http://motifcollectio	TTF2,FBXO5,ZWINT,ASF1B,BRCA1,MCM10,RRM1,EBP,HMGB1,TYMS,ORC6,RNASEH2A,TCF19,NUP10
E4F1(11g)	http://motifcollectio	SPATC1L,RAB11FIP4,USF3,TRIB3,TRNT1,TUBB4B,CDK2,HOXB4,E4F1,ATG13,METRNL
EBF1(375g)	http://motifcollectio	IGFBP7,TAGLN,TPM2,PTRF,CAV1,COL4A2,MYL9,PKIG,CYR61,AEBP1,COL1A2,CALD1,FXYD1,SPARC,
EBF4(10g)	http://motifcollectio	GNA11,PUSL1,CBFA2T3,DAPP1,LYST,COX7A2L,PLCD1,RASSF3,SIK2,SMG1
EGR1(204g)	http://motifcollectio	CTSD,NEAT1,GRN,SLC16A10,CD68,LAMP1,APOE,SLC15A3,ABL2,CD163,MGAT1,RNF13,ASAH1,GPNM
EGR2(528g)	http://motifcollectio	SRGN,TGFBI,CHST15,FAM53C,NFKBID,ICAM4,CARD19,NR4A2,NKIRAS2,MX1,GATM,CTSF,CXCL12,N
EHF(54g)	http://motifcollectio	CD24,GPRC5A,KLF5,LINC01480,MACC1,LGR5,BIK,DSP,SERPINF2,PITPNC1,ITGB2-AS1,CYR61,PRKAR2
ELF1(763g)	http://motifcollectio	KMT2E,YPEL5,REL,SRSF5,RANBP2,BTG1,TIPARP,RLF,CREM,EPC1,CDK17,PAPD5,RBM39,IVNS1ABP,C
ELF2(1432g)	http://motifcollectio	SLC27A3,SEC23IP,CCDC186,CCDC125,AHR,DCBLD2,UTP6,DDX17,GTF2H2,PHRF1,LACC1,SHB,LRRC6,
ELF4(926g)	http://motifcollectio	CENPV,PITPNB,TESC,COTL1,TMEM200A,PRPF38A,ARPC5L,GSTP1,LRWD1,UCK2,DAZAP1,KRR1,PPP1
ELK1(686g)	http://motifcollectio	TRPS1,ALG3,KDM2B,QSER1,TRIM14,CCPG1,KCNAB2,HEBP2,OS9,CPT1A,MCPH1,SEC61G,TSPAN15,WI
ELK4(851g)	http://motifcollectio	ZZZ3,HUWE1,GALK2,CPSF2,TXNDC5,PPM1K,UHMK1,PROM1,ZNF45,TSGA10,ANKRD13A,ZRANB2,US
ENO1(17g)	http://motifcollectio	CHCHD2,PSMD7,ATP5A1,MDH2,TIMM10,PSMB7,FKBP1A,MIEN1,NDUFAF3,MINOS1,PSMC5,ALDOA,W
EOMES(1809g)	http://motifcollectio	IL2RB,NKG7,KLRC2,CHST12,MCTP2,APOBEC3G,HCST,CMC1,ADGRG3,CST7,GNPTAB,SYNGR1,EIF3G,
EP300(115g)	http://motifcollectio	ZFAND5,NUFIP2,DYNC1H1,KPNA4,TSC22D2,TOP1,PABPC1,RBBP6,EIF4G2,ZMYM2,NFKBIZ,ZBTB43,IN
ERF(100g)	http://motifcollectio	ATF3,SLC12A7,GRASP,GAS2L3,NAMPT,GNAI1,SCML1,PFKFB3,LSR,ARL4C,ATP1B1,C4orf32,PPARA,FI
ERG(200g)	http://motifcollectio	NOTCH4,HYAL2,SPARCL1,CYYR1,NOS1AP,PROX1,CASC15,NPNT,HOXD9,GNG11,S100A16,NFIB,CDH5
ESRRA(27g)	http://motifcollectio	SQLE,FGF2,PRRC1,ALDH1B1,SPATA5L1,IL6,NCOA6,LRRFIP2,DROSHA,TSR1,CCAR1,BTRC,USP49,SER
ETS1(979g)	http://motifcollectio	CDC42SE2,LCK,GOLGA8B,TMEM2,ATP2A3,PITPNC1,RCAN3,PRKCQ,CD2,RORA,SYNE2,BCL11B,CYFI
ETS2(927g)	http://motifcollectio	IL1B,LYN,BCL2A1,CSF3R,SLC8A1,SOCS3,HBEGF,OGFRL1,IFI30,IL13RA1,RTN1,TGIF1,AP1S2,LPCAT2,V
ETV2(145g)	http://motifcollectio	ESR1,CDYL2,ADAM23,CTNNAL1,IHH,HMBOX1,SPATS2,EPHB6,PTPN13,NLGN4X,PDGFRL,ZBTB39,CR
ETV4(116g)	http://motifcollectio	C5orf56,GAPDHS,VPS72,RAD51D,HIST1H3C,BANF1,TCERG1,PRMT2,ECI1,C16orf95,ACAT2,NCR1,ETV4
ETV5(760g)	http://motifcollectio	RNASE6,GPR34,GATM,NPC2,C1QC,LRRC25,CD14,C1QA,FCGRT,MARCH1,CD33,MEF2C,LY96,RB1,TNF
ETV6(994g)	http://motifcollectio	PPIF,ARHGAP22,RASGRP3,LOXL3,TNFAIP8,NUDT3,DSE,SNN,SPAG9,PLEKHO1,MEF2A,TSPAN33,BID,
ETV7(400g)	http://motifcollectio	CEP170B,AES,GRAP2,USP30-AS1,ADD3,ENO1-AS1,THAP4,ATP8B2,EPB41,IPPK,LAT,SIRPG,TMCO6,CCI
FLI1(1105g)	http://motifcollectio	KDM6B,CYTH4,MPEG1,SEPP1,GTF2B,EMP2,LGMN,KCNJ5,SIGLEC1,HPSE,WWP1,EPHX1,HPS4,GMPR2,
FOS(150g)	http://motifcollectio	IER2,IER5,FOSB,NRIP1,TNFSF15,KLF6,DUSP1,GNAS,EEF2,PLAU,NEU1,BAG3,DDHD1,FAM46A,ATP1B1
FOSB(444g)	http://motifcollectio	FOS,JUN,GADD45B,PNRC1,ARL4A,IER5,NXF1,JMJD1C,CITED2,IFRD1,KLF4,MYLIP,NUFIP2,GADD45G,
FOSL1(75g)	http://motifcollectio	SEMA4A,UAP1L1,LINC01541,SLC43A3,RPN2,ABAT,MRC2,TSG101,DNMBP,TPBG,LILRB1,TGOLN2,NFI(
FOSL2(1414g)	http://motifcollectio	NR4A2,METRNL,JMJD6,CCL4,ZBTB1,RALGAPA1,PAPD5,ATP8B4,USP47,MAP3K8,MAFF,NR4A3,JARID
FOXA2(25g)	http://motifcollectio	THAP4,HMCES,ZBTB16,FXYD3,ARMC6,SPON1,INHBB,FOXD2,ATG2B,YPEL5,ANK2,KRT80,CD3EAP,S1

FOXB1(19g)	http://motifcollectio	ANK2,CELF2,LMO7,C7orf26,NPIPB4,FOXB1,SERINC2,SUCLG1,B3GAT2,RBAK,ZCCHC18,RNF43,MYO6,
FOXJ3(40g)	http://motifcollectio	TMEM170A,PSMG1,MECOM,WDR82,PHC1,XCL2,CEP164,ATF7IP,FBN1,RIT1,PGM2L1,GBF1,TMOD3,PD
FOXK1(20g)	http://motifcollectio	TRAPPC6A,IFT46,REST,USP10,LTB,TNFSF8,GLTSCR2,MKL1,RAD54B,DAB1,PIM2,SETD1B,ACSL6,BBC
FOXM1(125g)	http://motifcollectio	CENPF,ASPM,GTSE1,HMGB2,KIF14,NEK2,UBE2C,ARHGAP11A,KIF15,DEPDC1B,HMMR,CENPA,RAD21
FOXN2(17g)	http://motifcollectio	ATAD2,CCP110,DEGS1,EIF2D,LIN9,ALG5,SVIP,ATP6V1H,CHAF1A,NCOA6,RMI2,SLC2A4RG,FAM72B,K
FOXO1(211g)	http://motifcollectio	DGKA,CDKN1B,LINC-PINT,ANKRD12,SPOCK2,FAM134B,USP36,PBXIP1,MASP1,CREM,BCL2,IL23A,RO
FOXO3(379g)	http://motifcollectio	CFLAR,MAPK6,NAMPT,PDE4DIP,ARID3A,CHMP1B,THAP2,RHOU,SPAG9,RASGRP3,AKAP13,LONRF3,I
FOXO6(11g)	http://motifcollectio	MAST4,NFXL1,MEX3B,ATP1B3,MRFAP1,CLCN3,DACT2,ZNF503,CYCS,ZNF644,PARN
FOXP1(182g)	http://motifcollectio	RCAN3,JAM3,TUBA1A,MARCH6,ATF7IP,PMEPA1,BCL11B,FOXO1,TCF7,SPTBN1,SATB1,PPP1R2,ARID5
GABPA(716g)	http://motifcollectio	RCCD1,FAM98B,IFIT2,PPP3CB,FAM72B,GSDMD,GRK6,EMD,NCBP3,CUL4B,IFT80,OSBP,HIBADH,HIST1
GABPB1(2028g)	http://motifcollectio	DHX36,NELFB,TAF7,IRF2,UBB,H1FX,EXOSC3,PHF20,FAM103A1,NFATC3,ELF2,KIF2C,SRPK2,SMARCC
GATA2(63g)	http://motifcollectio	NAALADL2,ADAM23,RGS13,HES1,CTTNBP2,FER,STXBP6,CLU,TPSB2,TPSAB1,TESPA1,UTS2,SLC45A3
GATA3(1459g)	http://motifcollectio	FAM46C,SKAP1,PRKCH,B3GNT7,MCTP2,PDCD4,IL2RG,STK17A,CABLES1,RASGRP1,NCAM1,CD96,SPR
GATA6(23g)	http://motifcollectio	PODXL2,MTHFSD,PXYLP1,RANBP6,ZDHHC16,EDC3,GATA6,EMC2,MCCC2,LIX1L,AK6,FHL3,HIBADH,
GATAD1(1711g)	http://motifcollectio	PARP9,PLCB3,MPV17,VAV3,TNFSF12,APMAP,KIF16B,TWSG1,C6orf89,C19orf60,RNF213,FBXO42,PPP3C
GFI1(93g)	http://motifcollectio	SCML4,HEG1,POC1B,PDCD4,IL2RG,JADE1,MDFIC,RABGAP1L,HTATSF1,DLG2,CCDC141,TRG-AS1,GA
GTF2IRD1(32g)	http://motifcollectio	RAB7B,VSIG2,ZNF329,GLI1,PKIB,NCR3LG1,ZNF662,SDC1,LGR4,S100A13,GTF2IRD1,NFE2L2,SHPK,HIS
HAND2(41g)	http://motifcollectio	VCAN,PTCH1,ALDH1A3,WT1,ARMCX3,PLCL1,BAHCC1,DPCD,SLITRK4,PAPPA,PAPLN,HOXD11,RORB
HCFC1(915g)	http://motifcollectio	TYMS,CENPH,SPC25,ATAD2,ASF1B,PA2G4,SRSF10,RFC4,PPM1G,RRM2,CCDC167,IFI16,CENPM,CDKN2
HDAC2(216g)	http://motifcollectio	EIF4A1,FAM234A,ATP5G3,IPPK,THAP7,TIMM23,RARS,ADH5,UGP2,C1QBP,UQCRQ,TCAF1,COX14,AAS
HDX(117g)	http://motifcollectio	ZNF350,CAHM,ADAMTSL4,ST3GAL6,CLEC12A,TMEM14C,CLEC10A,TMEM256-PLSCR3,RNF111,BCL11
HES1(443g)	http://motifcollectio	ARHGAP6,SAMD4A,TNFRSF21,IFI30,CTTNBP2,LMNA,DLGAP3,KIT,MAPRE3,B3GALNT1,RERE,SVOPL
HES2(20g)	http://motifcollectio	SLC7A1,WDR12,SPTLC3,NRG1,IL6,INCA1,ZNF283,TREM1,SLC19A2,KDM3A,PRSS12,INHBA-AS1,EIF4G
HEY1(28g)	http://motifcollectio	C5orf30,DPY19L2,STXBP6,SVOPL,STXBP5,PAQR5,ARIH1,PBX1,DUSP10,MYO10,CNKSR3,NTM,ANKRD
HEY2(14g)	http://motifcollectio	COL4A2,COL6A1,COL6A2,PTK2,TSPYL5,RBM24,LINGO1,TBX2,GUCY1A3,ARHGEF17,TJP1,ID4,NR2F2,I
HIC1(304g)	http://motifcollectio	PRMT9,TCTN3,NRROS,NCKAP5,PPP1R16A,TOMM34,HOTAIRM1,H2AFY2,DENND1B,SLC25A28,TRAFD
HIVEP1(45g)	http://motifcollectio	TBK1,VPS11,FAM210A,TANK,TBC1D15,ATP6V1D,RASGEF1B,TNFAIP3,ETV3,IPMK,AP5Z1,MORF4L2,A
HLTF(82g)	http://motifcollectio	TYMS,CENPM,IVNS1ABP,ATAD2,SET,BRD2,RFC4,RBBP7,SLTM,FANCI,URI1,DUT,VRK1,CHD4,ACAT2
HNF1B(137g)	http://motifcollectio	WFDC2,KRT19,GABRP,SLC26A2,LINC01541,MGST1,STC1,DSP,KRT8,SYCE1,SLC39A14,RIMKLB,CD24,I
HOXA10(113g)	http://motifcollectio	IGFBP2,EFNA5,MAGED2,IPO11,PRRX1,FBLN1,MEIS1,SFRP4,PDLIM1,COL6A2,APCDD1,FHL2,ADAMTS
HOXA3(117g)	http://motifcollectio	A4GALT,PSEN2,CDHR1,GRAMD1A,SH3BP2,ZC4H2,FAM213A,HOXA9,PLEKHA5,EI24,FOXN3-AS1,ALDI
HOXA6(13g)	http://motifcollectio	TTC31,MICU3,LARP6,GFOD2,KCTD1,SOST,TMED1,PCDH9,CHST9,AAK1,CRELD1,ADORA1,PNMA1
HOXA7(59g)	http://motifcollectio	PDZD2,GRB10,ESPN,MUM1,CFH,LSMEM1,SERTAD4-AS1,AKT3,CSF2,RSBN1,SMAP1,RERE,PLEKHN1,I
HOXA9(35g)	http://motifcollectio	NCOA7,SVIL,TOX2,TMPRSS3,MAP2,NPPC,CPNE7,SHISA2,PCDH9,PLEKHA5,PDZD2,GOLGA8A,KIAA14
HOXB2(204g)	http://motifcollectio	ST3GAL5,MOSPD3,ORAI1,PRKCQ,SOD1,LYRM5,TECPR1,CELF4,UNKL,PIM1,PDK1,PHKA2,IGF1R,CMPI
HOXB3(19g)	http://motifcollectio	CDC25C,ATG4D,NUP35,DALRD3,PRKCQ,PTGER2,LINC00471,TRPC3,GPALPP1,LRRC43,HHIP-AS1,SNHG
HOXB4(15g)	http://motifcollectio	FAM49B,NAP1L4,PSMA5,NFATC3,NKAP,LIPN,PDZD2,ZNF518B,RBM23,DMTF1,MPV17L,ATP5G3,MAP3
HOXB6(39g)	http://motifcollectio	OVOL1,HEXIM1,SPDEF,CSF2,FAM71F2,TUBE1,TEAD1,GLTP,SLPI,AMOTL1,OXCT2,FAM227A,HEATR5

IKZF1(1216g)	http://motifcollectio	POLR2J3,STK4,GIMAP7,THOC3,CD3E,TMC8,NOSIP,SELPLG,TRAF3IP3,MPHOSPH8,ZNF800,HLA-F,SF3A
IKZF2(100g)	http://motifcollectio	SERPINA11,ALDOC,IL23R,NCOA7,PTGER3,SVIL,GOLGA8A,CPNE7,IL1R1,GOLGA8B,RRAD,B3GALT5,K
IKZF3(694g)	http://motifcollectio	SH2D1A,PDCD4,SH2D2A,CLIC3,CCL5,ZAP70,STK17A,APOBEC3D,PDE7A,CYFIP2,C5orf56,RHOH,SLC38
ILF2(1700g)	http://motifcollectio	RBM8A,MAGOH,DDX39A,H2AFZ,RAN,E2F8,GLRX5,HMGB1,CORO1A,SPC25,PTMA,MXD3,EIF3J,CEP55
ING4(464g)	http://motifcollectio	ADAM23,NGDN,KNOP1,DSEL,CCZ1,SSBP2,TSNAX,LINC00324,ADD3,MAL,FBXO15,XAB2,ITFG2,STMN
IRF1(44g)	http://motifcollectio	JUND,KMT2E,SYNRG,MBP,USP47,OGT,MOB3A,AP1G1,BRD2,HIPK1,UTRN,UBE2M,CELF2,CD47,SKI,L3
IRF3(15g)	http://motifcollectio	SUPT3H,SACM1L,JADE2,AES,TDRD3,STAU2,MICU2,SATB1,XRN1,NBR1,PPWD1,TRMT10A,KBTBD4,FA
IRF4(186g)	http://motifcollectio	IL23A,DUSP5,TRAF4,KDM2B,PPA1,DENND4A,FAM129A,PERP,TXN,NFKB1,N4BP2L1,CITED4,FAM84B,
IRF5(199g)	http://motifcollectio	SCPEP1,EPN1,COLEC12,CASP1,TMEM33,TBXAS1,ARHGEF2,HEXB,TRPM2,BNIP2,ITM2B,DCAF12,SERI
IRF7(1223g)	http://motifcollectio	MX1,C4orf3,ISG15,EPSTI1,OAS2,OAS1,OAS3,EIF2AK2,VKORC1,XAF1,TBL2,RNASET2,BRK1,NTAN1,IFI
IRF8(113g)	http://motifcollectio	ZNF787,SEC14L1,BCL2L11,BHLHE40,MAP3K8,PTPN1,VOPP1,SYK,FAM49B,TYROBP,HIC1,IRF2BPL,SLC
IRF9(908g)	http://motifcollectio	RNF213,POLR2J3,DENND2D,ZBTB7A,TMEM63A,ZNF512B,GLG1,PPM1K,XAF1,LFNG,STX16,ZNF91,EIF
JUN(29g)	http://motifcollectio	TOB1,SH3KBP1,INTS6,GADD45G,KLF6,PREX1,IER5L,ZMYND11,PHTF2,RUNX1,SEC23IP,TBC1D17,AMI
JUNB(723g)	http://motifcollectio	FOSB,IER2,JUN,KCNJ5,FOS,NR4A1,SEPP1,CXCL12,CD69,EPHX1,KLF2,ZNF331,KDM6B,RGS2,MCL1,C4c
JUND(2104g)	http://motifcollectio	YPEL5,SERTAD1,DDX24,RBM39,CNOT2,ZC3HAV1,HMGCS1,DEDD2,TRA2A,MYADM,BCAS2,BTG2,JOS
KAT7(13g)	http://motifcollectio	ELK4,PHF6,CAPRIN2,VAV3,PRKACB,ABCA5,LPIN2,VPS13C,TMEM30B,CD302,PHLPP2,NFYB,WWC3
KLF10(832g)	http://motifcollectio	OTUD1,PNRC1,KLF4,FAM46A,IRF2BP2,EIF4A3,YTHDF3,JMJD1C,PNPLA8,ARIH1,PLAU,SPAG9,NFAT5,M
KLF11(34g)	http://motifcollectio	LINC00884,RNF217,NT5C2,SPRY1,SERTAD2,MAP3K3,PEAK1,CPNE8,TRAF3IP2-AS1,CNTN4,IRS2,RLIM,
KLF12(444g)	http://motifcollectio	CHRM3-AS2,SYNE2,ATM,ETS1,OXNAD1,ANKRD36,PCED1B,GOLGA8B,GOLGA8A,NKTR,PITPNC1,SP4
KLF13(522g)	http://motifcollectio	STARD4,TRAPPC10,ADD3,SLC38A1,STK17B,TMEM243,TLK1,JAK1,G3BP2,KANSL2,DR1,MICAL3,OXNA
KLF4(972g)	http://motifcollectio	OTUD1,CXCL8,TRIB1,CHMP1B,GADD45B,GPR183,CXCL2,SGK1,CD302,SECTM1,LST1,HCAR3,SIRPB1,I
KLF5(489g)	http://motifcollectio	EDN1,DSP,FBXW7,OTULIN,ERRFI1,CD24,TACSTD2,USP53,EPCAM,WWC1,SOX17,PAPD5,MYO10,CCDC
KLF6(1360g)	http://motifcollectio	TNFAIP3,FOS,IER5,JUN,DEGS1,ATP1A1,TBK1,PMAIP1,FNBP1,OPN3,RRBP1,AGPAT3,FRMD4B,FAM105
KLF7(10g)	http://motifcollectio	LAP3,BLVRB,CDC42BPB,KCNQ1,CECR1,LINC00969,TMEM173,AMZ1,ZMIZ1-AS1,DYSF
KLF9(664g)	http://motifcollectio	ICA1,JUN,DAAM1,FBLN7,CLINT1,PTCH1,PDE8A,SHOC2,DSTYK,QSER1,AMOTL1,AFF4,TCEAL3,MYLIP
KMT2B(289g)	http://motifcollectio	BRD1,TTC21B,RORA,PDE4D,WDR48,ARHGEF5,FOXO1,FYN,RLF,ARL17A,SMCHD1,ARID2,SEPT11,NDU
LEF1(188g)	http://motifcollectio	CLK4,SUPT3H,MAML2,TNRC6B,FAM65B,GIMAP7,SCML4,MYH3,TTC39B,LINC00861,APBA2,PDCD4,FH
LTF(40g)	http://motifcollectio	FAM117A,FBXO3,TNFSF12,RMND5A,UVSSA,UBE2B,PCMTD1,KIF21B,MARCH6,ZNF749,HOXB4,PRKRA
MAF(51g)	http://motifcollectio	SLCO2B1,CSF1R,ENPP2,LILRB5,ITPR2,CD163L1,F13A1,TMEM176B,FUCA1,ME1,NCF4,GAS6,TBC1D14,I
MAFB(11g)	http://motifcollectio	KCTD12,TGFBI,SLC7A7,WDFY3,MARCH1,RIN2,LRRC25,SCPEP1,NUP214,PICALM,MAFB
MAFF(291g)	http://motifcollectio	BHLHE40,ARL5B,FOSL2,EIF5,TNFSF9,GOLIM4,REL,DUSP2,IRF8,TIAM1,NR4A3,JARID2,METRNL,SLC2
MAFG(225g)	http://motifcollectio	NINJ1,SHTN1,NABP1,GPR84,ELL2,TAB2,SOCS3,NEAT1,SAV1,EMILIN2,DSE,IL1B,CD83,ACER3,ZC3H12
MAGED4(20g)	http://motifcollectio	OSR2,GJA1,NFIB,PDGFRA,WT1,NFIX,MEIS2,ERG,HOXA10,HAND2-AS1,S100A16,SNCAIP,TMEM100,LS
MAX(187g)	http://motifcollectio	HIST2H2BE,SARAF,IQCD,TSC22D4,MAFK,SEMA4A,SIRPB2,C11orf74,C11orf45,DLG4,ATG4C,KLF2,MET
MBD2(633g)	http://motifcollectio	RHEB,CDC42,ARFGAP3,CDC37,EFHD2,YWHAE,TRAF1,FOXN2,TP53BP2,ANKRD10,FAR1,ACTR2,CD58,
MBTPS2(17g)	http://motifcollectio	EGR3,ANTXR1,EGR2,TRIM8,CNRIP1,RCAN1,DENND5B,PLXDC1,ELMSAN1,GPR85,SASH1,CYHR1,PAQ
MECP2(452g)	http://motifcollectio	SMCHD1,FOXP1,CREM,EZR,DUSP4,TNRC6B,HIVEP2,CDC42SE2,ASXL1,STK38,LAG3,PPP1R13B,FAM19
MEOX1(58g)	http://motifcollectio	POGZ,THEMIS,GULP1,PHF7,SOCS2,TMEM200A,PLA2R1,PLXNA2,ODF2L,DOCK6,HMGCS1,NUDT10,AG

MITF(1017g)	http://motifcollectio	TGFBI,CHST15,PLD3,CTSB,DAB2,FAM20A,FTL,ASAH1,MERTK,LIPA,SMPDL3A,GRN,NPL,CTSD,TNFR
MLX(487g)	http://motifcollectio	LDHA,MIF4GD,CAP1,BTF3L4,USP8,RGS1,PFKP,DBI,TMEM208,FMNL1,SNX10,PNRC2,ARF1,LRRFIP1,AI
MLXIPL(278g)	http://motifcollectio	NPC2,LGALS9,TYROBP,TFEB,PILRA,TGFBI,ANG,SLC7A7,MTUS1,KCNK13,TMEM51,SLC16A3,OSM,LY
MNT(108g)	http://motifcollectio	STK40,SLC35F6,ATP6V0D1,VAC14,GNPTG,UHRF1BP1,FAM214B,MORC3,CD63,ATP6AP1,GNPDA1,CCL
MSX1(11g)	http://motifcollectio	NAALADL2,PODXL,WFS1,KRT18,ASRGL1,SCNN1G,BEND7,RAB25,USP43,VWDE,AGR3
MTF2(11g)	http://motifcollectio	LDLRAD4,CENPV,PSD4,ATG101,MPHOSPH8,SLC37A1,MICAL3,SMYD2,ERI3,ZNF75A,NCBP2-AS2
MXI1(96g)	http://motifcollectio	ARID5B,FMNL2,DFNA5,SPTBN1,ANXA4,ANXA5,LHFPL2,CXADR,CDYL2,CDK14,CHST11,PKM,TNS3,B
MYB(167g)	http://motifcollectio	LGALS2,TONSL,ATP2A3,CDC45,ODC1,LIG1,XRCC2,TICRR,TCF19,PTP4A3,TMPPE,SIRT1,HELLS,FKBP5
MYBL2(667g)	http://motifcollectio	PRC1,SKA1,KIF18B,STMN1,CDCA5,RRM2,MELK,NCAPH,NCAPG,PBK,NDC80,SHCBP1,HJURP,ANP32E,
MZF1(156g)	http://motifcollectio	ANK2,PIGK,ODF2L,NOMO2,SEPT5,ZXDB,TRAFD1,PUS7L,TPTEP1,ZNF652,TMCO6,PMS2,MAP9,TIPARP
NFAT5(228g)	http://motifcollectio	EIF4A3,SNAI1,PNRC1,ETV3,CLCF1,BTAF1,GADD45B,PPIF,CDC42EP3,RND1,TIPARP,MAN2A2,TNFAIP8
NFATC2(698g)	http://motifcollectio	PUM2,INPP5D,TRIM14,RNF213,BAG4,TATDN2,ANKRD40,CRLF3,MEF2C,TRNT1,DRAM2,YTHDF1,GPR7
NFATC4(22g)	http://motifcollectio	GNG11,S100A16,TM4SF1,SMAGP,ASPN,LAMA2,NOSTRIN,MAGED4B,PTPRB,CDH13,GPSM1,LYPD6B,E
NFE2L1(451g)	http://motifcollectio	DUSP22,TCF12,KLHL5,CTIF,CLSTN1,DENND4B,CAB39,POGZ,FAM234A,CHMP3,CD99L2,HECTD2,IL15I
NFE2L2(70g)	http://motifcollectio	PIM3,UGCG,BID,SNX9,NAMPT,LITAF,ETF1,GPR132,AZIN1,TNFAIP3,UBC,GNAQ,PXDC1,LMNA,RAB21,
NFE2L3(154g)	http://motifcollectio	GRAMD3,PCDH9,B3GALT5,TIPARP,KIT,SERTAD2,NRIP1,SLC41A1,IL1R1,GOLGA8B,CHKA,ITPR1,PDZI
NFIA(318g)	http://motifcollectio	TPM2,MYL9,COL4A2,LHFP,FSTL1,COL1A2,SPARC,SYNPO2,COL6A1,APP,PRRT2,GUCY1A2,DDR2,PTK7
NFIB(78g)	http://motifcollectio	CALD1,MAP1B,TIMP3,PLS3,GUCY1A3,C1QTNF1,EMX2,TBX3,MEG3,TMEM47,ACTA2,ANTXR1,PDZRN
NFIC(1044g)	http://motifcollectio	CTSB,CYFIP1,RND3,LOXL3,TCF12,FEZ2,CCND1,SLC16A10,FLVCR2,DST,MTSS1,EPS8,EEF2K,AHCYL1,
NFIL3(451g)	http://motifcollectio	LGALS3,LONRF3,TREM1,CLEC4E,PLEC,CD81,EMP3,CORO1C,GLRX,LINC01272,AQP9,FBP1,MIR3945HC
NFIX(46g)	http://motifcollectio	GJA1,THRA,PALMD,RORB,OSMR,PDGFRA,ETV1,PTCH1,AFF3,PRRX1,HAND2-AS1,BAHCC1,BTBD3,EM
NFKB1(61g)	http://motifcollectio	UBC,HNRNPC,RAB21,PPA1,HNRNPU,SMARCA5,SPTY2D1,BZW1,REL,PDE4B,NUFIP2,ETV3,PABPC1,AN
NFKB2(62g)	http://motifcollectio	TNFAIP3,ATP1B3,USP36,RHOQ,PABPC1,SCAF11,ZMIZ1,RTN4,ZNF267,CEBPG,MICAL1,CHD1L,SKIL,GP
NFYA(544g)	http://motifcollectio	ZNF324,TMEM220,NCOA2,VEZF1,SLC4A7,GCC2,UBE2G1,HN1,FAM72A,IQGAP2,GANAB,NAGLU,DENN
NFYB(829g)	http://motifcollectio	HIRIP3,E2F8,EXOC8,DNMT1,RBM38,CENPM,HMGB1,HEXDC,GTPBP8,UBE2T,ZDHHC13,PHF6,ZNF26,T
NFYC(525g)	http://motifcollectio	SURF1,ARPC2,AKR7A2,PROSC,TIMM17A,SLC39A3,RALB,CLIC1,BTF3L4,BUB3,KARS,RER1,MDH2,ETF
NKX3-1(62g)	http://motifcollectio	BORCS5,TCF7,SPOCK2,DLG2,KIAA1324,BTBD11,PFKFB3,MAST4,FLJ20021,LPGAT1,LZTFL1,PLEKHN1
NR1D1(230g)	http://motifcollectio	NRIP1,AFF3,TMEM117,NCOA7,FURIN,MAST4,IL1R1,AHR,PCDH9,IRS2,BICC1,SVIL,CPNE7,MYLIP,NOD
NR1D2(112g)	http://motifcollectio	ANKRD12,ANKH,HECA,ZNF131,TNFRSF21,SESN3,TNFRSF11A,FBXW7,ME1,ITPR2,ARIH1,SPRED1,APP
NR1I3(67g)	http://motifcollectio	DPCD,LANCL1,HTATSF1,ZFP91,OGFRL1,UBL3,NEK11,CRLS1,PICK1,ZNF239,LINC00998,WARS2,SDCC7
NR2C2(56g)	http://motifcollectio	TBC1D19,SIRPA,SNRNP35,HMGN1,FOXN3,SLC2A4RG,ACBD6,SYNE1,CDK4,MTIF3,DIRC2,SS18,LRRC2
NR2F1(183g)	http://motifcollectio	MEIS1,FGF2,APCDD1,PRLR,HOXA10,ID4,COL3A1,PRRX1,ADAMTS9,BTBD3,CFI,PTN,SERPINF1,FBN1,Z
NR2F2(665g)	http://motifcollectio	MYL9,TPM2,CALD1,COL3A1,IGFBP7,COL4A2,SGCE,MGP,EMX2,CNN3,TIMP3,CNN1,FSTL1,S100A13,DI
NR3C1(766g)	http://motifcollectio	ANKRD12,EZR,ITPKB,EML4,DUSP4,FOXP1,ARIH1,SPTBN1,SOS1,ATXN1,FAM107B,NAB2,PGAP1,TOB1
OVOL2(50g)	http://motifcollectio	TIFAB,C19orf54,ABCA7,SERINC2,PPP1R13B,UBP1,CCDC141,LRRC75A,MAL2,TPD52L1,APOA1,ARSD,FI
PBX1(93g)	http://motifcollectio	ADAMTS5,EDNRA,FBLN2,LAMB1,COL3A1,PTN,ADAMTS15,DCN,BGN,COL4A2,BTBD3,ADAMTS9,LTE
PEG3(83g)	http://motifcollectio	NR2F2-AS1,SYNPO2,TBX2,TJP1,PXDN,EGFR,FGF2,NR2F2,PRKCDBP,ARHGEF17,FNDC1,PLEKHH3,COL
PGR(31g)	http://motifcollectio	SFRP4,MFAP2,QPRT,RAMP1,EVI5L,SFRP1,ADRA2C,CD24,DIXDC1,PTH1R,COL7A1,SMARCD3,SEMA3B

PHF20(1972g)	http://motifcollectio	GOLIM4,SEC14L1,GTPBP4,PRPF8,ADGRE5,DOCK8,EIF2B5,MYO1E,TLN1,DPP3,RNF115,KDM5A,IQGAP
PHTF1(13g)	http://motifcollectio	E2F8,TYMS,ATAD2,CARHSP1,RFC4,PA2G4,HEMK1,SSRP1,CENPU,FANCI,MZT2A,CENPH,PHTF1
PLAGL1(394g)	http://motifcollectio	SERPING1,SEC62,MIRLET7BHG,SOX4,REV3L,APP,SPRED2,CUX1,UST,AKIRIN2,JAM3,NXN,SMARCA1,
POU2AF1(33g)	http://motifcollectio	CD37,ARHGAP24,SPIB,SMIM14,CD22,APOBEC3B,COBLL1,TCF4,CNFN,POU2F2,PKIG,BCL11A,LINC-PIN
POU2F1(61g)	http://motifcollectio	NOL8,TRPC4AP,PELP1,ABHD3,UGGT1,ABHD2,CEP162,LMBRD2,POLD1,CLN6,C18orf8,SNX16,ACTR3B,
POU2F2(11g)	http://motifcollectio	MEF2C,LILRA5,LGALS12,IKBKE,CACNA1F,ELAVL4,NPIPB15,SLC16A9,KRBA1,PENK,MACROD2
POU3F1(44g)	http://motifcollectio	HEXIM1,PHF8,AAK1,INTS6,ARIH1,PRDM15,IFRD1,PPP1R10,NEU1,ARHGAP26,PLCB1,NOL4L,ARL4D,M
POU5F1(48g)	http://motifcollectio	SIGLEC15,PLD4,PAOX,APOBEC3D,HLA-DQA2,POU5F1,TRAF4,ATP2C1,NFKB1,OTULIN,LMNA,CD24,E
PPARD(58g)	http://motifcollectio	SIRPA,LAMP1,MX1,CTSD,ARHGAP24,RHBDF2,MITF,ARAP1,MTUS1,NEAT1,PLSCR1,MSR1,UGCG,PLO
PPARG(36g)	http://motifcollectio	SCD,APOC1,TNS3,AGRP,GRB2,BRI3,ATF5,PKM,FGD5,KCNE1,ATP6V1B2,GCHFR,FTL,GEM,STAT1,HTR
PRDM1(197g)	http://motifcollectio	DUSP1,COMMD9,TBC1D22A,FBXL5,THUMPD3,LAMTOR4,PTGS2,AP3B1,MEF2A,TBRG1,CYB561A3,SR
PRDM4(12g)	http://motifcollectio	PRDM2,SH3YL1,GNB5,SYS1,ARRDC1-AS1,EEF1G,CD79B,IFT57,HINFP,POU2AF1,PARD3B,PRDM4
PURA(879g)	http://motifcollectio	SOD1,ZFP1,SLC41A1,RPAP2,PRPF31,ZBTB46,ZNF32,LINC00176,SP4,TRIB2,ZBED5,PCDH9,CERK,ZNF33
RARA(24g)	http://motifcollectio	FBXW7,TIPARP,GNG10,ARL4A,DIRC2,PRR7,VPS9D1,PDK4,VEGFA,GADD45G,CYP2U1,KLF10,SIGLEC1
RARB(409g)	http://motifcollectio	PTRF,EBF1,RBFOX2,IGFBP7,CAV1,APP,CYR61,PRSS23,FSTL1,HOXD8,CRISPLD2,OAF,FILIP1L,ADAMT
RARG(126g)	http://motifcollectio	LINC01521,RTKN2,OLFM2,CD27,SLC14A1,NPDC1,AQP3,LMAN2L,SIT1,TXNDC5,GALNT4,LRFN3,LTB,I
REL(25g)	http://motifcollectio	METRNL,FOSL2,PRPF4B,JOSD1,MAFF,PAPD5,ZNF331,JUND,USP36,SELK,RANBP2,GPBP1,CSNK1D,UA
RELA(39g)	http://motifcollectio	RPF2,TOMM40,GOLGA4,PAPD4,PLRG1,MEIS1,SEC24C,MALSU1,SFT2D2,PPP2R3C,CSNK1G1,SAMSN1,I
RFX1(61g)	http://motifcollectio	APOL6,THAP5,ICE1,SPG7,SRPRA,AHCYL2,ABCA8,HIST1H2AK,MOSPD3,SEC16A,NEU4,AKT2,LRRC37I
RFX2(44g)	http://motifcollectio	GDA,DEFB1,IRF6,SLC7A1,CDH1,MGST1,PRRG4,ZNF804A,LGR5,GRB7,SERINC2,DENND2C,SFN,CD300I
RFX3(67g)	http://motifcollectio	RASGRP2,NSMF,HBEGF,LILRB2,KLRG1,PLEKHF1,MIR22HG,UBE4B,ZNF512B,RPRD2,GAS2L3,WDR13,
RFX5(32g)	http://motifcollectio	CDHR3,NRARP,LY86,MSRA,AIRE,RNF208,PDE2A,CDK14,LNX1,MED13L,SLC38A7,LIPN,GAS5-AS1,PXY
RFXANK(25g)	http://motifcollectio	SLC35A4,FXYD5,EDC3,TMEM243,EIF3F,ZSCAN21,UCP2,TRAPPC9,HS1BP3,LYRM7,SREK1IP1,SERGEF,
RFXAP(11g)	http://motifcollectio	ZNF574,CCDC28B,ARGLU1,NAP1L1,STPG1,RFC5,GRAMD1A,STK32C,EFCAB2,PKIG,KLHL5
RORC(224g)	http://motifcollectio	SOST,PCDH9,KIT,PRR5,CPNE7,GOLGA8A,NCOA7,IKZF2,GOLGA8B,GRAMD3,IL1R1,MDFIC,RTKN2,AD
RUNX1(35g)	http://motifcollectio	APLP2,NCOA4,ST3GAL6,MAFG,PLIN2,ARID3A,C9orf72,EMILIN2,EPB41L3,ITGAV,AGAP3,SNX30,PQLC
RUNX2(45g)	http://motifcollectio	DDR1,SPRED2,GGT1,LRRC16A,LINC00884,TNF,AGFG2,ARHGAP10,CARD8,ZBTB25,NFATC1,CUL4B,AC
RUNX3(1755g)	http://motifcollectio	SLC38A1,G3BP2,GSE1,RAB8B,STK17B,SLC1A5,GZMB,KIR2DL4,DUSP10,JAK1,GZMA,COTL1,BCL2L11,
RXRA(187g)	http://motifcollectio	IRF5,NSF,FAM89A,NUCB1,SPPL2A,NECAP2,TSPAN14,PYGL,IRAK1,FOXK2,UTP18,SNX14,ZBTB37,ZNF
RXRB(175g)	http://motifcollectio	CENPV,RRS1,MYRF,TPD52,FGF2,GAR1,INPP5B,CDCA7,RCN2,BRIX1,MED10,RAD17,TUBGCP5,SUPT20
SIRT6(14g)	http://motifcollectio	NAP1L1,ZNF131,NRG1,CSTF2,PRDM5,MED8,FAM71F2,AGR2,ASCC1,CRYL1,SELK,LINC00152,PTPRS,C
SMAD1(77g)	http://motifcollectio	CRYAB,AHRR,GNG11,IL23A,NFIB,MEIS2,ERRFI1,HYAL2,SEMA3A,SERPINE2,CLIP4,HOXD9,CLDN3,TM
SMAD3(376g)	http://motifcollectio	ELK3,PTPN13,PDE4D,CNOT6L,TOB1,ELOVL5,NIN,PAK1,ANK3,FOXP1,BORCS5,NUDT11,CLIC5,AKT3,N
SMAD4(14g)	http://motifcollectio	MT3,SLC17A9,FLT1,HS3ST2,UBP1,LINC01268,DTNA,TRIM36,IGFBP3,LINC00243,RFX1,SSBP2,CDKN2B,
SMAD5(284g)	http://motifcollectio	ZMYM4,ARHGAP20,MTSS1,MAN1C1,TRIM44,SPIN1,TNRC18,PPARA,BIN1,CTNNB1,DEGS1,GTF2I,RNF
SOX15(10g)	http://motifcollectio	FAM90A1,SERPINF2,DNAH12,SEZ6L,CHRNA6,B3GLCT,EFCAB1,LINC01504,DMPK,HLA-DQB2
SOX17(122g)	http://motifcollectio	CD24,DSP,ERRFI1,KLF5,SFRP1,TJP1,CHST9,GPRC5A,CYR61,IHH,MECOM,EHF,MYO6,SHANK2,STXBP6
SOX5(38g)	http://motifcollectio	COL1A2,COL4A2,BGN,GUCY1A2,ID4,NFIA,PEG3,FAM162B,LINGO1,NR2F2,PDGFA,PXDN,COL6A3,PRR

SOX9(71g)	http://motifcollectio	LAMC2,DMKN,AMOTL1,C6orf132,LDOC1L,SLC16A9,TEAD1,RHPN2,AMN,EMX2,SERPINA5,TNNC1,DA
SP1(26g)	http://motifcollectio	B4GALNT1,ARG2,NCSTN,AP1AR,SCO1,FAM124B,EIF4G3,ARID3B,ATP10D,GPATCH2L,PREB,FOXB1,CI
SP140(212g)	http://motifcollectio	AIP,SRSF7,SNRPB,DLST,STK39,CENPJ,KRR1,OXCT1,ZNF75A,PPP1R35,PRPF38A,TLK1,CENPH,LSM8,BC
SP2(84g)	http://motifcollectio	CDKL2,FAM160B1,MMAA,STK10,ENPP6,AP4B1-AS1,FOXC1,RNF219,CCDC107,PPT2,CREM,ZNF175,AG
SP3(636g)	http://motifcollectio	SERGEF,TBC1D23,ZHX1-C8orf76,ANTXR2,SLC7A1,EXOC5,DEPDC7,POM121,SLU7,PSMD12,MTPAP,HE
SP4(185g)	http://motifcollectio	OXNAD1,MLLT3,TMEM106B,CDC42SE2,SYNE1,FAM184A,ODF2L,ETS1,ASH1L-AS1,TLK1,TMEM116,G
SPI1(1821g)	http://motifcollectio	GPX1,CD74,PKIB,HLA-DPA1,HLA-DRA,RAC1,HLA-DMA,HLA-DRB1,HLA-DQA2,HLA-DMB,AIF1,NPC2,
SPIB(84g)	http://motifcollectio	FCRL3,BCL11A,SMIM14,RALGPS2,PRDM2,ARHGAP24,COBLL1,MS4A1,GNB5,FAM60A,EML6,PARP15,I
SREBF1(1201g)	http://motifcollectio	DAB2,CD163,TTYH3,CD84,MS4A7,CTSB,DOCK4,BMP2K,TIMP2,FCHO2,CYFIP1,BNC2,CTSZ,CCND1,FRI
SREBF2(158g)	http://motifcollectio	SGTA,PRRC2A,ATRX,ZDHHC2,CBWD1,RUFY3,SSFA2,ARMC6,H6PD,ENO3,MLLT4,MGAT4A,CCDC47,E
STAT1(1691g)	http://motifcollectio	APOE,IFI44,RNF213,RRAGD,CTSL,NPC1,MX1,PARP9,KCNQ3,CYB5D1,ABL2,CSTB,IFI6,DTX3L,OTOA,S
STAT2(1014g)	http://motifcollectio	SLC15A3,XAF1,IFI44L,MX2,OAS1,APOL6,USP18,RASA3,PARP9,CD47,OTOA,DTX3L,FCGR3A,ADCY7,IF
STAT5B(35g)	http://motifcollectio	FAM65B,RASA3,CNNM3,FAM168B,APOL3,TGFBR3,LBH,NXPE3,EPCAM,CRY1,SMG6,FAM60A,S1PR1,U
STAT6(43g)	http://motifcollectio	STK10,MAP7D1,ANXA7,MED15,SDSL,MLLT10,HPS1,CAPG,SLC35A4,SERF2,ZNF281,PLIN2,DDB1,PWP2
TAF6(42g)	http://motifcollectio	NFRKB,LEMD2,CDHR3,PARP16,RBM27,EP400NL,ILF3-AS1,TRMT12,MTAP,KHK,EIF1B,SLC39A9,BTG1,
TBP(194g)	http://motifcollectio	TMUB2,KLHL9,OGG1,KIAA1551,PHF21A,TM2D3,TUBE1,ETAA1,ZNF585A,C2CD5,FAR2,YIPF4,ENTPD1-
TBX1(19g)	http://motifcollectio	APOC4-APOC2,TUBGCP5,ZDHHC11,PRKAR1B,SCAI,CYB5A,LANCL3,TMEM121,DDAH1,REEP6,MICU2,
TBX21(74g)	http://motifcollectio	MATK,TGFBR3,PDCD4,STK17A,CDC42SE2,AUTS2,ATP8A1,DTX3,MBD5,LINC00869,LEPROTL1,RORA,
TCF12(180g)	http://motifcollectio	HDLBP,SFRP4,SLC7A8,PEAK1,TWSG1,RPN2,EEF2K,CUX1,CD59,RAMP1,TRAM1,DIXDC1,DISP1,CCDC4
TCF3(608g)	http://motifcollectio	THAP1,HAUS8,METAP1,E2F3,PDIK1L,NFATC2,KIZ,ABHD18,LDHB,ZNF408,L3MBTL2,SETD5,SPSB2,HA
TCF4(921g)	http://motifcollectio	TCEAL4,SWAP70,CLN5,ARHGAP24,CCDC50,KCNJ5,SEC62,CYBRD1,C2,CRK,DUSP22,NR4A2,TCEAL3,N
TCF7L1(80g)	http://motifcollectio	EGR2,NR4A3,ZNF263,EGR3,GYPC,SASH1,SOX18,RCAN1,LGMN,ZNF19,CXCL12,SEPP1,ZCCHC14,EPHX
TCF7L2(439g)	http://motifcollectio	CEBPB,SLC7A7,VAMP3,RAB20,KLF7,CTNNA1,SOCS3,ADM,PDK1,SMPDL3A,STX4,BCAT1,DOK3,TBC1
TEAD4(97g)	http://motifcollectio	GNG11,HYAL2,SPARCL1,ASPN,CTHRC1,S100A16,TM4SF1,SMAGP,NOSTRIN,RASSF9,CDH13,NPR1,CDI
TFAP2C(52g)	http://motifcollectio	F3,TPM2,CENPV,ALG9,FBXO17,GCFC2,OSBPL9,TFAP2C,GJA1,RLF,JADE2,APTX,PDP1,LGALS9,TMCO3
TFAP4(39g)	http://motifcollectio	CACNB4,UBAC1,MFSD2B,CCDC77,SLC22A5,NRG1,PEX11G,LILRB5,SRFBP1,S100A13,SIDT2,EPHB2,TR
TFCP2(103g)	http://motifcollectio	ADAMTS1,LMO4,SSBP2,ZBTB26,ZNF518A,TRMT11,UFL1,CCDC186,GPR135,CASP9,ZNF197,PNPLA4,TI
TFDP1(897g)	http://motifcollectio	FAM111B,HPRT1,GLO1,NRGN,MAGOH,TP53,TMA7,UFD1L,KARS,IFT27,MIS18A,ING3,MCM3,ITPA,ADI
TFDP2(442g)	http://motifcollectio	SATB1,TNIK,B4GALT4,INPP4A,JAK1,PSMA3-AS1,KIAA2026,EID3,YLPM1,TUBE1,SLC25A1,CSNK1G2,H
TFE3(474g)	http://motifcollectio	SLC39A1,GPR84,SH3GL1,FAM214B,ARHGEF10L,RAB39A,SIGLEC9,UGGT2,MTUS1,PPARD,FAM89A,SO
TFEB(713g)	http://motifcollectio	HLA-DQA2,FCGR2B,PKIB,APOC1,IFI6,DNPH1,TMEM14C,LIMS1,SMIM20,PAK1,RNASET2,RILP,LHFPL2
TFEC(1417g)	http://motifcollectio	ABCA1,KCTD12,SOD2,CPEB4,SSFA2,PLXDC2,C9orf72,DRAM1,PPT1,SCD,PLBD1,GRB2,CTSZ,HNMT,DM
THAP11(446g)	http://motifcollectio	TMEM243,GLTSCR2,AAK1,EEF1A1,PHAX,CTR9,XRCC4,ABHD15,FXYD5,SETD6,RSBN1,LINC00176,CIT
THRA(266g)	http://motifcollectio	SERPING1,C1S,GNG11,NXN,GJA1,RUNDC3B,MEDAG,PRSS23,PALMD,PDGFRA,ERBB2,MME,MUM1L1,
THRB(26g)	http://motifcollectio	KCTD3,ZBTB7C,IL23A,IRF1,THRB,ACVRL1,ROBO3,TBC1D4,CS,CHST7,NYNRIN,GAREM1,HMOX2,PDL
TRPS1(12g)	http://motifcollectio	TBC1D14,SUCNR1,CEPT1,CHD7,TNFRSF11A,SEC24D,SNX9,LYNX1,PIP5K1C,TMEM86A,FAM110B,RAB
TWIST1(51g)	http://motifcollectio	C9orf3,GUCY1A2,OBSL1,PEG3,PRKCDBP,PMEPA1,AP1S1,KANK2,PXDN,C1QTNF1,PLOD2,RBFOX2,DD
USF2(2387g)	http://motifcollectio	APOC1,GRN,CTSB,ADORA3,PTAFR,CTSL,SCD,PSAP,UNC93B1,TYMP,LAIR1,NPC1,MSR1,SLC2A5,CSTE

VDR(116g)	http://motifcollectio	NFIL3,SERPINA1,PTPN12,TREM1,TSPO,COMMD10,GLRX,ASGR1,LINC01272,LRIG3,TLCD2,BLOC1S2,A
VEZF1(27g)	http://motifcollectio	RBMS1,POU2F1,PSMD3,HIC1,SEC23A,MAGT1,ZNF317,CCNH,SPOP,CSNK1G1,IKBKAP,CENPN,HELZ,UI
WT1(799g)	http://motifcollectio	INSR,MEDAG,MUM1L1,C1S,SNCAIP,PAPPA,ELN,PDGFRA,SFRP4,S100A13,PTCH1,GJA1,GXYLT2,TEAD
XBP1(84g)	http://motifcollectio	CD47,FAM133B,FILIP1L,RBM23,CTBP2,GNAS,ITGB1,TBC1D23,LIN7C,CSNK1E,MYADM,XAF1,RAP1B,T
YY1(1670g)	http://motifcollectio	SON,PAK2,ACIN1,EIF4G2,TRIP12,EIF1AX,CHD4,COPS2,CTDSPL2,SOCS4,BLOC1S6,CNOT1,DNM1L,PKN
YY2(11g)	http://motifcollectio	NUBPL,ARFGEF2,YY2,SLC36A1,TFAP2C,HNRNPD,SUB1,AGO1,PTCH1,PTBP1,RCBTB1
ZBED2(10g)	http://motifcollectio	PROM1,TTC9,ZNF777,RBM19,OTUB2,DDHD2,TEPP,KLHL11,CLDN15,B3GNT9
ZBTB11(506g)	http://motifcollectio	ZNF804A,FBXO33,HIF1A-AS2,TOPORS,CUL3,BCLAF1,MAP3K4,SPTAN1,SETX,PRPF4B,STK17B,AHCTF
ZBTB14(147g)	http://motifcollectio	FRMD6,FOXB1,THAP5,PVRIG,SPIN3,FANCB,TBC1D3K,MYBL1,C5orf66,EID2B,ERICH3,OTUD4,TOP2B,S
ZBTB16(76g)	http://motifcollectio	PDGFD,PCAT6,SPRY1,TMIGD2,RNF165,ABL1,SLC4A4,PITPNC1,PYHIN1,KRT81,PDZRN3,LZTFL1,POLR
ZBTB17(66g)	http://motifcollectio	TTL,NUP62,CECR5,MKNK1,SLC16A3,CAPG,APOBEC3A,PLEC,DHDDS,C1orf198,KCNQ3,ARRB2,DIRAS1
ZBTB18(48g)	http://motifcollectio	CRYAB,NR2F2,AGAP9,C9orf3,GNB5,SMAD3,LINGO1,FNDC1,COL18A1,DLC1,TRIM2,MYO1B,CHN1,ARI
ZBTB2(34g)	http://motifcollectio	R3HCC1L,OSBP,STT3B,ZNF33B,BCLAF1,KIF20A,GAS2L3,SPDL1,PANK2,HMGB3,TMEM209,MLXIP,ATI
ZBTB21(407g)	http://motifcollectio	YTHDC2,LARP4,PPP2CB,RRAGB,KBTBD2,PRRC1,PXK,PRDX1,CD63,GCHFR,FDX1,SMC6,EPC1,EIF4G3,
ZBTB25(1090g)	http://motifcollectio	CDC25A,KNTC1,GTDC1,TNRC6B,ERAP2,RNPC3,HLA-E,RAD54L,ZNF398,FBXL3,CD47,PKMYT1,B4GAL
ZBTB40(105g)	http://motifcollectio	SS18,COL15A1,EPB41,ZFP30,GINM1,CDK19,NREP,SPRY1,GPR88,TRAF1,EPC1,CD24,BSPRY,MIOS,CNOT
ZBTB43(240g)	http://motifcollectio	MXD1,NFKB1,BIRC2,MAP3K8,ZNF622,ARFGAP3,NRIP3,REL,CDC42EP3,QPCT,RBBP6,WDFY2,FAM102I
ZBTB5(99g)	http://motifcollectio	CCDC120,VIPAS39,ARRDC3-AS1,ZNF248,SLC4A8,SELT,ZNF160,C1orf53,GXYLT1,ZBTB5,TNPO3,B2M,C
ZBTB7A(1446g)	http://motifcollectio	CAPN1,TSC1,PLRG1,FERMT3,STK10,RBM23,YTHDF2,DDX58,AHNAK,MED17,RNF213,PIK3CG,ZNF638,
ZBTB7B(46g)	http://motifcollectio	NCK1,STK33,KBTBD7,HOXB5,IFT57,NACA2,C10orf107,ITGA10,ATP1A3,COPS4,EPS15,SETDB1,MIS12,R
ZEB1(24g)	http://motifcollectio	CHD3,MAGED2,MXRA7,MYH9,ASCC1,SFRP1,RAI2,BRD1,CCND2,FTX,PYCR1,SNX21,TARSL2,CDC26,G
ZFX(612g)	http://motifcollectio	PDCD6IP,IKZF1,BCL2L13,OSBPL8,SLC25A11,CNBP,SNX10,EBLN3,C11orf24,PRKCB,ZNF140,HK1,DDX3
ZNF107(30g)	http://motifcollectio	TTC14,SLF1,ZNF684,ZNF681,MSANTD2,ANXA2R,MCM8,GTF2H2,MTG1,SLC25A53,ZNF286A,SENP7,PO
ZNF121(340g)	http://motifcollectio	PPP3CB,FAM98B,ZC3H13,RCCD1,COG1,CASC4,SYT11,MTRF1L,CCDC7,CDK13,ZNF226,LINC00680,CAB
ZNF165(62g)	http://motifcollectio	DSP,CD24,RGPD8,BACH2,KLF5,WWC1,FAM150B,PDE4D,CACHD1,PHLPP2,RIMKLB,C2orf88,LONRF2,E
ZNF174(44g)	http://motifcollectio	GAA,GNS,SNX30,LIMD1,TPP1,ANKRD12,MS4A4A,GXYLT1,NRIP3,AP5Z1,HNRNPH2,ARHGEF9,NPRL3,
ZNF200(358g)	http://motifcollectio	SNAP47,AGO3,PYURF,LENG1,EXOC7,NKRF,METTL2A,TTLL5,FAM64A,LINC00467,ZNF35,HOXB7,PPP1
ZNF232(59g)	http://motifcollectio	KLRG1,SENP7,SPICE1,MEN1,KIR3DL1,HEXA,TCF12,CENPO,NPAT,SNRPD1,ATAD1,CDC16,CPSF3,NCF
ZNF260(13g)	http://motifcollectio	FAM110A,PTH1R,P2RY14,PROX1,POFUT2,SLCO5A1,ACHE,KCNN1,GNAO1,COL27A1,OVCH1-AS1,SLC1
ZNF263(58g)	http://motifcollectio	TMCC3,TCAF1,PMAIP1,L3MBTL4,NYNRIN,CCDC149,METTL21A,GALNT10,LINC01569,TMCO4,PLEKH
ZNF267(607g)	http://motifcollectio	ICAM1,FNIP2,NAMPT,GK,HIF1A,RAB21,CFLAR,ZFYVE16,PABPC1,WTAP,ARL8B,MGAT1,GNA13,AGAI
ZNF300(133g)	http://motifcollectio	PTN,FBN1,PRLR,PTH1R,MEG3,EDNRA,PAPLN,PPM1L,ENPEP,TMEM196,COL3A1,DOCK1,IRS1,EDIL3,U
ZNF304(11g)	http://motifcollectio	SLC12A5,RSAD2,TBPL1,MAGED1,MYO19,CXorf40A,ELL,GTF2H2,ZNF607,SETD4,FAM91A1
ZNF316(57g)	http://motifcollectio	COPB2,AIFM2,WIPF2,MTDH,TBRG1,ZNF518A,ABHD6,ARPC1B,IMPACT,YKT6,ZNF407,FAM174A,NUDT
ZNF333(15g)	http://motifcollectio	HEXDC,MT3,FLT1,HS3ST2,ZNF226,IGFBP3,NR2F2-AS1,SLC17A9,ZNRF1,PTH1R,CRTC3,TCF12,DCP1A,C
ZNF33B(15g)	http://motifcollectio	PDE1B,DPEP2,NFATC2,ELAVL4,TRIM5,UNC5B,CCM2,XK,SYT17,TCF12,PIK3CD,FAM129B,GNA13,LINC
ZNF341(18g)	http://motifcollectio	ELMSAN1,RCAN1,CTSF,C2,A2M,NAIF1,GOLGA7B,SERPING1,STON2,LEPR,CNRIP1,LRRC20,GLCE,SMI
ZNF362(56g)	http://motifcollectio	CLOCK,PABPC3,PLCL1,TP53INP1,ZNF652,USP9X,DUSP6,CELF2-AS1,GOLGA8A,OPN3,SP3,CLASP1,RES

ZNF366(56g)	http://motifcollectio	CD1A,HLA-DQB2,CLEC10A,CIB2,LSP1,JAML,CDH13,PIGR,KRT19,LRRC20,GREB1,ZNF385A,ADGRE3,D
ZNF37A(32g)	http://motifcollectio	STARD3,GRAMD1B,TSC22D4,RNF34,TMEM129,MUS81,SEC23A,ZNF322,UBXN2B,TAF1,ZSCAN9,ANAP
ZNF419(17g)	http://motifcollectio	LDLRAP1,LINC01550,GIMAP1,EPHX2,CCR7,S100PBP,HAUS7,EPB41,ACSL6,CHD3,PXYLP1,LEF1,EPHA4
ZNF426(62g)	http://motifcollectio	FBXO34,ZNF322,FLI1,POFUT2,LINC00426,CDK17,ZFPM1,NFRKB,SCRIB,COL9A3,GATA3,TIMM10B,PLC
ZNF431(12g)	http://motifcollectio	HIPK1,HIBADH,CXorf40B,ADO,ZNF33B,TUG1,FGD3,ZNF131,SNX13,SNAPC1,NLRP3,NFXL1
ZNF436(12g)	http://motifcollectio	WASL,ULK4,ATP10D,ZNF43,KNOP1,RBM12B,DGKH,PGAP2,NFIA,NUTM2B-AS1,AEN,NBPF12
ZNF443(24g)	http://motifcollectio	ZBTB37,ADAT1,KLRK1,GALM,BATF,TTC13,DOCK5,NF2,HELLS,SLC2A13,TPD52L2,DTL,BBS4,GNPTG,
ZNF45(23g)	http://motifcollectio	ASAH2,RAB3GAP1,RAD18,CDAN1,PTPN9,ELMO1,UHRF2,C1GALT1,PLEKHA3,SPG7,GRAP2,RAB40C,ZI
ZNF462(40g)	http://motifcollectio	RAMP1,CALD1,PLS3,CSRP1,COL3A1,PTMS,CYR61,FRZB,PTRF,TPM1,NET1,ADIRF,ARMCX2,ARID5B,G
ZNF484(12g)	http://motifcollectio	NAA16,ATP10A,PLS1,TSPYL2,ZXDC,ZFYVE26,CBLB,IQGAP2,AQP11,KCTD17,CHM,RAB28
ZNF518A(883g)	http://motifcollectio	SLC44A1,NFATC2IP,RICTOR,MMS19,CETN3,CCNT2,ERLEC1,SLC39A10,HIST1H2BI,LINC00115,TAF1,PS
ZNF527(102g)	http://motifcollectio	NR2F2,USP13,BGN,GPC6,PI15,HRC,PMEPA1,PXDN,EDNRA,TPM1,CYR61,LCTL,KANK2,RBM24,MAP3K
ZNF529(13g)	http://motifcollectio	ATP10A,LAX1,NRCAM,ADRB1,DMKN,SOX9,LINC00893,SMARCA1,ACSL6,UBR2,PDE4D,ITIH5,MORF4I
ZNF540(15g)	http://motifcollectio	TMEM30B,NBPF20,TSPYL2,TMEM2,ZHX1-C8orf76,LINC00683,ZNF540,RBM45,PTPRU,ZNF416,ITM2C,A
ZNF543(130g)	http://motifcollectio	THAP5,MUM1,SOCS7,LCLAT1,ZNF250,TNRC6B,MDN1,ZNF486,DOCK6,ZNF160,DCAF8,PIGO,LEMD3,U
ZNF544(220g)	http://motifcollectio	UBR1,CCNA2,RAB3IP,P2RY6,SFXN1,E2F6,MLLT6,TRIP13,SPAG5,PRR5,TERF2IP,SLC37A4,AP1G2,ZNF6
ZNF552(14g)	http://motifcollectio	SETBP1,IFFO1,MAP3K10,ADPRH,PFKFB4,GLUD2,GALNT2,SEPT5,EPHB2,AHSA2,ZBED4,ZNF358,TFRC,
ZNF556(23g)	http://motifcollectio	GCLM,KCNQ1OT1,SLC12A4,ADAMDEC1,MICAL2,PLCE1,SPAG6,ENPP4,UBR5-AS1,UBXN2B,KHK,DNM
ZNF563(24g)	http://motifcollectio	CLDN10,ADAMTS17,PPP1R26-AS1,TTL,BAIAP2-AS1,CA5B,CCNO,SOCS6,GLCCI1,ZNF610,MSANTD1,NI
ZNF571(313g)	http://motifcollectio	CNOT2,CNOT6L,YPEL5,ABTB2,YES1,SCUBE1,DZIP3,ISCA1,PARP8,ABHD17B,FYN,PLXNA4,HERC1,STI
ZNF574(168g)	http://motifcollectio	SNRNP27,RNASEH2C,RAN,NOM1,WRAP73,CENPL,UBB,FYN,ZNF551,MSL2,RABEP2,AIP,C8orf82,HMGI
ZNF585A(14g)	http://motifcollectio	SEPT5,KLHL29,SPDYE3,CTSL,LGALS4,LIN7A,FAM171A1,PTGR2,ZNF589,IFT27,UTRN,KCP,NPIPB6,HLX
ZNF639(327g)	http://motifcollectio	FAM172A,CCT7,JAG1,ESR1,TSFM,ADAMTS1,SDR39U1,ZMYM5,ZCCHC9,SEPT5,MEN1,PTS,RRS1,SLC52
ZNF682(12g)	http://motifcollectio	FANCM,ANXA2R,ZGRF1,ZNF682,GMPPA,LANCL3,STYK1,GAPLINC,MAD2L1,BAP1,ANAPC11,ACBD4
ZNF699(40g)	http://motifcollectio	ZNF367,PSIP1,DSP,SMC5,TIFA,LIMA1,TIMELESS,TOX,C12orf75,WHSC1L1,BACH2,MTHFD1,TMEM263,I
ZNF704(150g)	http://motifcollectio	SFRP1,TWIST2,PTCH1,LRP6,MYO10,MLLT4,ZBTB8A,HIVEP2,RORB,LONRF1,RAPGEFL1,CHPT1,NPAS3
ZNF726(30g)	http://motifcollectio	CENPH,CLSPN,RAD51,MCM7,SLF1,PSMC3IP,RRM1,FDPS,PSIP1,PRIM2,COPS3,FANCL,ELAC1,FANCG,P
ZNF740(201g)	http://motifcollectio	TXNDC5,LINC01138,ZFP1,MBNL1,PCMTD2,MTOR,AUH,MED23,KLF12,ID3,ZBTB14,SLC12A6,TMEM144
ZNF777(102g)	http://motifcollectio	PROM1,PGAP1,CREM,ZDBF2,FAM129A,C2orf88,YES1,FAM53B,PRKAA2,ZCCHC2,BCKDHB,ARHGEF5,Z
ZNF789(32g)	http://motifcollectio	POLDIP3,IRF1,EHMT2,NUP155,METTL12,NVL,ZNF14,ITGB7,CCDC90B,KLF13,IRF7,SNRNP70,ITGB3BP,I
ZNF823(34g)	http://motifcollectio	P2RY6,ZNF200,MAFA,CLIP1,HRH2,SLC15A3,RHOBTB1,LZTFL1,EFCAB1,HOXB8,SNAP47,SHANK2,DGC
ZNF83(606g)	http://motifcollectio	TMEM41A,SACS,CXCR3,NAPEPLD,IL27RA,KIAA1551,ZNF43,FDXR,NKTR,TRIM4,LUC7L3,ZNF766,ZNF
ZXDB(18g)	http://motifcollectio	ATXN7,SPIN1,OSBPL1A,CELF2,CD24,TOB1,MLLT4,RORA,YPEL5,MTUS1,UBE2E3,PRICKLE1,SSBP2,CH
ZXDC(27g)	http://motifcollectio	AGO4,C19orf35,CHN2,CAST,RIC1,DNM3,DCUN1D3,PHF3,TRIQK,UBE2R2,SKAP2,CCDC71L,GPHN,CBL,A

SR,ERO1B,NFATC1,MYLIP,NFE2L3,ITPR1,FEM1C,SLC16A1,YPEL2,LATS2,LRRC75A,RERE,HDAC9,KDM4C,NR1D2,CCDC144NL,SMAD4,A
CK2,RUNDC3B,HTRA1,SMAD1,NFIB,NAV2,RBFOX2,VCL,DDR2,TIMP3,SOCS5,PTPRS,SORBS3,ID3,RUNX1T1,LOX,MIR99AHG,PDZRN3,T
P3,RIT1,ZCCHC24,DTNA,SOD2,DSE,SQSTM1,RUFY3,MAP4K4,SSFA2,SLC25A25,FNIP2,ARHGEF11,MGAT2,TRIQK,RELT,C16orf72,KIF13A,

LK,ATR,SSR3,DECR1,TMEM218,LMAN1,TMEM11,BMS1,SLC39A7,SND1,ATP5H,RUNX2,USP9X,STX4,BBIP1,ZCCHC2,DPP8,MAPK7,TMUB
D2AP,ZNF436,DDX5,EIF2D,FOSB,LAS1L,SYNC,PSMC3IP,ATP10D,ZNF121,C16orf59,WASL,AP4E1,UHRF1,EXOSC6,MARCH6,RABEP2,PUM2
JCP3,ATAD2B,GALNT11,ATR,IP6K1,MAP2K4,PAQR3,MAN2A1,SMCHD1,PLEKHM1,PDGFC,KPNA1,G3BP1,MINA,MARCH6,ANKH,ZNF45,S
,PAPSS1,SOCS3,JUN,RGS1,GRASP,TCHH,NFKBIA,NFE2L2,TFRC,ZFP36L1,SCO2,PALD1,ARL5B,IL10,ICAM4,SLC8A1,HLA-DOA,BHLHE41,F
DC42,ZNF326,ATF7,ZBTB43,EIF3A,IRF8,GNAI3,TXLNA,BOD1L1,G3BP1,STAT3,COPS5,CSNK1A1,SERBP1,SRSF5,ZC3H15,ZFAND6,SEPT2,F
2,USF2,NFKBID,RGS1,LIMS1,MAFG,SLC3A2,RGS12,PSAP,SIRPA,VPS18,GPR137B,CHST15,PKIB,BRI3,GEM,RRAGD,NEK6,HIF1A,EPB41L2

A4,KDM7A,SMAP2,SQSTM1,C16orf72,QKI,CYTH1,TRIB1,BAG3,SERPINB9,OTUD4,CLCF1,TNFRSF10B,SLCO3A1,CLCN3,NFAT5,SHB,OPN3,
,CTNNB1,AGAP2,WDR47,SPRY1,NPAS3,C21orf91,HIVEP1,JADE2,DDX6,CDC42SE2,CNOT6L,TRA2A,CASZ1,CREM,EZR,BACH2,FOXO1,PA

46,CLIC4,MAK,ANTXR1,MEF2C,NFAT5,OTUD6B,MED13L,FCER2,RASL10A,VTCN1,PLAGL1,PLOD2,OSBPL1A,SLC41A2,ZDHHC7,RAB24,C
N3,PIK3IP1,BCL9L,IL7R,ATP8B2,ZC3H12D,RORA,PRKCQ,KCNA3,ETS1,CAMK4,SLAMF1,MAL,CD40LG,SYTL2,FAM65B,LAG3,ISG20,PITPN
AF1,TNFRSF9,SLC25A29,TBC1D4,TBC1D30,TNFRSF10B,ANKRD33B,TBC1D8,CMTM6,SIK2,SCML1,FSTL3,NFKBIB,KIAA1522,JARID2,DGA
R,LINC01272,TRIM25,CD36,DOK3,TTL,FAM162A,SPINT1,POLD4,FN1,MAP4K3,MYOF,PHC1,PIGH,BASP1,LONRF3,TMEM38B,MX1,IFIT3,M
IP1,NFKBIB,TOP1,GNAI3,FIP1L1,ZFR,CNOT1,TACC1,HYOU1,ZNF207,FAM72A,DHX9,HNRNPM,POMC,PFAS,SMARCA5,MAPRE1,VCP,SRF

LS9,IGSF6,SOCS6,ADAM28,AXL,EPB41L2,HLA-DRB1,GATM,PKIB,SLC39A1,IFI30,CCND1,RAB31,ADGRE2,LAIR1,RGS1,OGFRL1,PTPRO,C
1A,NR3C1,CDK13,SMURF2,TGFBR2,KAT6A,SMARCA2,ARID4A,KIDINS220,ZNRF2,AGL,PCM1,VPS13C,BCLAF1,SETD2,NAA50,TLK2,SPTB
CC1,SNRNP40,MCM3,HELLS,UHRF1,CBX3,RBL1,U2SURP,RFWD3,PTMA,PRKDC,CHAF1A,MCM5,XRCC2,BLM,GMNN,GINS1,WEE1,MCM2
,MAFB,GNPDA1,DMXL2,IRF5,TLR2,ZEB2,RAB31,PLBD1,GNB4,PTAFR,ITGAM,CECR1,GPX1,IFNGR1,PMP22,PLTP,PLXNB2,CYBA,SLC31A
NLRP3,PILRA,C9orf72,PTPRE,CPEB4,CCL3,CCRL2,LILRB2,PLIN2,ST3GAL6,PLBD1,DUSP1,TCF7L2,MAFG,LILRB3,GAS2L3,EMILIN2,CEBPI
1,MAF,FCGRT,C2,F13A1,MAN2B1,ENPP2,FCGR2A,SDC3,FOLR2,FES,WWP1,LILRB5,MS4A6A,LPAR6,GAS6,ITSN1,TMEM86A,GATM,CRHB
1,SRSF5,PRRC2C,RBM39,CYCS,BRD1,GLS,OXSR1,WAC,MYLIP,RANBP2,JUND,TRA2A,JMJD1C,RLF,ARL4A,CCNL1,RAB11FIP1,MBNL1,PB
AMD9,SSBP3,TPT1,TMEM94,ATAD2B,USP10,AMZ2,ANAPC16,NDUFA3,TMEM159,C8orf59,RASSF3,C9orf16,NDUFA13,GABBR1,ARMC10,D
2,ZNF362,BICC1,TMPRSS3,NDUFAF1,MAGED1,ZNF43,UBR5-AS1,TYK2,C17orf62,BTRC,PKP4,SLC25A36,RRAGA,LMO4,SPATA33,BMP2,ZN
Q5,AGA,NUCB1,CIZ1,CLTA,AAK1,RC3H2,ATRX,IKZF1,SPAG7,PON2,MCTS1,BEX4,IPO13,NIPAL3,KCTD5,CD59,SCAMP2,TOMM7,UBN1,L
NC00493,FLT1,TNPO3,TECPR2,B3GALNT2,ARHGAP5,PAN3,C9orf16,BMI1,PRKAA1,MTRF1L,CREB3,TFIP11,METTL3,EFHC1,IL15,CHIC2,PB
4,KLF7,KCMF1,HINT3,PRKCB,FAM210A,TGFBRAP1,USO1,PIP4K2B,CD99L2,RSRC1,LRP3,DPAGT1,SRM,IBTK,AASDH,TMUB2,C11orf24,AC
EM2,DUSP4,LEPROTL1,ISCA1,KMT2E,PPP1CB,SYTL3,SHROOM3,ANKRD37,DEDD2,MPZL3,PROM1,SAMSN1,LINC-PINT,CD69,GTF2B,RA

f25,ZNF202,ATP8A2,ZBTB14,MYO9A,CNOT6,KMT2C,ADNP-AS1,ARID2,SMC6,NCK1,SMN2,SEC31B,SS18,EDNRA,IKZF5,EIF2AK1,XRN1,C
IF3L1,ZNF43,TSTD3,KHK,HDHD2,CROCC,FAM105A,RDH11,LINC01089,GATAD2B,LRRC37B,TET3,PKM,GRAP,NFX1,STARD13,RCAN3,ZB

5,MCM2,MSH2,RMI2,MCM3,DSCC1,POLE,DCTPP1,TMEM97,ALDH18A1,FAM111B,MCM4,CHAF1A,KCTD17,PGRMC2,HELLS,GINS2,MYO1
LS,C12orf57,LIG1,C1orf35,WDR76,CDCA7L,HRAS,IL18R1,SLC39A8,CBX5,UHRF1,MYB,MECP2,SH3KBP1,ZGRF1,CENPU,EME1,E2F3,ANKR
SPP1,LRRC58,EMC4,TRAP1,TDRD3,CCDC124,TULP3,TARS2,TM2D3,KIAA1586,REXO2,CDC6,TBP,FAM3C,SUGP2,TLR2,ZNF367,BOP1,WF

,DDX51,TMEM79,IARS,MIR9-3HG,ETV4,MYH9,CENPC,REXO1,FBXL7,EFCAB2,TMCO4,NOCT,BCL11A,CXXC5,PRDM2,FAM3C,MARCKSL
6,EHF,STK32C,MFN1,KDM1B,DPY19L2,PIM1,IFT80,ACVR2A,CCDC30,MSX2,CAHM,NFIC,CLEC12A,PTK6,HEXA-AS1,SRGAP1,TRIM38,KI
3,SLC45A4,IL18R1,RECQL4,MND1,HDAC9,TFDP1,MCM10,HIST2H4A,BRCA2,RASGRP2,EME1,KATNAL2,PHLPP2,HIST2H4B,ZDHHC20,TM
07,TK1,NUDT21,TRIP13,HJURP,ANP32B,SMC3,HIST1H1B,IFI27L1,SPC25,FEN1,RAD51AP1,ZNF726,CENPH,ATAD5,USP1,SAE1,KIAA0101,SN

PI15,MGP,FSTL1,MAP1B,LHFP,TIMP3,ACTG2,NR2F2,PLS3,OAF,PARM1,DDR2,DSTN,LAMB2,APP,ARHGEF17,CNN1,RUNX1T1,BCHE,COL

B,TMEM51,NFKBIE,C5AR1,ZFP36L1,RHBDF2,SIRPA,MX1,SDCBP,WBP2,ITGB5,FAM53C,ATP6AP1,MS4A7,GM2A,ICAM1,PLSCR1,KDM6B,
R4A1,CCL4,CMKLR1,EGR3,RHBDD2,SLC22A18,FCER1G,WBP1L,GAPLINC,TMEM255A,ALAD,SIGLEC1,ITSN1,SERINC3,RDH11,PRR5L,PG
2B,CAHM,LPAR3,TJP1,HDAC9,CCDC6,AP1S2,TPD52L1,OCLN,ASB2,GRTP1,GADD45G,CYP1B1,ERRFI1,MECOM,KIAA0430,SMAD3,BMPR1
CNOT2,TRA2A,CHD1,ZC3HAV1,CHORDC1,GPBP1,ABHD17B,EPS15,ISCA1,ATF7IP,CEP85L,ARIH1,HERPUD2,MAPRE2,LINC-PINT,SIK3,SAT
LFNG,SRPK2,EIF4A2,KLHL28,BOD1L1,COL4A3BP,KDM5A,RASA4,RNF40,TCP1,MED17,C1orf131,TMEM177,ZMYM1,UTRN,NUP43,GIMAP
R18,EVL,SLC25A17,SUPT20H,C8orf59,CCDC12,VWA9,DLEU1,ZAP70,VPS25,CSK,CPNE1,TMEM231,MPG,NCOR1,CD2BP2,SLC27A2,AREG,I
DTC1,B3GALT6,UXS1,RBMXL1,INPP5D,SETD1B,ELOVL1,STYX,TM9SF4,TOR4A,CHRNA1,AXL,PIPOX,KIAA1109,ADPRHL2,SS18L1,PLAU
P33,CASP10,SF1,ETS2,SRGAP2,EXOG,SETD1A,PAG1,LINC00680,ZNF507,MTOR,SUGP2,EID2B,ENTPD4,GTF3C1,TRIM59,AAK1,JAK3,SPHK

,SAMD3,KLRD1,DAPK2,DPF3,KIR2DL4,ARPC5L,MATK,CD247,CD7,EVL,PRF1,EPAS1,GFOD1,JAKMIP2,HOPX,ITGA1,GZMA,SPRY2,GZMB
G1,BZW1,FAM133B,CDV3,AGFG1,ZBTB1,SCAF8,TAX1BP1,ZCCHC2,PCF11,TDRD3,SLC12A6,AMMECR1L,UBR4,FAM102B,BOD1L1,KMT2
LIP1L,FAM57A,CXorf40A,STXBP5-AS1,RASA4,MAFF,CYYR1,MSX1,PHLDA2,CLCC1,PALD1,MAFK,TRIP10,EGOT,SH2B3,SHC1,LITAF,PCB
5,LRIG3,RASSF9,FKBP9,HTRA1,POSTN,MECOM,CLDN5,TEF,CXorf36,ZNF385D,AGFG2,CDH13,UACA,GABRA2,MAGED4B,EPB41L4A,DAC

P2,NPAT,TCF7,FYN,TTC39C,PPP2R5C,LEPROTL1,ZC3HAV1,AAK1,RBL2,SP4,PTPN4,SLFN12L,PDCD4,SENP7,PARP8,IL18R1,CNOT6L,SH2D
VEGFA,RILPL2,CREB5,RIPK2,FAM26F,NFKBIA,CD1D,CTSH,ST3GAL6,BTK,PTPRE,SGK1,ALDH2,HLA-DRB1,MNDA,DSE,CST3,SLC12A7,SI
NDE,LIMA1,GAREM1,GOT2,MECOM,ADARB1,BTBD2,SOBP,NFIA,NRXN2,MED13L,LAMB1,PIGZ,SLC2A3,PBLD,SVIL,KCTD15,USP34,VGI
,CHCHD2,ADCYAP1R1,ASNS,SP110,TCF19,STXBP5-AS1,AK3,TAF12,ACTR3B,UXT,NCOA1,ACOT1,CCT8,COTL1,H3F3B,TAF7,ILK,TPST2,I
SF13B,HNMT,LPAR6,SLC12A5,VSIG4,C1QB,FCGR2A,TGFBI,CHST13,GPX1,THEMIS2,CMKLR1,RNASET2,ITM2B,C3AR1,MS4A6A,SLC7A7,
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DC109B,RAD54B,TMX1,RNF166,TRADD,CARD16,TNFRSF14,PARP9,SIT1,ICAM2,HMHA1,USP20,INTS7,PIDD1,CCDC15,FAM178B,MX2,CD3
,TTC17,PPP6C,ATXN2,SPATA7,ATP11C,ZNF141,ETNK1,ATF3,NR4A2,FAM133B,BRWD1,GNA13,GIMAP6,PREPL,RING1,FAM168A,TACC1,M
,ING1,TPT1,ARL4A,KPNA4,SELT,CD46,JUN,CCSAP,PABPC1,WSB1,SH3TC1,SOCS3,DUSP6,EIF4B,RTN4,TFE3,LACC1,JMJD1C,SLC12A5,AR
DUSP6,NR4A2,TIPARP,ZFAND5,ZNF503,JMY,NR4A1,SMAD7,AFF3,PLK2,ATP10D,C3orf58,AMD1,HIST2H2AA3,INTS6,ZFP36L1,SLC38A2,A
C,MIOS,IFNGR2,CYR61,PNPLA8,COMT,SLC37A2,CKS2,CTNS,MAFK,CEP95,RHOA,LIN7C,SEC24C,MRC1,UFM1,ARHGAP22,SLC11A2,ITGB
2,TOPORS,ZNF331,GOLIM4,TNFSF9,ARHGEF7,BHLHE40,REL,PIK3R1,SDE2,IRF8,FAM131A,SYTL3,DUSP2,ZC3H18,NOP58,VPS37B,SUPV3L

GFD,RBM19,TLR3,CSRNP1,DCUN1D3,ZBP1,MED13,PRRC2A,IGF1R,PYGL,STEAP4,TRIM39,MEST,PHC3,SOCS2,CHAF1A,LMAN2L,LYNX1,

,BIRC5,CCNB1,DTYMK,CASC5,RACGAP1,KIF2C,CEP55,BUB1B,HMGB3,SMC4,KPNA2,SASH3,CKAP5,TTK,CKAP2,CDC25B,SAPCD2,PSRC

RA,TOB1,PHF23,PHACTR2,ARID5B,FAM84B,ANK3,RFFL,CD5,NUP153,IL2,TLK1,GBP4,ULK1,PDE4D,MAPKAPK5,CCDC149,UXS1,CDKN2
AB21,MANBA,B3GNT5,OTUD1,KLF4,TET2,PPIF,UBC,FAM151B,PABPC1,RIT1,CCSAP,GPCPD1,SH3GL1,MXD1,SGK1,TNFRSF1B,YBX3,FA

B,NR3C1,FBXL3,N4BP2L2,SF1,CDC42SE2,CREBRF,SERINC5,KIAA0922,SARAF,NBL1,NFXL1,PHF1,ADARB1,ASXL1,PLEKHA3,PLXNA3,A
H3G,GYPC,TSPAN17,PDSS2,TP53I13,TCF20,CNOT6,TMEM62,ARHGAP15,CCNA2,TRIB3,TMEM41A,APOL2,ANKRD40,FGFR1,KHK,AAAS,
1,POMC,MXD3,TBC1D10B,DPF2,GTF3C5,HIST1H3B,NDC1,JAK1,KIAA1551,CALM3,PRPF4B,MYL12A,RNF19A,CYTIP,ASB1,ZNF655,CCNT
,VWA5A,JPH4,MAG,MAPRE3,MYO10,NTM,KREMEN1,ZNF571-AS1,EVI5L,SYCP2L,NFIA,SYT5,SLC24A3,HPGD,SEMA3B,BACE2,KAZN,FB
Y1,CD3E,SH2D2A,SPRY2,DAPK2,CD69,PPFIBP1,RNF125,G3BP2,S1PR4,STAT4,OBFC1,CPNE1,FYN,XCL1,SMKR1,FAM64A,MNAT1,AKNA,

B,B3GAT3,PCCB,SSH1,ELOVL1,IQGAP2,CHD8,GOPC,OSTM1,CASP4,VKORC1L1,CREB1,BLVRA,UBP1,POLDIP3,ABCG2,ETNK1,DDX60,G
AD2B,RBM48,APOBEC3D,MEX3C,STK17B,BTG1,ARHGEF3,SMARCA2,ATF6B,STK10,SMKR1,TTC39B,PTGER1,GPR171,PRKCQ,GALT,RN
T2H4A,QPCT,UQCC1,TSKU,TBC1D16,FFAR4,CLCF1,PPP1R12B,PDXDC1,ZADH2,ANXA4,TP53I11,MSI2,NFATC1,AMOTL1,GINM1,LGALS3,
,IL15,KIAA1644,PAMR1,ADCY1,TMEM196,FMOD,CRABP2,ZNF518A,OLFM1,GOLM1,PRRG1,CACNB1,TMEM132C,DTX4,LSAMP,HOXA11
2C,VRK1,CENPK,CARHSP1,DUT,USP1,PARP4,PIN1,NRM,E2F8,FANCI,PAPD7,CENPU,NUDC,AURKB,ZNF668,SNRPE,MELK,RAD51AP1,TH
DH,AP3M2,COX10,MKRN2,ARFIP2,PPIB,TIMM17B,THUMPD3,FAF2,VKORC1,UBE2K,THG1L,CHAMP1,EID1,DDA1,MARK3,ITPA,PNPLA4,
1A,ACBD7,PDSS1,DHTKD1,RPP25,GCC2-AS1,IFNGR1,WDR92,PEA15,CLEC4E,TPM1,ECHDC3,DRAM1,AMPH,DAGLA,MIIP,PTGIR,ARHGEF
,ARHGAP20,FAM214B,SLC24A3,TGFBR2,CDC42BPA,NR6A1,SMYD3,ADAMTS5,ADAM23,ABCC9,USP6NL,STXBP6,SYPL1,IHH,C5orf30,TS

01,ITGA1,FBXO10,CD274,FAM60A,SLC25A33,TRAF3IP2-AS1,WARS2,CCNH,PKN2,FAM131A,NGLY1,TMEM101,AHI1,ZNF260,FAM110A,RG
NKRD12,POM121,ZNF124,ATXN1L,UPB1,INSIG1,GALNS,HPS3,ABLIM1,RREB1,ATP9B,RALGDS,USP36,DEDD2,ADNP2,UBAP2L,CHSY1,T
,TES,C18orf25,CALCOCO2,TCTEX1D2,SPG11,IFI16,PA2G4,SMARCE1,C19orf48,UBR1,HTATSF1,ASF1B,HEXIM1,CENPU,KIAA0101,SNRPD1
MT1H,SCNN1A,CDH1,C1orf210,RXFP1,C2orf88,CAPS,SFN,OVOL1,IRF6,PAX2,MT1X,CKMT2,PIFO,SCGB1D2,NOV,LGR4,MUC1,SCGB1D4,C
5,RBFOX2,PPFIBP1,CIRBP,OSR2,OSMR,TMTC1,PDGFRA,EBPL,HAND2-AS1,SMOC2,RRAS2,RAMP1,ZEB1,PTCH1,HES6,CNN3,NFIX,SMIM1
H9A1,AP5Z1,RAB37,DYNC2LI1,TAP2,MUM1,RPAIN,HOXA3,PIGO,CACFD1,LINC01089,RRP1,GTF2E2,CALM1,TRAFD1,DHODH,RERE,TCEA

HOXA9,PACRGL,PLCB4,ZNF10,DLG2,HOXA11-AS,HOXA-AS3,ZNF608,HYI,SVIL,TSTD3,IL1R1,CFL2,RFC4,SAMD15,SYDE2,MATN2,ZNF82
56,AHI1,GABPB1-AS1,CENPV,FZD8,RAPGEF5,MPPED2,RASSF8,GOLIM4,ZNRF1,BMP2,RASSF8-AS1,SERF1B,RASEF,BICC1,N4BP2,CACNE
K1,CLDND1,PLEC,SCAP,LUZP1,ARSJ,ZC3H12B,MLLT3,SPIDR,NFATC3,CASP6,MPC1,ODF2L,JADE2,UXS1,LRRIQ3,DHRS12,PRKCI,CBWD5

B,GPA33,STC1,TSPAN9,DMKN,SFN,CHMP4C,MAOA,PTPRS,DDX43,ABCC4,SUMF1,C6orf132,TUBB2B,TAOK1,MAP1LC3B2,CFAP45,ZC3H1

A2,TAP1,TRNAU1AP,CYLD,KIAA1551,ESCO1,NIPAL3,DOCK8,ANAPC16,ZCCHC7,SNRPD1,LDHB,FMNL1,MBP,LPIN1,NSMCE3,ZFX,RAN,II
CIT,TOX2,PCDH9,DCAF11,SLC41A1,NCR2,PTPN22,NPPC,ELOVL6,TMPRSS3,PDZD2,MAP2,CRY1,INPP4A,GOLGA8N,TLK1,ANKRD36B,GPI
A1,RASGRP1,CCDC88C,SYTL1,SAMD3,ZBP1,ATP8A1,FYN,FGD3,TTC39C,PLEKHF1,PRKCH,RBM38,ITPR3,ETS1,MYBL1,EPB41,TMEM2,HI
,TMPO,PSMA4,MAD2L1,C9orf40,ASF1B,CBX3,HIST1H1E,HMGN2,PFN1,BARD1,HIST1H2AI,HIST1H3B,HIST1H2AJ,ATF4,CARHSP1,USP1,K
3,IFIT1,FBXO8,VAMP2,NOSIP,AES,SYPL1,PITPNA-AS1,ZNF74,EIF2S3,CIZ1,ZNF420,RCBTB2,IPPK,ATP8B2,GPR150,THAP4,ABTB1,SLC4A2
MBTL2,EPC1,SBF1,TAZ,KLF13,XRN1,C2orf49,DDX3X,PCMTD1,HELZ2,PRKACB,CASD1,C1GALT1,NOTCH1,RSF1,NPIPB5,IRF2,IL16,LINC

BIRC3,MCOLN2,CHST7,PDE4A,NDEL1,CD40,TUFT1,TTYH2,EDN1,TMEM97,PTP4A2,BTBD7,ST7,BORCS5,CYP2S1,HES4,NRARP,EZR,FSCN
PINB6,FYB,FUCA2,BNIP3L,MAP3K11,KCNMA1,CLEC4E,CSTB,MROH1,GNB4,LRRC25,SNX30,NCLN,SLC25A13,VMP1,NCOA4,COMMD9,LA
T2,IFI44L,DPP7,DTX3L,IFIT1,TMEM134,CCNI,LOXL3,TPI1,DARS,DHRS3,UBE2L6,MMP3,PARP12,SAMD9L,FLOT1,ZNF581,FCGR2B,ATP6V
C25A33,LAT2,JARID2,GIPR,CCNT2,SERPINB1,MACC1,FOSL2,SDE2,PRDM1,STK40,PHLDA2,GPR82,ETV6,CNPPD1,REL,NSUN4,KLHL42,TP
2AK2,CAPN15,PHF11,IKZF1,CTU2,TRIM22,STAT5B,ELK4,N4BP2L2,GAS8,AES,SLC2A4RG,PCBP3,MPHOSPH8,ADAM12,TRMT11,IFIT5,NPI
D1,CD2AP,GRAMD1B,RASA4B,EPG5,RUNX2,MPRIP,RGPD8,LRRC16A,ATG14,GALNT10,RFFL,ZNF219,ARAP3,UGT8,NPIPA7,HMOX1
orf32,TOB1,ATF3,SLC25A44,GADD45B,MAMDC2,DUSP1,MAT2A,BTG2,CITED2,CCL3L3,PPP1R15A,DIRC2,PPP1R15B,OLMALINC,DPEP2,PI
SD1,G3BP2,CD69,TSPYL2,LINC-PINT,KMT2E,FOSB,IDI1,DDX3X,RANBP2,STK17B,IRF1,CHD1,CCNH,RGPD5,ELF1,EPC1,PTPN22,CBX4,RSI

MAP1LC3B,BAG3,AFF4,AHR,KLHL15,ERRFI1,C3orf58,CHMP1B,PDE4B,IER5,JMY,ING1,DDHD1,NCR3LG1,IFRD1,NRIP1,TRA2B,ZFAND5,PT
,SLC23A2,CNOT4,FAM46A,GUCY1A3,PLD1,ZNF644,NR2F2,CCPG1,NEXN,SMAD4,PIK3CA,FHL1,ARHGAP21,CSRP2,MARCH6,LCOR,ADK,A
,SPTAN1,DGKA,ANKRD44,BTBD11,ZNF507,RAPGEF6,PSMA3-AS1,OGT,STX17,THEMIS,GIT2,GOLGA8M,PLCG1,S1PR1,ZNF652,MLLT3,TS
AD1,KDM5B,FBXO3,PPP1R9A,DIDO1,HDHD2,ADNP,TEC,VPS13C,RAB3IP,ABLIM1,AREG,ZNF12,AKAP8L,XRN1,NCAM1,NAA60,ETS1,RAS
BAG3,ETV6,PLEKHG2,LYZ,TNFSF13B,PID1,YBX3,DPYSL2,HCAR2,C19orf38,ST3GAL6,SOCS3,WTAP,RTN4,CLEC7A,NQO2,B3GNT5,RTN1,
C6,LGR5,DENND2C,IRF6,TFPI2,ARL4D,ITGB8,PDE4D,GDA,MYO6,RND3,WEE1,FZD6,PTPRS,PAX8,C2orf88,C6orf132,ITPKB,PGBD5,PPM1H,
A,GNAS,PHACTR2,BAG3,PDGFC,ATXN1,ING1,PCF11,ANKRD28,USP9X,NABP1,MGAT4A,PLAU,BTAF1,CRYBG3,HMGXB3,AZIN1,CSDE1,

P,COPS2,RALGAPA2,ANKRD10,RNF180,FOXO1,TRAM1,SYNE1,CLK1,PKD2,TM9SF3,PHACTR2,CNOT1,SOS1,TSC22D2,CARD10,CRY1,ARI
UFB2,REST,EPS15,CCSER2,TNFAIP3,SCAF4,ASB7,SMAD5,ZFHX3,AGL,DYRK1A,PRKX,DMTF1,C3orf33,CDYL,ZNF800,CDK13,ISCA1,UGDI
IIT,ATM,FGD3,FCMR,S1PR1,GIMAP1,PCED1B,TMEM106B,GPR155,USP51,RCAN3,SELL,LINC00623,LINC00869,TRAF3IP3,SERINC5,PARP8
A,BLM,ZNF672,ADD3,NBPF11,ZNF595,METTL2B,PLAA,ZNF467,GIMAP6,TPMT,ARL6,ELF2,LINC00176,SERPINB8,CWC27,BMI1,CLASP1,IN
PLD3,ZFP36L1,SH3KBP1,IGF1,PRNP,RASA4B,MRC2,LYNX1,SSH1,TRPM2,ZNF358,ARHGAP35,WDR91,DCBLD2,LPCAT1,LZTS2,RDH10,SOI

5A33,MIR22HG,PPIL4,MDM2,MCL1,ETNK1,GRASP,BIRC2,PINX1,TLN1,SEC14L1,BCL3,ATP8B4,ATF4,SNHG15,DEDD2,MXD1,FAM102B,RI
C,RUNX1,ACSL1,APLP2,PIM3,MIR155HG,PXDC1,ATP1A1,NFE2L2,GSAP,RP2,AQP9,LITAF,TMBIM1,IFNGR2,QKI,LILRB2,DENND5A,FNIP2

TL14,KLF6,BIN1,HIC1,NFKBID,NTAN1,PQLC1,EGLN2,TNK2,DOLK,EPHB2,HEXA,SECTM1,UBE2B,DEAF1,SLC12A6,RGL1,FMR1,RMND1,
HIGD1A,RAP1B,TBC1D1,PTP4A2,SLC20A1,GNAS,SPATS2,FAM129A,IRF2,UBL3,CHMP4B,BAZ1A,TTC7A,PNRC2,PSMD12,CAMSAP1,ASAI

9X,DGKD,BPTF,LEPROTL1,MARCH6,PCGF3,YES1,PGAP1,ZNF467,MEF2D,PSMA3-AS1,KMT2E,SGCB,G3BP2,EML4,ARID2,LINC00936,DO
GO3,PWWP2A,SIT1,NTRK2,FGF13,DHRS12,ADAM33,SOBP,C19orf71,SLC22A17,CLIP4,TJP2,ATP8B2,FKBP11,TMEM183A,PIEZO1,TMEM121,

SF21,TSPAN4,CXCL16,PTPRO,APOE,SLC16A3,C20orf194,ADAM9,CD9,CD68,TMEM51,UNC93B1,SORT1,INF2,SOCS6,KLHDC8B,SLC23A2,M
DAM10,KXD1,TRIP4,HSD17B12,RAD23A,GTF2H2C,JOSD2,SMS,THUMPD3-AS1,TFG,KCMF1,TMEM50A,EMC7,BRE,BFAR,COPA,TCIRG1,F
96,GPX1,APOC1,RAB31,ANAPC13,CD68,IL17RA,KCNN4,DOK3,TPP1,C4orf3,SPG21,DNPH1,LIMS1,GPR84,CHST15,CSF1R,FCGR3A,P2RX7,M
18,PLA2G4C,ABR,PLEKHF2,AMDHD2,CSNK1D,SNCA,SEC23IP,DOPEY2,TMEM8A,CD84,GLYR1,CTIF,RGS12,GLMP,TNPO1,FAM220A,FRM

ASP1,LGALS3,FURIN,RNF13,FAM160B1,RALA,GRB2,DTNA,PALLD,TRIM36,FLT1,CHPT1,NCK1,ZCCHC2,NUAK1,NFIL3,PCED1B,CLDN23,
,ZNF367,TP73,LYST,FIGNL1,EIF4A3,BATF,TMEM154,HIST1H4I,LAIR2,IL18R1,HIST2H4B,MCM6,NRGN,LRRC8A,NUDT11,PSTPIP2,SERTA
TMPO,NEIL3,TYMS,TUBB,FAM111A,KIF22,HMGB2,KIFC1,ASPM,SMC4,MKI67,TPX2,RAD21,HMMR,FOXM1,C9orf40,HIST1H2BL,NUDT1,I
,HMOX2,PPP2R1B,RCN2,STK3,C9orf114,POGZ,AEN,PHLDA3,FRMD6,PDLIM1,THAP11,MKLN1,PTPN13,LIX1L,AAMDC,LSR,ESPN,CDIPT,Z
,TFRC,NFKB1,PPP4R3A,MAP4K4,EDEM1,TET2,TXN,GADD45G,PSTPIP2,ZFAND5,JMY,CREBBP,IL1R1,SDC4,IFRD1,CD40,BIRC3,CERS6,KL
75,ARHGAP4,GATM,NPEPPS,ERCC5,BTN2A1,LMF2,TOR4A,PEX11B,KAT6A,PAQR3,RDH14,IFFO1,ICAM2,PDE1B,ARL2BP,ZBTB2,SLC25A1

RA,ITPK1,MIB1,PLPP3,TSHZ3,CACUL1,IL15,LPIN2,DIXDC1,C5,ESR1,RDX,LPAR1,ZNF644,CREB3,FBXO9,TRAM2,CELF1,PEAK1,DENND5B
,GPR137B,STX11,RASGEF1B,NFKBIA,MAFG,NABP1,BTK,PFKFB3,CFLAR,RIT1,ATF3,SAMD4A,ATP1B3,NEAT1,MIR155HG,NAPA,KDM6B,
D2,AHR,NCOA7,TMEM243,RASSF8-AS1,CDC14A,KIAA1456,KIAA1211L,ZCCHC2,LPAR1,CTNNB1,FAM46A,FARS2,ERN1,MGAT4A,PHACT
2,PI15,NCKAP1,STON1,C9orf3,COL6A2,PMEPA1,TJP1,SMTN,PXDN,DSTN,JAG1,PLS3,ARHGAP29,MKL2,DPY19L2,NREP,TSC22D1,ADAM2
3,RAI2,EMX2OS,MEIS2,S100A16,PTPRS,NFIA,ADAMTS1,ZNF462,HOXD11,ARHGAP29,GULP1,AVPR1A,NR2F2-AS1,APP,ARSJ,PLXNA2,DL
GNB4,SERPINB6,BNC2,SREBF1,GNPTG,FAM114A1,PTGS1,WWC2,COLEC12,ANTXR1,RHOB,DOCK4,SOGA1,TOM1,ABHD12,ERC1,ACSL1,
G,TNFAIP6,FLNA,HK3,PRAM1,LIMS1,FNDC3B,TBC1D2,TMEM38B,ZNF281,SLC17A9,SLC1A3,BRI3,CXCL2,SNX10,ACSL3,CCNL1,DOCK7,E
MX2,AGPAT1,SEMA6C,PLXNA2,SFRP1,HOXA10,PTN,RERE,TRAM2,NR2F1,SEMA4C,NRXN2,LINC00863,TANC1,APP,TMEM100,TBX3,RBF
NKRD28,PPP2CA,ZCCHC2,FAM107B,BIRC2,DENND4A,OTULIN,TIPARP,DDX5,CHD2,SERTAD2,OXSR1,UFM1,ETF1,MED13,BTBD7,RCOR1
PR137B,SQSTM1,DPP7,TRAF3,NR3C1,FAM129A,REL,HDLBP,ANKRD12,ZNF185,TAB2,ACO2,HECA,NUDT9,WBP2,REEP4,CXorf40B,OAS3,G
ND4C,KCTD3,ZHX1-C8orf76,TRIM14,CCNH,BIN1,U2AF1,CDIPT,CHSY1,ZNF808,TPST2,HECA,GPAM,PHKA2,CCM2,PHC3,CTSD,TUBB,MBN
TC39C,HCFC2,CEP95,TYMS,GPR18,CDK11A,ZWINT,ATAD2,PPP5C,ZNF829,DUT,ZNF43,PA2G4,ESCO2,SMC3,IPP,C19orf48,MAZ,ACAT2,PO
B,PDE12,TFG,NR1H2,PRPSAP1,NDUFAF3,SLX1A,STX8,MANF,USP16,MTPN,MFSD5,NSFL1C,TIMM8B,BLOC1S2,CAP1,SZRD1,PIH1D1,FCC
,PGM2L1,IL1R1,NFE2L3,CA2,GRB7,AQP3,USP20,DNMT3B,FAM150B,MAPK10,GOLGA8B,GOLGA8A,DYRK3,SPEF2,FGFR1,ARMC8,PLAT,I
1,GRAMD3,PDGFC,KIAA1456,FAF1,ENPP1,KIT,L3MBTL3,WWC2,BTBD7,GRB10,ZNF219,ADAM12,HIPK1-AS1,PHACTR2,ANKRD28,ANKD
L2,DDX6,XPR1,USP36,BCL11B,MARCH6,IRS2,TMEM57,TSPAN33,TP53INP1,KAT6A,CNST,FOXJ2,DMXL1,AHR,SLC40A1,APC,FAM110B,D
AG8,SNAP47,NUDT13,PSMB6,MIR155HG,SMCO4,IL7R,DYNC2H1,CAMSAP1,PDE4B,TADA1,ARL8B,PDIA6,SCAF11,APBA3,HTRA4,SNX25,
0,GNS,SORBS3,ZNF511,HNRNPF,DDX20,KCNE3,PPM1G,PPP1R2,ATP8B2,HCG11,NIPAL2,USP7,ILVBL,ZFP30,GNPTAB,GNPDA1,EGLN2,SP
ZNF300,CPXM1,EDNRA,DCN,NME5,OSR2,NR2F2,S100A13,ISLR,LAMB1,DDR2,LTBP4,NXPH3,PHLDB1,ADAMTS5,C1S,ESR1,NR2F2-AS1,PT
DR2,MFAP4,COL6A2,FERMT2,IFITM3,FBLN1,APCDD1,NXN,MAP1B,C9orf3,LHFP,FRMD6,CTTN,RUNX1T1,SMARCA1,HOXA10,PTRF,PDLI
,SPEN,PTPN2,UBAP2,PPP1CB,EGR3,CREM,HNRNPLL,RCAN1,WHSC1L1,DUSP8,BBC3,SMAD3,ATP1B3,GSPT1,FBXO33,MECP2,NR4A3,SO
H,CD24,WARS2,CDH1,OVOL2,COL4A5,LEFTY2,NEURL4,SMG1,KBTBD8,RRM2B,HAPLN3,FOXJ3,KIAA0556,NEBL,RBM17,RMRP,SCNN1A
3P4,TMTC1,COL1A2,ISLR,DPY19L2,KANK2,PRLR,NDN,PTPRS,CD248,PHLDB1,MGP,PARM1,IRS1,SALL2,PMEPA1,SLC24A3,PRRX1,CTTN,
L3A1,FAM162B,TSPYL5,CYR61,FILIP1L,ABLIM3,PRICKLE1,BTBD3,ADAMTS8,HAND2,RBM24,AKAP11,EBF1,ZBTB39,SATB2,SPINK2,CLIC
,MSX1,ESR1,FBXO17,CKAP4,ALDH1A3,ACYP2,TUSC3,HEPH,ACAP3,PIP5K1B,ZNF254,TMEM161B-AS1,NLGN2,DIO2,SPDYE2,CNIH3,KIF2

2,RSRP1,SLC2A1,TSC22D3,ABHD2,PCBP3,ZCCHC11,ZNF148,SMARCC1,MICU2,VCP,AREG,PLA2G16,HERC1,TMC6,CYTIP,ANKMY2,CIAO

ABI2,RHOBTB1,CCDC71L,RTN4,CTNNB1,IRS1,EGR3,TRAM2,PEAR1,AHR,PPARA,RUNDC3B,TNRC18,VAPA,VCL,IL6ST,CALCOCO2,FARI
NT,MBNL3,CHD7,ANGPTL6,TBC1D8B,TIAM2,RAB30,LINC00926,ECE1,MEF2C,ZC3H12B,FAM60A,LRRC4C,SCNN1A,ACKR1,ACTR3C,SPAT
ATF2,ESYT1,MLEC,TRAPPC8,GTF3C2,NOMO3,FAM3C,FAM89A,ACAD9,ZNF480,RAP2A,SPG11,ZNF217,NAT10,PTRH2,MED12,TNPO2,HO

EX3C,ATP8B2,CCNG2,AGAP2,RORA-AS1,PNPLA6,NOTCH1,ZBTB11,NKILA,ANKRD49,GOLGA6L9,THRA1/BTR,POU3F1,YTHDF3,ZNF791,
TNK1,KLHL12,DENND4A,CACNA2D3,KLF10,CDK10,WWTR1,RAB5A,USP34,ANKRD65,TBC1D30,SEZ6L,PTPRN2,MAOB,TNFAIP8,ARHGE
D3,HEXA,ATP7A,IFIT3,SLC19A2,SCARB1,CTSA,BHLHE41,NFE2L1,TRIM8,ANKRD9,GPR132,C17orf58,WDR81,RASAL2,DOCK7,PPFIBP2,CI
A4,LGALS3,NUPR1,CCND1,EMP3,IRAK1,PLEC,DFNA5,BCAT1,MIR3945HG,FHAD1,FAM129B,AHNAK,FABP5,FN1,TNS1,MLKL,B3GALNT
D5A1,SRA1,TMEM33,GPRIN3,TM9SF2,DHRS11,MLXIP,IFI30,SLC25A13,KLF10,DCAF12,INSIG1,SNAPC1,NR6A1,SMOX,C18orf21,RGS19,SK

A,ZNF573,ZMPSTE24,THAP11,ACOT8,IRAK4,SMAP1,CTR9,AKAP9,LTN1,TTC37,JAG1,TIAM2,PXMP2,PPP2R5C,ANP32E,TUFM,EXOSC9,SA

S15,TSC22D1,ALDH7A1,TAGLN,TNS2,TPM2,LHFP,FXYD6,CALD1,COL6A1,RARRES1,COL4A2,LAMB2,TPPP3,A4GALT,ARHGAP6,AR,ARI
TPR1,ARL17B,AMZ1,MVP,CORO1B,LMBRD1,RASGRP2,SNRPN,WNT7A,CD3D,TCF4,ZNF624,ZNF565,TRPM3,TSHZ2,EPHX2,C7orf61,POGK

PP1R21,ANTXR2,TMEM50A,ANKS1A,USP15,CCDC130,ARIH1,GTF2F2,VPS18,MED15,NDUFB7,OSGIN2,TRAK1,UTP23,TFIP11,WDR45,SET
3,BBC3,MAPKAPK5,DDX5,KANSL1,TRIT1,CNTROB,APTX,SMCHD1,WDR75,ZNF250,TNPO2,PTPRA,GRK6,GLTSCR2,ASPSCR1,YTHDC1,Z
B,AP1M2,SYCE1,ZNF185,SGPP2,SLC30A2,C1orf210,WDR90,MAL2,SLC45A4,LRP5,GOLM1,OCLN,PKP3,EPHX3,GLCE,ATP2C2,PPM1H,FAM
ARHGAP24,PICALM,SIRPB1,RAD9A,PFKFB3,MAP3K7CL,PTP4A3,MEF2A,TAPT1,SNN,NEURL1,PQLC1,C20orf27,SMCR8,RNF138,FTCDNL1
7LP1,BCAR3,NAAA,ZNF749,ACOT7,SPDYE5,PAN2,RANBP10,RFX5,MYO10,FCHSD2,ROPN1L,SPDYE6,LEFTY2,LYL1,TRIM16L,TBC1D5,W

AM12,SLC41A1,FARS2,BTBD11,KIAA1456,AFF3,PDZD2,ELOVL6,ITPR1,IL23A,BICC1,NRIP1,CDC14A,MAST4,SVIL,ENPP1,PTPN13,IL18R1,
1,NEDD4L,LAP3,PRKAG2,RREB1,DCTN4,ATP6V1H,TLE3,OPN3,ITGA5,GTF2A1,MAFK,RUFY3,DDHD1,SEC24D,TRAPPC5,USP6,RDH10,FAI
CP5,SMAD7,ZBTB7B,TFEB,PEA15,PLA2R1,ING2,DIABLO,POGZ,ANK3,C14orf159,MLPH,ZBTB20,AMPD3,FAM65B,KANSL1-AS1,TOLLIP,PR
AREG,IL2RG,CASP3,DDIT4,KIR2DL3,IL2RB,OFD1,SH2D2A,MYO1E,EVL,TRAF5,PIK3R1,RHOH,RHOF,SOCS1,TMEM120B,FAM177A1,GADI
24,TALDO1,DNASE1L1,SYNJ1,ACOX1,GGA2,CCDC22,ABR,KIAA0100,YTHDF2,SND1,ARHGEF11,TUBGCP2,PRKAR1B,ANKRD13D,CRTC1
H,TMEM26,ADAMTS17,SYCP3,ASH2L,KLHL8,CNOT11,SPESP1,GABPB1-AS1,ZC3HC1,FADD,FBXO9,EBLN3,DDAH1,NAA40,BTBD2,DTD2,

ITC1,SMAGP,SLC24A4,SCGB2A2,ERG,CCDC15,ICA1,RIMKLB,RNF24,S100A13,MAGED4B,SLC46A3,THRB,BCL11A,FOXO1,EXT2,DSP,LYN
NHSL2,G3BP2,LONRF2,ANAPC10,ZBTB24,DYNLL2,SYNE2,PERP,LEPROTL1,PHYHD1,CDK17,UXS1,FAM107B,WWC1,ERF,WDR53,RAB3IP,

150,ZFHX3,DMXL1,PRKAR1A,KIF5B,TMCO3,PIAS2,SPRED1,WAC-AS1,BNC2,RAPH1,ITGB1,GMEB1,ACAP2,C2orf49,DICER1,PXK,STAMBP

5,ACSL5,EMX2OS,PLLP,OCLN,HKDC1,TGFA,SLC45A4,LIPN,TPD52L1,PERP,ANK3,ADAMTS8,SLC34A2,TSPYL2,MYO10,YPEL5,CDK12,SK
X1,SATB2,DCN,RBM24,SDC2,PDE8B,DLC1,CTTNBP2,MAOB,LGALSL,CYR61,IMPA2,TMEM47,SOX5,GPC6,HEY2,LRRC41,PRSS23,TPM1,A

AM2,CCDC39,PTDSS2,VIPR2,SPDEF,ZNF492,ELOVL7,ITIH5,SOX9,LAX1,CSF2,FOXA2,INSL3,HOXB6,DISP2,CCNO,RGS9,KIAA1671,ANKRI

CS1L,MCM3,NUDT5,WDR35,INPP1,RAP1GDS1,DCUN1D5,BLM,MYL12A,MED6,HDDC2,POLR2C,LSM3,CELF2,C1orf52,ABCB7,TFIP11,SLC3
R2,FAM177A1,PPP4C,PSMB1,NPNT,SP2,E4F1,SPTBN1,HTRA4,SLC35B3,RAB3IP,TACSTD2,ARHGEF7,ISCA1,IGIP,TRAPPC8,LRRC20,KIF13I
XDC,PHLPP1,SLC4A7,UPF2,MBD2,RMI1,MID1IP1,ZFR,ZC3H13,IL1A,FAM102B,ADK,ECHDC1,FAH,NSF,MAGI3,IST1,WDR37,ATP6V1H,FAM
OLGA8B,MPP7,BACH2,SENP7,GLCCI1,SATB1,RICTOR,SPTAN1,RCAN3,SHISA2,ZNF14,SLF1,PERP,C11orf21,ZNF567,CENPI,IL18R1,TTC39C
RNASET2,HLA-DPB1,HCK,CST3,HLA-DQB1,PLD4,FCGR2B,SAT1,SPINT2,CPVL,THEMIS2,LGALS9,PPT1,RGS10,LY86,SYNGR2,VAMP8,CY
KHDRBS2,PREX2,POU2AF1,CPNE5,AIM2,AKAP2,AGAP5,TCF4,NOS3,MED13L,TRPV3,DENND5B,CXCR5,NBPF11,CHD7,SETBP1,EEF1A2,C
MD4A,GLUL,RBM47,SIGLEC1,ATP6AP1,EGR1,MERTK,ADORA3,PLD3,MMP14,MFSD1,C6orf62,SDCBP,PEPD,ATP6V0A1,CTSL,LAMP1,PLX
EA1,NABP1,FITM2,POFUT2,CASP7,ATP5J,SPATS2L,KDELR2,MAP3K11,ARPC3,HDAC5,FAM60A,GGA1,KLHL8,KIAA1033,ENOSF1,LSP1,R
100A11,SCD,MX2,APOL6,RASA3,IL4I1,TRIM22,PSAP,TRIM14,FTL,TUBGCP2,GPNMB,OAS3,OAS1,HTRA4,CYB561A3,HK2,FAM20C,SLC30A
IT1,RSAD2,ADAR,MX1,ENPP4,HGF,MAPK7,TPST2,SLC17A5,PRDX1,MGST3,HERC5,PRR5L,NPLOC4,PARP14,HELZ2,STAT6,FURIN,SLC23A
HMK1,PHF3,STAT5B,CEP164,TRIM41,RBM38,PDS5B,CARNMT1,ZNF131,FAAH2,PRKCQ,ANKRD12,CYTH1,ZNF121,PCNP,TUBB2A,VILL,S
,RMDN3,GSN,C6orf1,UBAC2,HTATIP2,TGOLN2,RAB42,TNPO3,RASSF3,VPS11,SLC12A6,POU2F1,GLDN,LRRFIP2,SEC24C,ABCC4,MAN2B2
EIF4EBP2,DCTD,SF3A1,USP48,EPC2,XRCC3,SRSF6,PSMB10,RABGEF1,CFL1,FUBP1,SMG7,RDM1,GLTSCR2,OPA3,CYP2U1,PTBP1,TCEB2,Z
-AS1,ECE1,MPHOSPH8,USP33,ZFR,HERC4,SPSB3,NARS2,TRIM7,ALKBH8,STOM,FOXJ3,RBMS1,HMOX2,RRP15,H1FX-AS1,ZRANB2,MCTP

ADD3,SMURF2,PDE7A,SPTAN1,FBXW7,LINC01138,RAP1B,DENND1B,ADAP1,MLLT3,B3GLCT,DGKD,CEP85L,PLCH2,ESR2,ITM2A,MAP4,I
7,HAND2-AS1,DOCK1,KIAA1033,TSHZ3,SIRT1,MAP3K1,MAN2C1,BNC2,SNAI2,CREB3L2,TNRC18,FAM114A1,PLEKHH2,XPO6,FAM234A,A
US5,AGPAT5,SS18L1,UTP15,USP51,DDX55,ATF2,DUSP19,TONSL,LRRC58,AKAP7,USP37,UGGT1,STX16,CAPN5,PGGT1B,UBLCP1,BCS1L,
YNRIN,EPB41L2,SORBS3,NRP1,WLS,EPHX1,ZNF629,LINC01503,UACA,MCOLN1,SH2B2,ULK2,SNX24,TSC22D1,RASA4,FAM57A,CD163L1
1,FOXD1,PLXDC1,WDR91,SBF2-AS1,CXCL2,SCN1B,CD163L1,HOMER1,SLC46A3,EPHB6,SLC45A4,KMT2D,OSGIN1,PRNP,NR4A1,TMEM25
D12,CCRL2,ASAH1,FAM214B,SGK1,BAZ2B,RNF130,ADSSL1,APLP2,B3GNT5,C9orf72,PTGIR,BACE1,DOCK1,CRLS1,USP6NL,EPHB2,ARHG
H5,ERBB2,LIFR,COX4I2,TMEM45A,NOTCH4,CXorf36,GDF15,SORBS2,GPSM1,MAGED4B,EPHB4,NFIB,TMEM88,TXNDC9,NPDC1,CLDN5,C
3,RNF126,FTH1,GORASP1,MXRA7,ZNF704,FYN,MSI2,DENND4B,LRCH1,NEK1,MSRA,ASB13,KCNMB3,FAF1,BUB1,NIPBL,HGH1,RCN2,LAI
APPC6A,ZNF630,KBTBD3,KLHL13,SPOP,ASNSD1,OSBPL1A,ECT2,TMEM175,FAIM,SOD2,SHTN1,GAK,CYHR1,PNPLA4,ZFX-AS1,THADA,M
GD4,CARD10,WRAP73,ZMPSTE24,SLC39A7,ROCK2,ERCC3,UNC45A,SLC25A36,EMSY,WDR92,GATAD1,ZNF816-ZNF321P,SRPK2,DDIT4,TI
RM1,MPLKIP,ATP5I,CMSS1,SF3A1,RFT1,IL18R1,ARHGDIA,DGCR6,U2AF1L5,WDR33,SMIM13,ST20,UBE2K,RBL1,BRIP1,COX8A,U2SURP,T
LTF,MBP,CEP104,NRARP,UHRF2,RASSF1,ZNF396,ATXN7L3B,STAT4,IBA57,TMEM158,RANBP2,SAMD9,PKN2,CEP63,CDK5RAP1,ZNF211,
RBS3,DICER1,UBE2W,FAM213A,ALDH3B1,LTBP3,MOK,WSB2,PRSS36,TPCN2,ARRB1,PLXDC2,EPS8,HEATR3,SPATA6,EPB41L3,FAM114A
,TLR10,SMIM14,FAM26F,SMCO4,NOD2,ECHDC3,HACD4,PYCARD,OSBPL8,COMMD9,ATF5,PEPD,GEM,CNDP2,CSTB,GCHFR,MRAS,RAB3
MXL2,LILRB3,NUMB,ZMIZ1,ZFYVE16,FCGR1B,CECR1,DAPK1,NEDD4L,LAP3,WTAP,ST3GAL6,WDFY3,NPC1,ALDH2,ATP6V1B2,TNFAIP2,
ED4,RPP25L,HTATSF1,PLA2G16,BMI1,SSB,COLQ,SNRPN,PRELID1,PDE12,SMIM19,BEX2,NEIL2,LRRCC1,PIGU,SCAND1,PIGH,CSRNP2,MZ
PDLIM4,OSMR,DAB2IP,FHL2,WT1,ALDH1A2,SMARCA1,FBLN1,MDK,S100A13,NUDT10,ADAM33,PAPPA,PEAR1,C4A,VWA1,PHYHD1,FAI

X10,GSTM3,SATB2,AOC3,LINGO1,FRZB,GUCY1A3,ENAH,THY1,ENPEP,NKRF,INTS10,CRYAB,FBN1,DACT3,PRICKLE1,RASL12,SEPT4,WI
3,KCNQ3,S100A11,DPP7,RENBP,LAPTM5,LINC01094,SCPEP1,CD68,ATP6AP1,HK2,IL4I1,SIRPA,NAGK,NUPR1,NUAK1,ST14,BRI3,ACP2,GST

LAS1,FNDC3B,SLC2A6,HM13,ERICH1,SERPINE1,RXRA,TNFAIP6,AGRP,CDH23,MFSD13A,ZNF205,SDS,VDAC1,FOXK2,PRRG4,HK1,BCL6,

2,COL7A1,DCN,IGFBP4,RAMP1,HAND2-AS1,PALMD,APCDD1,NQO1,MYZAP,MME,LAMA2,IGF1,C16orf45,AEBP1,CFI,SNAI2,EMX2,FAM2
MUB2,USP8,EIF2AK2,TFG,EIF4B,UTRN,CALU,MARCH7,SEC24D,ITGAX,NOTCH1,ELF2,FBXO18,UFL1,PPIL4,SRPK2,MORF4L2,PSMD10,U
2,SRRM1,VEZT,DUSP4,CCDC59,FIP1L1,ROCK1,NIPBL,RBM25,WBP11,CSNK1G2,INTS7,SRRM2,CDV3,VPS13A,DYNLL2,SMCHD1,TRA2B,

1,ZCCHC11,ODC1,LINC01004,ZCCHC6,PRRC2C,MBNL1-AS1,USP38,FAM133B,ANKRD36B,RLF,VPS13A,RMND5A,TTC21B,KDM3A,TMEM
TIM2,CCDC85C,SPG7,TEC,GATSL3,WBP1,TELO2,SAMD3,TJP3,TBC1D3C,USP33,ATP10D,ZBTB14,MED10,FAM45A,IFRD1,USP28,SEPHS1,
1E,IKZF3,UBR1,FAM193A,TMTC4,ATP2A3,KLF9,JADE1,PLCB1,TSC22D2,DNAH14,MSX2,MPP6,ZNF492,CWF19L2,RNF8,TTC21B,NAA35,U
,STRN4,CCDC30,HSD11B1,SIL1,GLUL,TP73-AS1,ANG,CLEC4D,PAQR5,PABPC3,ANXA7,RAB40C,ST3GAL1,CNOT8,ETFB,SERPING1,FXR2
GAP28,RGL3,REM1,FAM171B,L3MBTL3,PDE3A,FAM13C,ACTA2,TSPAN12,WFDC1,SBSPON,PDGFRB,YAP1,HIGD1B,ITGA11,COL5A2,RN
5L,EBPL,UTRN,ARPC4,ZNF644,ZBTB2,CCNB2,HLA-E,LRRC58,SHQ1,SS18,MAL,GNAI3,AKAP11,NFE2L1,KIF2C,MIER1,UGP2,REL,RSL24D
ATF7IP,PLXNC1,CS,KCNJ2,CSDE1,SLC25A28,CA2,PDE8A,DGCR6,SDE2,RCBTB2,USP42,P4HA1,VPRBP,RBM7,KAT7,JUND,CNIH4,ATP9B,T
T3,PSMD5-AS1,TTC9,GIMAP4,SLF1,ELK4,TESPA1,DNA2,GIMAP1,VPS33B,ZNF507,NOSIP,ZNF546,RBL2,FANCG,NOL12,PGAM1,SPSB2,C1
T11,ZBTB40,CRTC3,SEPT9,SOX17,SHC2,LINC00623,DTD2,ZNF684,TUBE1,SNED1,KLRC4-KLRK1,LINC00869,PRKAG2,FAM19A2,NRSN2-AS
3,MCTP1,NUFIP2,PPP2R5A,KBTBD2,BOD1L1,CDV3,USP3,KLHL21,SLC2A13,JARID2,AFTPH,CCDC71L,PNPLA8,NCR3LG1,FAM168A,LINC0
DC27,AP1AR,EIF3D,PMS1,VAPA,SLC39A10,ZMYM5,TYW1B,EDEM2,NAP1L1,ORMDL1,DCBLD1,ZNF850,USP47,TAF7,PTER,CMTR2,YTHD
DDX17,TRMT13,TGFB1,GTF2A1,ARHGAP1,TM2D1,SETD5,TNRC6A,MAP3K10,POLR2J3,BFAR,UTRN,MFN1,FAM20B,AMMECR1L,PI4KB,F
NF146,CDC42EP3,SAMSN1,RNF139,TTC17,CASP8,PCSK5,B3GALT4,GXYLT2,TRMT2B,ZBTB7B,SGK3,MID1IP1,CDK2AP1,SDHC,LINC0049

9B,CYLD,BCAP31,FAM168B,UBE3B,USP10,TM2D1,ZNF292,TNRC6B,CADM1,SETD4,PRDX1,SUPT3H,KPNA3,SQRDL,RAB3GAP1,C1GALT1
LR3A,ARID4B,PKIA,STIM2,HMBOX1,C3orf67,MKL1,KLRK1,BBS9,FAM66C,PIBF1,LINC00449,NIFK-AS1,XPOT,CCAR2,ZSCAN22,CTBP1-AS
LES1,PAM,SAR1A,LSG1,PTK2B,RPF1,CENPQ,OSBP,ZSCAN32,KLHL9,EDIL3,CASD1,TFIP11,NIF3L1,NFATC2,FAM126A,ZNF644,SOX6,LRII
ZR,LINC-PINT,ZFP30,TP53INP1,BICC1,RCBTB1,SIK3,ABCD3,CACNA1C,PTP4A2,ASXL1,CHD7,SETBP1,MYO6,PRDM2,YPEL5,EFEMP1,PER
LAIR1,FLCN,TMEM55B,SREBF1,RBM47,KPNA2,CLTC,PLD2,KIAA1033,CD163,ITGAV,ARMT1,WDR81,RCCD1,IL15RA,GALK2,CLIP1,PTCH
R16A,ESD,PIK3CD-AS2,PRR15,UBXN8,ZC3H3,PCBD2,FAM102A,ZNF324,ARAF,SMIM11A,ECHDC3,DAP,STX18,GBF1,C11orf57,CAPN3,THT
1,PFAS,RNF214,AP1AR,OGDH,GIN1,HECTD3,C1orf112,TTI1,SRGAP2,LETM1,RCCD1,ZZZ3,MCM6,BET1L,GLCE,ZNF707,SYNRG,TWF1,ZSC

G5,TMCC2,SYVN1,GRB10,ADSSL1,TCF12,SLC46A2,E2F3,UST,ACAP3,KIAA1211L,DMD,IDNK,TP53,DLEU2,SH2B3,DHTKD1,TNFAIP6,OTU
P3,UGCG,NFE2L2,LITAF,PLSCR1,RASGEF1B,CMTM6,ELL2,TMCC3,RBM47,HOOK3,SKIL,STX11,TRAF3,RRAGC,ARFGAP3,BAZ1A,RB1CC1
ACA,LAMB1,ADAMTS9,LTBP4,ADAMTS5,EID2,IFT43,C1R,RNF150,FBLN1,PRRX1,DPY19L2,ADAMTS15,DDR2,STRN4,PTK7,CPEB3,PTCH

T18,RMND5B,FIS1,SDHAF4,AZI2,GOSR2,EIF3D,CTBP1,FAM159A,FECH,CERS5,METTL6,SRGAP3,ACOX3,ERGIC1,GLIPR2,RRP36,DDX56,AI

ST,PHACTR2,VPS37D,TOX,KLF12,SCML1,CDKN2AIP,BCL6,LINC00877,MLXIP,ZNRF2,CYP1B1,ZNF524,PRDM2,IKZF2,RP2,REPS2,ATP10A,I

)EFB1,ASB9,LIPG,PLD2,FHDC1,BCL7A,HDAC9,CFH,TJP2,IDO1,LIMK2,SMIM5,PLA1A,FAM89B,H2AFY2,ENHO,SPNS2,GDPGP1,GLIS2,USP4
C7,SLC37A4,ZNF518B,DDX42,PLEKHA3,AGL,EIF2D,TTC14,KLHL9,CSNK1G2,NRF1,MTRF1L,MFF,GTF2F2,ZNF264,GBP7,VPS11,ZNF37A,H

CH2,SMARCA2,STRBP,ZNF500,IPMK,DNMT3B,YES1,REEP6,SCYL3,RTKN,VPS25,JMJD8,INTS1,ARPIN,ZNF595,MTG2,ANKRD37,KCTD5,AF

UCY1A2,KANK2,C1QTNF1,BCAR1,HEY2,TIMP3,NDRG2,PXDN,ARSJ,ZNF462,DCN,COL6A2,LPP,COL6A1,ASPN,NCKAP5,ATN1,MAP1B,TN

SMA3-AS1,RBL2,GOLGA3,UACA,DAPK1,ZMPSTE24,TTC39B,TXNDC5,MDM4,FTX,KCTD18,PEX26,DDHD2,PCCA,HDAC7,SUPT20H,ZNF43
11,FGFR1,PLEKHH3,LAMB1,LINGO1,RASL12,ZBTB39,NFIA,DDR2,COL6A3,PLAC9,LHFP,ZNF575,C1QTNF1,MID2,SLC46A3,CACNA1D,DL(

VSSA,BRD3,TRPC3,PIKFYVE,RABL2A,PPP1R10,STXBP5,FAM50B,MYADM,MBD5,ZNF25,PIK3CD-AS2,PIBF1,CEP76,SLFN12L,KIAA1468,H
30,TAP2,SLC35C2,NAE1,ZNF184,UXS1,ZNF582-AS1,CCR5,SP140L,LINC00539,SLC39A4,ZNF675,U2AF2,GRAMD3,SF3A2,FBXW2,ZNF75A,S(

L,CDC42SE2,NAA30,BTBD9,RAB3IP,SPRY2,KCTD9,GNB5,ADNP-AS1,BBC3,PDP1,GPRASP1,PIK3R1,ATP8A1,PPP1R13B,PRKCH,GJA1,NDE
32,HDHD2,U2AF2,TEX30,PPP1CA,SSR2,GTPBP8,GOPC,MAT2B,PRPF38A,STRN,NXT1,NT5C,TERF1,BUD31,INIP,ARHGEF1,GPAA1,GSE1,JA

2A2,CEP76,TBPL1,TMEM68,TMEM59,ZEB1,SUN1,CMTR1,PSMB1,FKBP1A,SART1,IFT88,FAM63B,NME1,PAIP2,SMTN,STK3,MAPKAPK5-A

EMB,CCNE2,PTGES3,FARP2,YY1,KDELC2,NREP,FANCC,USP53,EXD2,ZNF699,LBR,SMARCA5,FKBP5,BLM,PPP1CB,TRIM59,RBM15,RALY
,PAPD5,CCNG2,FURIN,PITPNC1,CSRNP1,PON2,DENND5B,ARL3,CHD7,BTBD3,FARP2,HOMER1,TAB2,BCL11B,CNOT6L,CUL3,NR3C1,CCI
'OLD3,HELLS,RFWD3,XRCC2,KDELC2,CEP295,GMPS,CEP192,LRRC20,LRRCC1,MYO19,JADE1,TRAF2,PGRMC2,PRMT3,ORC1
4,ANKRA2,HMGN3-AS1,P2RY1,TAF1,CEP126,B4GALT6,TBC1D20,REV1,CDK13,HS3ST1,BTBD9,KLF16,PPM1K,ANKRD10,HYLS1,NUTM2B
ZNF662,SOCS4,BICC1,DSP,LATS2,ARL13B,NRG2,GORASP2,CEP70,ZNF777,CDC42SE2,SCARA3,IHH,PGM5P3-AS1,PRKD1,EPB41L4A,GAB1,
HERC2,MAN1B1,SMURF2,GLB1L2,C10orf76,EXOC5,NOC2L,ZNF662,WDR6,KIAA1841,SIK2,PAN3,KPNA5,RAB36,WWC3,CCDC113,CACHD
CR14,USP35,SNAPC3,ASAH1,KCNA3,VPS37D,FCGBP,POLG2,FOXRED2,EFEMP2,PCYT2,FLJ35934,SMIM6,CEP290,ZNF189,BET1,NBR1,DYN
184,HDHD3,ZNF26,PGAM5,ERICH1,TRAPPC2,MPHOSPH8,ZSCAN9,TTC17,ZNF611,TRMT11,USP34,EIF2B5,TMEM185A,GZMH,CXorf21,SLF

HRB,ADAMTS9,IGF2,ST5,TSC22D1,FAP,FXYD6,KHDRBS3,BAHCC1,STON1,CCDC80,PALLD,COL4A2,MAPK10,AR,HOXD11,DTX1,ADGRF
PIP5K1C,PDE4DIP,OTUD4,TRAK1,ADORA2B,HIPK3,TRPS1,MAPKAPK2,CEBPB,HES4,FNDC3A,MEF2D,ARHGAP26,MED13L,HTR7,MAPK6

32,CDC27,IQGAP1,ZNF490,EMG1,RMND5B,WIPF2,PDSS1,CAST,KHDRBS1,CRELD2,SF3B5,ABI2,QSER1,KLHL8,SCFD2,AMN1,CAP1,UBE2V

SOCS4,SLC35F5,IBTK,CMIP,COL4A3BP,BTBD9,MKLN1,DDX6,MAP3K14-AS1,MBTPS1,SLAIN2,KAT6A,LEMD2,CSNK1G3,RBSN,TRAPPC8,
PRKCA,JUNB,GTF2B,SLC45A4,IER5,PER1,DIRC2,SLC25A13,KDM6B,EMP2,PHACTR1,OTUD1,TNFSF15,WLS,ARF4,CCRL2,CXCL12,DHRS3,
RBM25,PPP1R12A,UBB,ROCK1,LUC7L3,SAP18,VPS25,SCAF11,UBAC2,EP300,TBC1D5,GSK3B,PPP4R2,FBXO28,AP1AR,TMEM126A,TMEM5
,SLC36A1,TUBGCP2,C15orf48,SWAP70,NFIL3,ATP6V0D1,RGS10,RTN4,SCO2,VEGFB,TLR6,SRGN,FCGBP,AKR1A1,SNX8,DNPH1,CCL18,PQ

,CREBRF,RUNX1,CD83,NXF1,TNFAIP8,SERINC5,SERPINF2,PLAC8,ADAM17,MED13L,C18orf32,CBX6,CXCR2,OSBPL11,LRRK2,GNA15,OPA
X2,UBR5,RORA,ZNRF3,AMOT,TPT1,PPP1R9A,KLF12,GOLGA8B,USP7,ZNF335,CUL3,LDHB,C1orf61,ZMYM2,FLJ35934,SLC38A1,CDC14A,M

NC1,PBXIP1,KLRG1,ANK3,TRAT1,PDE4D,TMEM63A,NLRC5,BCL2,TC2N,AQP3,ARHGAP15,AES,SERINC5,CD3E,CD48,CD226,C16orf54,DOC
LT2,KANSL1L,REL,FLT3,CD274,RASGRF1,CIB2,VOPP1,IER5,NATD1,RCOR1,MICAL2,SLC41A2,NBPF14,BCL2A1,ZBTB10,NUB1,NFKB1,SEC
MAOA,STK40,FAM214B,FTH1,MMP14,RNF4,CNDP2,FCRLB,TMEM163,GEM,RABGAP1L,NAV1,CNNM4,OAS2,CHSY1,RMDN3,CYP27A1,TM
RM1,HNRNPL,RSRC2,H3F3B,COPS5,GLYR1,TCP1,SF3B1,BRD2,RNF6,IQGAP2,NCL,GTF2I,EFCAB14,MB21D1,SRSF4,PRPF4B,TBC1D5,TXLN

GRN,SIRPA,IFNGR2,AIG1,SIGLEC9,PHC2,P2RX7,TNFRSF1A,CCDC112,USP6NL,ENTPD1,ANXA5,RAB20,FLVCR2,CYFIP1,PMP22,FCGBP,FT
3N1,FAM133B,CGGBP1,KIAA2026,TAB3,ZBTB20,SS18,CCSER2,ADNP2,GATAD2B,CDK17,SLC4A7,ARFGEF1,HTT,ANKRD11,ERCC6L2,C1C
2,CCNE1,MMS22L,OXCT1,SF3B3,MSH6,FDPS,RPA2,MYO19,DLEU2,FANCA,SPATA33,HIST1H2AH,RBBP8,SLBP,FANCD2,LMNB1,SNRPA1,
A2,WDFY3,PTTG1IP,ADORA3,FCGRT,BLVRB,CYFIP1,ATP6V0A1,EPB41L3,CCDC88A,SCPEP1,PAPSS2,GRN,CTBS,CTSZ,SCARB1,VSIG4,CC
D,IFI30,HCAR3,YBX3,CHST15,CXCL8,RIPK2,ATP6V1C1,KLF4,HCAR2,TRIB1,SERPINA1,NCOA4,DMXL2,ITGAM,ADM,KLF7,ZNF385A,NPT
3P,SLC12A5,NRP1,TMEM176B,C1QB,RNASE1,ICOSLG,TRPV4,MRC1,DRAM2,CD163L1,WLS,ITGA9,PRNP,ZNF467,RAB3IL1,HERPUD1,CCD
PP2CA,TOB2,CREBBP,SRSF6,TLE4,SMARCA5,COPS2,CUL3,PNPLA8,FBXO11,LATS2,YTHDC1,VPS13C,CDC42EP3,YPEL5,GOLGB1,BRWD3
US1L,MMADHC,NOSIP,GOLGA4,ARFRP1,LEMD2,GCH1,TP53I13,PPP1R11,UQCRH,MOSPD3,ENOX2,ZBTB37,ELMO1,FXYD5,CDC42SE2,NS
NF789,ZNF436,OPA3,CCAR2,ATG4B,EXT1,TYW1,GEMIN8,BLZF1,FBXO33,ERCC5,VPS53,ZNRF2,ERAP1,PHF3,YTHDF1,ZNF572,KPNA1,MB2
ASM3,SHOC2,NDUFB3,C7orf55,CNOT8,ABCD4,MAML2,SESN1,C5orf24,RICTOR,TMEM147,ADAT1,RNASEH2B,EIF2S3,EMC4,RFK,GOT2,CA
KD2,CLTB,POLR3A,ZNF684,EIF2AK1,EYA3,TRAPPC5,MAPK1IP1L,DLGAP1-AS2,STAU1,MTIF2,SRSF7,NIPAL2,CYB5D1,BLZF1,GTPBP4,WI
CVR2A,PHF20L1,MAST3,MBTD1,DENND6A,RBM18,ATR,POMZP3,HSDL1,VIPAS39,ZNF395,ZNF584,ENTPD5,TMEM175,SWT1
LGAPA1,HIP1R,RNF19A,VPS37B,CNOT4,EML4,ZDBF2,JUND,RANBP2,YPEL5,RGPD5,ARNTL,MARCH5,TSC22D3,ANKRD12,CSNK1D,ZNF

ARNMT1,SPRY1,ZBTB40,PPP6R2,ZNF322,ATP11B,SH3KBP1,UTP14A,SMIM24,VPS26A,ASCC3,ANKRD11,ASAP1,PCMT1,STARD9,SFXN1,T
TB45,SEPT9,NFATC2,NUMB,DBP,ARHGEF10,GTDC1,ZNF558,CTSB,CHN2,SGK1,GABPB1-AS1,ARHGEF3,MDS2,ZNF644,ELMO1,EXO5,LIP

19,RFXAP,SHMT1,RNF126,PCNA,POLE2,GEMIN7,BRCA1,HDDC2,CDK4,GZMH,SLC25A53,LIG1,TCF19,PHOSPHO2,RPA2,ZNF257,CD320,AT
D36C,CCDC14,MIF,UNG,NRGN,ING3,MCM4,PSMC3IP,PSMB10,DYRK3,C17orf49,NDUFB1,TMEM214,TOMM5,CDC6,NUP153,XRCC2,PPIH,
S1,MAPK14,DCAF8,ZC3H13,RPA1,ZNF519,PCNA,CEBPZ,RPRD2,FKBP4,TAPT1,SCD5,DDX10,PAICS,ZNF84,MTG1,PAQR4,ZBTB18,PTPN11,

AA0430,GTDC1,TCF7L2,KCNE1,COMMD3,E2F6,GATAD2B,OSER1,TEKT4,CASC4,TMEM170B,SLC7A8,EGR1,ZNF318,SLC38A2,SYP,SLC39
EM30B,ROMO1,C4orf32,ATP5I,STIL,CCNB1,CENPA,ANPEP,STAG1,ERBB3,BTAF1,CEP152,NRGN,MCM3,ELN,MAPK6,PPP1R13L,NDUFB1,
NRPD1,SSRP1,STMN1,RAD51,FANCI,CBX3,SUV39H2,CEP57,HIST1H1D,DDB2,MXD3,MND1,CDT1,APOBEC3B,UBE2T,DHFR,SNRNP25,RFW

6A2,PXDN,C1S,TCF4,CRYAB,PTN,CLMN,LGI4,NFIA,MYH11,FGF13,APCDD1,FXYD6,FAP,TMEM47,PALLD,GUCY1A3,HOXD8,CLIC4,GUC

STARD8,ARAP1,DPP7,HGF,TMCC3,HOMER3,INAFM2,ARHGAP24,SH3TC1,ACP5,TUBA1A,ZNF267,NFKBID,INF2,IFNGR2,JUNB,CCRL2,IL1
S1,CCR1,L3MBTL4,SLC5A3,EIF2AK2,ATF3,KDM4B,METTL7B,DRAM2,STARD13,WWP1,LRRC41,DHRS3,CPEB3,CD163L1,PDGFB,AKR1B1
B,S100A13,DGKH,LINC00877,CLMN,EHF,GATS,ULK1,AK4,SERHL2,PSTPIP2,MAP2K1,C12orf75,TMSB10,CDHR3,KDM7A,CSRNP1,RASSF2
TB1,RGPD5,RNF19A,ELF2,FAM210A,RALGAPA1,FAM133B,POM121C,PPP3CA,YWHAZ,TXLNG,TSC22D2,SMCHD1,SOCS5,SPRY1,EZR,BAC
8,MYSM1,PCMTD1,SUFU,GLE1,ATF6B,MARK3,NNT,SETD2,CD200R1,FAM91A1,MUL1,ZNF217,TM9SF4,STRN3,DYRK1A,EXOSC6,ERLEC
PP1R7,LEO1,HPGD,EXOSC2,APOBEC3G,RTCA,MNAT1,RRS1,WIPF1,GZMA,JAK1,CHURC1,CD247,PILRB,STAP1,SEMA4D,CCDC97,WDR1
R,ABI2,SLC3A2,GLRX5,SMIM7,RHOBTB3,BAIAP2,VBP1,CBFB,SLCO3A1,CCNY,COX4I1,ARL2BP,USP6,RRBP1,TMEM127,PDHA1,C6orf1,P
2,MFSD14A,NR2C2,VPS13B,UBE2Q1,SYNE1,ZBTB14,GTF3C3,KLHL2,ANKRA2,PI4KB,BACH2,CNOT7,CDKN2AIP,RNF170,THAP5,IPCEF1,

,CTSW,SH2D2A,NCAM1,FASLG,ORAI2,ITGAD,ITGAX,VPS37B,UBASH3B,PYHIN1,ARHGEF1,TXK,ACAP1,SH2D1B,B3GNT7,PPFIBP1,SKAI
C,XRN1,TAOK1,FAM210A,STT3B,ID2,MBTPS1,C18orf32,ZNF622,SELT,FAM214A,ABHD5,UBE3A,USP42,TM7SF3,DDX21,UBE2D3,SRSF5,II
P2,NR4A1,ELOVL5,SDK1,ZNF628,PPP2R5C,HBP1,SIN3A,CEBPD,KIF13A,ZMYM1,TCF3,ZMAT1,ZNF341,AFF4,ACSL3,MAPK1IP1L,TCF4,JU
LA,OTUD7B,MSANTD1,PEAR1,CASKIN2,SMAD1,CPNE2,EVC,EGFL7,TCEAL4,ACKR1,GHR,PSORS1C1,RND1,TLE2,USP25,IL15RA,RALGA

01A,CBLB,TNRC6B,SLC16A7,ADD3,EMB,SMCHD1,CYTIP,RNF157,TC2N,C10orf35,PPP1R13L,MLLT3,ODF2L,PBXIP1,AES,TSPYL2,FLT3LG,
PINT2,TFEC,NFKBIZ,SCO2,CLEC4A,AIF1,CLEC10A,ZNF385A,KLF4,PILRA,ETV6,CLEC7A,IL6R,LCP2,SPI1,MGAT1,PLBD1,PFKFB4,ALDH3I
LL4,TRIM68,GFOD2,DENND5B,RARB,OSBPL9,SERTAD4-AS1,RNF144A,SLC23A2,TPST1,ID3,EI24,PRTFDC1,GIPC2,CEP170B,NR2F2,COL4A
OCTN2,SLC35A2,SLC35A4,ALDH16A1,SNRPB,C5orf51,BAX,EFHD2,AZIN1-AS1,WAS,POLR2H,BCL2L12,CTNNBIP1,ZHX2,GALE,SFT2D1,SA
LAIR1,FZD1,FEZ2,MKNK1,ITSN1,CCR1,TNFAIP8L2,ODF3B,PILRA,TBXAS1,BLNK,CSF1R,PLD3,BMF,LGALS9,SLC22A18,LTBR,LY86,HGSI
GD2,PELI1,GRB2,CCDC88A,PIK3R5,SCML1,ZNF706,LYN,TPRA1,RNF19B,TNFRSF14,NINJ1,STX11,RUFY3,RGS10,LITAF,CFLAR,IFNGR1,GN
3D,TRIM32,RASGRP2,PPIA,NPIPB3,SLC35G1,MCOLN2,ELMO1,CISH,STMN3,IFI30,ISCU,TESPA1,AMIGO2,LSP1,SYNE3,ARHGAP22,PLAC8,
MCL1,UBXN8,FBXO4,HMHA1,IPO8,GAS6,APC,SCAMP5,SLC45A4,COA5,ITSN1,ABCD4,CLEC7A,RNF139,MESDC1,SLC46A1,MAFK,OSBPL2
HGAP21,AKAP9,FAM133B,STX4,GADD45B,MLXIP,RGS1,AMD1,CFAP44,AHR,MYADM,SEC63,RRAGB,ADAM17,SYVN1,GPATCH2L,OTUI
NKRD28,KPNA4,TRA2B,LONRF3,IRS2,GRAMD1B,ELL,RBBP6,ATP1B1,SIRT1,JUND,ABCC1,TRA2A,CSRNP2,SLC40A1,PHLDA1,ABHD5,CL
5,USP2,ARPC1B,APLP2,ARFGAP3,HEXIM1,HIF1A,KLF6,ITGA9,RHEBL1,DSP,FOSL1,ICA1,TBC1D5,POMP,NEK6,MAL2,PDGFC,MSX1,MCU
L1,PDE4A,CNOT2,GABARAPL1,IDI1,RAB3GAP1,HCG18,PIP5K1A,FBXO33,FRAT2,SELK,GPR65,JUND,ZNF263,COL4A3BP,KMT2E,RASSF8,

:1,CDKN2D,PHF19,ARL6IP1,FAM72C,WDR62,CCNF,KIF20B,HP1BP3,ODF2,POC1A,EMC9,PTTG1,FAM83D,CCNB2,NCAPH,SPC24,CDK2AP2

AIP,TMEM106B,TIPARP,SMAP2,GREB1,CDC14A,SERINC5,RABGEF1,TRIB2,EGFR,NCBP1,GOLGA8B,KCNA3,RCBTB1,ERC1,ASXL1,TP53I
.DS1,RCAN1,RALGDS,C16orf72,PRKAG2,ZFYVE16,LCP2,MALT1,FRMD8,SLC15A3,ARL8B,PFKFB3,FBXW11,PIM3,AMD1,OGDH,RNF19B,T

NK3,ARID4B,PDE4D,ODF2L,STXBP6,BTBD11,HBP1,GFPT2,FSIP1,FAM65B,MYO10,HOXB5,PARP15,LMNA,CHD7,CCDC109B,PITPNC1,SLC
LINC00309,RANBP9,SHC1,PNPLA2,GNE,CLIP1,CENPA,CKAP2,MLKL,NUDT21,PMAIP1,XRN2,USP10,NUP188,MED1,DHX9,CDK13,GSR,KP
2,PDHB,IFRD2,SLC27A5,LUC7L2,ASH2L,NKAP,LARP1B,IDH2,HIST1H1E,CLEC2B,POLR2J,TUBA1B,MITD1,PPP2R3C,LSM3,HIST1H1D,ZCC
3XO10,COCH,SPECC1,SMAD9,SLC29A4,TMEM241,EPB41L1,PARD3B,C5orf30,PIGA,DACT1,DENND5B,SHANK2,SAMD4A,SALL2,ESR1,DU
CD247,NKG7,ARHGAP9,XCL2,ITGAX,FAM83D,STK17B,KLRC2,FZR1,TNFRSF18,PIK3R1,CDC20,CENPN,CMC1,SYTL3,AUTS2,RUVBL2,SL

LG1,CTDNEP1,TPST2,MR1,CD53,TMEM248,OCIAD1,CD164,IGF2R,RTCA,DERL2,ATAD1,RBMXL1,TNPO1,FUBP3,ADCY7,VPS11,ANKFY1,
NF125,TTC9,UBASH3A,SLF1,GSTM2,SENP7,CDK12,APBA2,GOLGA8N,MOB4,TRANK1,NOL9,CRACR2A,RASA2,SUN2,GOLGA8R,DKFZP43

YN1,PTMA,LEMD2,CMC2,POLR2K,SNRPB,CORO1A,NELFCD,CDT1,SEPSECS,ABHD5,TBC1D5,ADAM10,KARS,PPID,GID8,METTL25,ERIC
,GPATCH4,POLR2F,COX6B1,EXTL2,PQBP1,NTPCR,SLC30A9,TRADD,DKC1,HARS2,WDR25,GIGYF2,COX5B,ZNF337,TMEM126A,FRA10AC
F28,CCDC71L,AIG1,MRS2,RNASE2,STXBP6,CKB,CDC16,MEFV,MAPKAPK2,SLC25A33,PCYT2,TTC7A,CD300E,NCBP2,RAB4A,C1R,ABCC3,
C22D1,NTM,STXBP5,PLIN2,SPG20,MSRA,CCDC170,AHR,DZIP1L,SPECC1,GRAMD4,FOXP1,TFE3,ANKRD50,RHOBTB3,SNX7,CRYBG3,ZFA

PD8,PRKAB1,CANT1,ZFYVE1,CPNE1,FAM49B,DDX6,REEP6,UGCG,ZBTB2,TMEM57,LSP1,SMURF2,BCL3,ZNF674,ATF2,SHARPIN,HDAC9

,RCC1,CARHSP1,RAB27A,MSH2,ORC2,PIN1,IPO5,ASCC3,PACS1,WDR90,CMC2,DCLRE1C,PLEKHF1,PTBP1,POLR2K,GEMIN8,GINS4,CGGI
19orf33,RIPK4,HGD,EFNA1,PPM1H,SCGB2A2,SMIM22,LINC01451,C6orf132,LRRIQ1,SERINC2,PTP4A2,HMGN3,F2RL1,GDA,SDCBP2,SLC34
10,MEDAG,RUNX1T1,GJA1,ARMC1,PXYLP1,CTTN,PTPRS,F10,GULP1,PHLDB1,SNCAIP,HOXA11-AS,RSPH9,IFITM3,ADAMTS9,CRYZL1,LT
AL4,TXNDC5,YPEL2,BCO2,TRAF7,HNRNPH3,LPGAT1,HEG1,PTPN18,TXNL1,CTNNB1,PCIF1,TOX2,FNBP1,PTGDR,KIAA0100,FBXO9,GAB

1,SRF,TRIQK,FAM167A,PDZD7,NGFR,BEX2,PRR5,CRMP1,SLC46A3,CITED2,LINC00886,AK3,GOLGA8A,ITGB7,HOXA7,PLD2,CDIPT,SDK2,

5,SOCS2,CHAF1A,ABHD8,AAMDC,PRR5,FAS,ACSF2,TMSB4X,PRR15,RUFY2,AMFR,GRAMD3,MLST8,PIK3CD,CAMK4,LEF1,ATP1B1,UQC

L16,FNBP4,HIST1H4C,PARP10,C5orf56,CD47,AGK,ABHD3,ORMDL1,ORAI1,SUN2,CRLF3,PPM1K,ZHX1-C8orf76,EEF1D,RNASEH2C,TRMT1
R68,KIAA1456,PLCB1,GOLGA8M,MBD1,DSEL,XYLT1,LTB4R,ST3GAL5,TRIM7,KIAA1211L,RASEF,SNTB1,ATP2A3,PHC1,GOLGA8R,ETS1,
EG1,PARP8,ABLIM1,OGT,AUTS2,OPTN,TC2N,TLK1,RNF157,CPNE7,SLC16A7,BTN3A1,KIAA0922,GAS8,SYNRG,SLC12A6,SS18,PVT1,ARH
LIFC1,HNRNPA2B1,FAM192A,H2AFV,NUDT5,HJURP,LSM4,STRAP,DTYMK,FBXO5,BRCA1,SLC25A3,RANGAP1,ACTR3,TRAIP,RAD51AP1,
P,GRAMD1A,ODF2L,ANKRD18A,ABCD4,LSR,SPSB2,ZBTB26,AMIGO2,VPS11,ZNF195,METTL2A,THOC5,ACTR6,ZBED5,BTD,DCTN2,GABP

N1,CDKN1A,CHD1,OCLN,SGTA,TBC1D4,MAP4K4,RIMKLB,BCL2,THEMIS,FAM60A,ZNF516,ARHGAP5,DSP,ELMSAN1,NPM1,GNAO1,ETV3
AMTOR4,GRN,GBA,ARSB,GMFB,CD164,HIVEP3,HTATIP2,IMPACT,CD163,MTSS1,TMEM55B,TBRG1,RNF130,GAA,FAM134A,PFKFB2,CCD
70B,PTGR1,STAT1,IFI35,IFIT3,GBP2,DDX58,LGALS9,MTFR1L,FBXW5,FAM234A,TMUB2,IFI44,CD9,SLC35A4,CD164,SLC16A3,CHID1,SLC2
'BG,ZGPAT,ZFAND6,DENND6B,LINC01588,LYPLA1,SCN4B,SOGA1,KLHL5,MYO1E,SH3BP1,LRIG3,ACTR3,CACTIN,CRIM1,ARL5B,TBC1D
PB5,DDX60,MUC5B,CEP126,TMEM106B,CCZ1,METTL17,WDR6,ZCCHC3,MTA2,ATP8B2,PARP9,MUTYH,IRF7,ZNF737,SP4,DDX39B,OLFM

HACTR1,EIF1,ELMSAN1,HIST2H2AA3,PER3,NR4A2,ERF,TAGAP,IFRD1,SLC45A4,HPSE,TPT1,EGR3,NFKBID,RGL2,DTX2,NFKBIZ,SLC40A1
RP1,YTHDC1,PRDM2,GPBP1,RGPD6,ANKRD37,VPS13C,CHORDC1,IDS,TOB2,PPP3CA,CLK1,REL,TIPARP,NSMCE3,SIK1,SRSF7,FAM13B,BT

TP4A1,CXCL2,FEM1C,CLINT1,USP38,ARL4A,ANKRD28,KCTD15,THAP9-AS1,SLC25A33,SPOPL,YBX3,TIPARP,UBAP1,ACSL3,REV3L,ANK

SHZ2,NCK2,ZNF512B,ZBTB39,ZC3HAV1,TMEM50B,XRN1,ILF3-AS1,SYNE1,MAST4,RNF157,CDC14A,PDK1,RCAN3,LINS1,NDUFV2-AS1,IN
SA2,CASD1,NAA35,LINC00680,ZNF266,CDKL1,OGT,PTPN14,ABHD17B,MEX3C,CASP3,STK26,MSL2,RBM18,SMNDC1,PRDM2,SMCHD1,PR
NINJ1,KLF10,RNF141,JMJD1C,FAM46A,MAPK6,CPED1,CLEC4A,UBE2D1,THBD,ZFP36L1,ADAMTSL4,AIF1,MNDA,CD300LF,PLCB2,C11orf
,EXPH5,RNF180,SGPP2,DCDC2,TRIM2,RIMKLB,ANK3,ANXA3,ESR1,YWHAZ,SPTBN1,TJP1,PPAT,ARIH1,HMGCR,MTUS1,SLC26A2,IL1R1,A
SYNJ1,ATF3,YWHAH,TAB2,SAT1,NFE2L2,GTF2H2,SEL1L,NFATC1,ING2,ST13,PABPC1,BTBD7,PLEKHO1,PNRC1,CCDC117,DCBLD2,TUBA

HGAP5,DUSP8,MLLT4,C6orf132,ABLIM1,TOB1,ADRB1,ST6GAL2,PDZRN3,CTNNAL1,DGKD,FBXO11,RNF150,CAMK2N1,RGPD8,DOCK1,CA
H,PERP,PDP1,SLC16A7,NAA35,L3MBTL4,PRR14L,F3,USP33,FAM135A,FOXJ3,MAPK9,IL6ST,MAP3K4,UBXN2A,RHOA,SGK1,PARP8,PANK3
,TRABD2A,TSHZ2,PLAG1,ADTRP,STMN3,KRBA2,PDK1,NOSIP,ZBTB25,ADD3,JADE2,PVT1,EPB41,CYLD,SLC22A5,NOL11,PI16,SLC37A3,C

RBS3,PAG1,NFATC1,NBPF1,GALNT10,BBS2,RAB12,LINC00969,CTDSP2,SETD1B,MICAL2,MAD1L1,DGCR2,SEC23A,ACSF3,IGF2BP3,ZNF28

HOQ,ZFHX3,GABARAPL1,ITPRIP,CD55,JUND,ANKRD37,PHF20,OSER1,HIC1,SIK1,OTUD1,SEC23B,PRPF40A,KLHL2,CDV3,CMIP,UAP1,SKI
,SLC12A7,SKIL,COL4A3BP,HIPK3,OTUD1,KIF13A,CORO1C,PLXDC2,CTNNA1,MYOF,NETO2,GAS2L3,WDFY3,ABI1,ZFAND5,P4HA1,PICAI

PRR5,FNIP1,SPPL2B,USP34,ARMCX6,PPP1R10,SLC12A4,DOT1L,NABP1,ANKH,CCNL1,SNX2,MEF2C,NFKBIB,GAA,BHLHE40,PAG1,ARHGA
P1,NAA50,CSGALNACT2,ZBED5,SEC24B,BASP1,PTPN1,MCMBP,TIMM23,PAK2,HNRNPU,QPCT,PLEKHB2,MBOAT2,ROCK1,HOMER2,MG

CK11,FLNA,NR2C2,CDKN1B,RAB30,RORA,EPHB6,TMEM41B,DDX6,ZFP30,FYN,FAS,ZDBF2,ZNF652,GLS,SEPT9,FAM117A,OTUD7B,IHH,B
,C2orf74,KCNA3,SMIM6,CNFN,EEF1A2,MEOX1,CD3D,NADK2,MYH9,FLJ22447,FAM76B,KLRG1,CISD1,KCTD1,GNG11,WFIKKN1,TBC1D3I

IS4A7,CADM1,SLC48A1,SLC7A8,SLC17A5,TMEM106A,OTOA,CD84,USF2,GLUL,CTIF,SGPL1,LHFPL2,PKM,ANKH,BCAT1,FCGRT,NADK,A
IS1,NOP10,PROSC,SZRD1,CMTM7,YIPF1,POLDIP2,FNIP1,PCBP1,MPC2,MAN1B1,DAZAP2,GNB2,GPD2,KCNJ2,MALSU1,PKN1,OSBPL8,SNC
MP2,SPRED1,CORO1B,IL17RC,USF2,ARID5B,C1QB,RILP,VAMP3,SNCA,BLNK,GPNMB,ALG1,SLC35F6,NAGK,APCDD1,ZNF706,EMP1,M6
ID4A,PARVB,SLC17A5,NUDT9,TECPR2,RNF185,P4HA2,OSBPL1A,CYFIP1,GOLGA5,GNS,RBM47,NGLY1,RREB1,RAB39A,GFM1,ACAP2,AF

,RORA,C1orf21,PPM1H,PLCB4,LEPROTL1,MBNL1,MYO10,ANKRD12,SLC5A3,TCP11L2,INO80D,RRAGD,ADARB1,UBE3A,OXR1,ADAM10,I
D2,KLHL21,SCD5,AIM2,MCM3,TTC7A,HIST1H4A,CABYR,PPIF,C2CD4B,ETV1,ZFAND4,UHRF1,DPY19L4,KCNQ5,IKZF2,USP53,HIST1H1A,
HIST1H1C,TOP2A,DLGAP5,CCDC18,CEP55,SPATA33,CENPO,UBE2T,CASC5,H2AFX,RFC3,NUF2,BUB1B,HIST2H3C,CTCF,ATAD2,GTSE1,B
ZFP1,GOLGB1,ZNF543,CDC42EP4,ENO3,IFT27,ALG9,ETV2,ZNF83,SPATA7,SLC35A1,KDM4C,ERF,AK1,ZNF675,INPP5A,TRIB2,EPAS1,SNRP
LHL21,PIGA,CDKN1C,EHD1,SLC24A4,USP12,CXCL8,TRAF1,TLE3,FAM84B,CSRNP1,ERO1B,ZMIZ2,ID1,CD1A,NRARP,MYLIP,ELF3,TWISTN
,HIBADH,BIN1,ZNF83,ZRANB1,HIF1AN,MOB3C,KLHL36,ZNF33B,SP110,RUBCN,SMIM7,APOL2,LLGL2,NFKBID,SLC18B1,ADSSL1,SRPK2

,NEIL2,IRS2,VGLL4,ITGB8,RAB11FIP2,ARHGAP5,PIK3CA,AFF3,IPO8,IPPK,PKD1,TSPAN3,RHBDD1,SPATS2,BMI1,FOXO3,DOCK1,WNT4,P
,TGIF1,HIF1A,ABLIM3,RAB5A,ARL5B,NFKB2,NFKBIZ,SELK,UBE2J1,RHBDF2,HPS3,JDP2,PTGER4,MB21D2,LPXN,IGLON5,SNX33,P4HA1,S
R2,ABCA5,MAST4,MAN1A1,PPP3CA,SMAP1,IKZF2,TIAM1,SPTAN1,FZD6,CA2,NCKAP1,GRB10,NUDT4,SVIL,PTGER3,LPGAT1,KDM4C,AF
3,MAP1B,RBM24,FAM162B,RASL12,CNTN4,PTPRS,CAV2,LINC01197,ROCK2,CSRP2,RUNX1T1,HIGD1B,PLCE1,AAMDC,ABCC9,GUCY1A3,
G2,CASC15,NFIB,MAP7D3,CDH6,FOXC1,CACNA1C,NR2F2,CDH11,PTPN13,SLC24A3,SERTAD4-AS1,PHLDB1,SYT1,SERTAD4,PDLIM5,RBI
,EPB41L2,NFE2L1,PTPRJ,ARHGEF11,ARPIN,PSD3,IST1,HNRNPH2,PAPSS2,RHOBTB3,SEC61A1,TMED10,MPZL1,CPM,NPL,PLBD2,NADK,E
P300,ACAP2,MYOF,ALAS1,PABPC1,CBL,CXXC5,TRIM25,BCL6,PEPD,PIK3C3,HK1,CUL2,TCF7L2,MX2,CHST11,DFNA5,LTBP2,NUAK1,TM
OX2,FLRT2,NFIB,ADAMTS1,MEIS2,HAND2,NFIX,NR2F2,WNT5B,CCDC80,COL1A2,C1QTNF1,DNM3OS,PTPN13,HOXA3,SNCAIP
,RB1CC1,USP7,SPEN,DYNC1H1,FAM102B,NUP58,ARF4,PHLDA1,IDI1,LRRFIP2,HIPK1,PRKCI,ARHGAP10,CD1A,UAP1,ZFC3H1,TOB2,MOB
ALNT11,IL18BP,ARID5A,TMEM50B,PLXNA3,MAEA,ARFGEF2,IL4R,IPO9,GTF2A1,TRAF1,RELB,MLLT4,ATXN1L,SLC6A8,UTP6,LRRC8B,I
L2,CKS1B,CSTF3,CARD8,HIPK3,WIPF1,HAUS3,CDKN2D,FBXO5,DEPDC5,SLC8B1,EDEM3,HIC1,GPN3,OPA3,MSMO1,KIF11,HNRNPA2B1,I
LR1D,ITGAE,C1orf54,C19orf66,RRM2,CLN3,RBBP7,VPS18,ZNF35,RAE1,C5orf22,BIVM,SSRP1,APMAP,FAM46C,MZT2A,MITD1,RGS10,NRM
R1A,C1orf174,PIM1,NOL7,INCENP,PRCC,PSMB1,SRP19,C14orf166,SNX10,SNX17,YWHAH,H2AFY,TAF9,MTUS1,PARK7,ZNF524,PNRC2,SN
EML4,CERK,NT5C3B,SPRED2,PDK3,TGFBR2,MAST1,HAR1A,LCOR,PHACTR2,TBX2,DCAF7,ZNF580,KRBA2,URI1,TNXB,KLF11,FLJ13224,I
D1A,APPL2,TSPAN33,DUSP6,ZNF618,SLCO3A1,FAM20B,CDC14A,COL4A4,PLK2,MOK,SCD5,PIGZ,SLC41A1,KLHL15,GSR,COX10,TNS3,SP
YRK1A,EML4,FAM53B,KMT2E,UBXN7,RB1CC1,KDM6A,CD163L1,RERE,LRRC8C,KANSL1L,SLC35D1,COLEC12,HIVEP2,NMT2,KANSL1,C
DKK1,PJA1,TRAPPC8,WDR45,CABYR,ODF3B,LIMD1,BCKDHA,ZNF226,FLNB,CEP68,ZNF611,ZNF567,ZUFSP,CRTC3,C7orf55,AAMDC,TCE
IDR,MINK1,TRIM8,PGPEP1,CCDC47,CC2D1B,CDT1,NCOA6,TRIQK,STAT5B,AZIN1,PIP5K1C,AKR1B1,TRIM47,MPHOSPH8,MFHAS1,HERC
H1R,ADAMTS15,SMOC2,ACO1,SALL2,PAPLN,RBFOX2,KANK2,MEG3,PDGFRA,MFAP4,GULP1,ADGRL2,TWIST1,HAND2,SORBS3,HOXA
M1,PRSS23,ADAMTS5,DPY19L2,GULP1,MXRA8,ENAH,PHLDB1,WWTR1,SMOC2,ABCC9,PKIG,COL1A2,ADAMTS9,ANTXR1,MEIS1,PMEP
CS5,WAC,PHF3,LEPROTL1,TRAF1,PSME4,HECA,HBP1,PAPOLA,VPS13A,TSPYL2,ISCA1,PDE4D,USP7,N4BP2L2,DCDC2,UBE3A,ELMSAN1,
,CDCA7,ALG8,PLEKHG4,MED30,ZNF764,NBPF20,NOL9,EXPH5,INPP5A,ALG11,LINC00638,NSMAF,LRRC37A,DLGAP1,SNX18,PIDD1,BENI
C1QTNF1,SEMA5A,GULP1,COL5A1,PDGFA,FTX,SEMA6C,PRICKLE1,TBL1X,DLC1,ZNF436,ADGRA2,EFNB2,MEX3A,MAGI3,ADORA1,EHI
C4,ZMYM4,TCEAL4,PTN,ADCY1,NES,SNX21,COL6A3,APP,LHFP,GUCY1A3,FAM171A2,GXYLT2,PINK1,IGFBP7,SOX5,CLMN,LACE1,SEPT4

1,RNF19A,PSPC1,GPR65,CCDC93,PIK3CD,PRKACB,SLC15A4,MUT,SNW1,TOPORS,ZFP36L2,CCDC186,N4BP1,MOB4,AKAP9,NMD3,DHX9,(

P1,PKD1,RASA4,TMEM255A,TBC1D1,MXD1,LGALS3,SDC3,MTCH1,ABHD13,ARMCX2,RAI2,TMEM30A,MICAL1,ZNRF3,KIF27,PAM16,HNI

MEZ,SLC22A15,RBMS1,OSER1,NKAP,RNGTT,PRDM2,ALG12,RICTOR,GOLGB1,MPC1,POU2F1,ARHGEF40,RHBDD1,ZMAT3,DIS3L2,CEP35

,OSBPL9,KLB,UPF3A,SOCS7,THRA,PDZRN3,PTP4A2,NPIPB5,KCNQ1OT1,LSMEM1,SPDYE2,AHSP,NGRN,CYCS,PCAT1,PRR5L
F12,F5,GRAMD4,ARL8A,REL,TBC1D13,SKIL,ZNF527,HLA-DMB,ZFYVE21,FAM189B,FAM188B,FN3KRP,RARRES2,HCN2,ARHGEF28,SORE
DK14,HEBP1,MFSD1,ATP6V0D1,PLXND1,SMIM4,RHOBTB1,DSTYK,GNS,GAA,AKR1B1,CELSR1,SDF4,FAM131A,ARHGAP12,HNRNPH2,GN

AP2,MAFG,UBE2Q1,PES1,ALG3,PUS1,MIR99AHG,LINC00884,EFTUD2,PTP4A2,MAFF,SLC35B2,FAM105A,ACLY,TOP1,MAGI1,KLF3,HLA-I

P18,SP3,ING4,MFGE8,FAM179B,FUBP3,KATNBL1,ABHD15,TFG,ZNF664,FAM32A,SETD6,MTG1,ZNF213,NEK7,LTBP3,UMPS,PODXL2,ADA

IGAP29,ETV2,NES,CTGF,TNFRSF19,PXDN,ADAMTS1,SPARC,PDZRN3,HOXA11-AS,KCNAB3,ROCK2,PLAC9,NCKAP1,CCDC74A,PRKAA2,
,UACA,SNCAIP,LIMA1,SLC2A4RG,FBXL19,PBX2,SPATA18,TSNARE1,KLHL6-AS1,PIK3CA,MARCH9,TRIQK,MANEAL,UST,ITGA5,HAR1A

NF506,SOCS2,CNOT4,LDB1,MEX3C,ORMDL3,ZC3H11A,RFX1,TMEM136,R3HCC1L,C1orf109,BCORL1,ITFG2,GTF2A1,PPP2R5C,EIF1AX,PPI

,PIK3CD-AS2,GBAS,BRI3BP,DALRD3,EEF1G,AFF4,ZSCAN12,SLC38A7,TCF4,SGK1,ACTR3B,NR6A1,PPP1R13B,FAM19A2,RAP1GAP2,MTH

FAM84B,PLK2,PPP1R9A,ADGRL1,CSRNP2,TOB2,SMAD3,XYLT1,TIPARP,NR1D1,TOX,PHF12,TMEM243,ZNF667,RORA,NCR2,SMAP1,FURI

SS12,MLLT3,TC2N,GLDN,RFX5,KCNC3,WWP2,RAB12,CHODL,PIK3CD-AS2,POU5F1,PRKD1,HOXB2,CHI3L2,CSGALNACT1,MARCH10
D45A,ARHGEF1,PNN,ZFP36L2,SLC25A38,ORAI2,ECI2,CCND2,ATP10A,SEPT6,TOP2B,FAM46C,RASSF8,AFAP1L2,PDCD2,EMB,MNAT1,STK
,RUFY1,DVL3,ALDH3A2,PLGRKT,UFL1,SCFD1,PI4KB,SLC23A2,UBE2R2,ARID5A,ZFHX3,GCC2,TECPR1,TBL3,ENOSF1,ACAP2,LSS,ILVBL
,MGAT2,POLE,AK5,ACRC,PWWP2A,NUP210,SLC43A1,MTAP,ARID2,CNOT10,GPAM,GPAT2,RRP1,SV2C,GPR88,ABAT,C20orf96,CTDSP1,JH

NX1,LINC00881,ECE2,ADAMTSL1,SMAD1,ZNF385D,KIAA0513,PLXNB1,C15orf62,CYP2U1,GULP1,HIVEP2,PCDH1,C19orf81,AGO3,ASH2L,L
,MECP2,SUN1,FAM84B,ODC1,ANKRD12,CDC42EP3,LAMC2,MAP3K1,CREM,RASSF2,BACH2,PTPN14,SOS2,SLC20A1,ARIH1,ZNRF3,SLC22

,COMMD3,RAB39A,TSPAN33,FAM110B,STX6,ANKH,PIK3CA,SOS2,FAM135A,UBXN4,TMEM117,MAP2K4,WWC2,YPEL2,MKRN1,RAB6A,

P1,PTPN21,TRAK1,CDT1,MSH2,GRB7,YPEL1,IGF1R,PITPNC1,TMEM9,FAM124A,ARHGEF5,S100A13,FOXN3,C6orf48,CSRNP1,PREX2,WWT

D42,ZFP30,RAG1,MAPKAPK5-AS1,GPR15,GRTP1,NRCAM,MAGEH1,C1orf106,DACT2,C6orf118,ST6GAL2,PTH1R,C10orf91,TOB1,ZBTB10,M

8A1,CHMP6,SETD5,TMEM238,SLX4,MANEA,NCOR1,TOPBP1,CCDC7,TMEM261,TTF1,SSBP1,PAQR4,XRCC5,CD19,SMCHD1,ZNF45,NUTM
B,KANSL1,SYNE2,SPATS2,ERRFI1,FBXL5,SESTD1,FAM129A,KIAA0922,AHCTF1,OCLN,STXBP6,CNKSR3,KLF5,C1GALT1C1,MAP2K4,RAI
M98A,WDFY2,EIF5,LRCH1,ZBTB1,MYSM1,CDC73,MED16,PAFAH1B1,ANKRD52,MAP3K3,PITPNB,TIAM1,WHAMM,EIF4E,NIPBL,CAPN15,
C,NCK2,TFAM,HELZ,TTC9,PRKCQ,IVNS1ABP,SPRY1,ECI2,HERC6,JADE1,SMG7,UHRF2,AEBP2,TC2N,OTULIN,ZBTB25,RUNX2,PURA,STK
BA,RASSF4,IFNGR2,PYCARD,GPAT3,RNASE6,RAB34,CTSH,CCDC88A,TBXAS1,LPCAT2,ADAM28,ATG3,SLAMF8,RAB32,GPX4,FAM26F,F
OLCA1,NR5A2,RASGRP2,OSER1,GUCD1,SLC25A28,SPAG6,NSUN4,MEIOC,FAM65B,CD1C,BEND4,FBRSL1,RSPH9,NIPAL2,CBFA2T3,AFF3
ND1,LRP1,GNB4,NPL,AKR1A1,CD68,SPRED1,SCD,TNS3,MITF,DUSP3,PLTP,GNS,APOE,ADAM9,ITGAV,COLGALT1,SCARB1,KIAA1033,KI
HOA,MPPE1,SYNE2,MOV10,C2orf69,GUF1,TNKS2,DOCK5,HMGN3,SCMH1,SF3A2,LINC01184,PIGB,VPS13B,CLIP1,BASP1,FKBP3,IVNS1AE
A7,ADAM8,CCDC109B,ACP2,IFIH1,ANXA2,DDX60,IFI44L,TBC1D2,SERINC5,ATOX1,RHOQ,GBP1,TMEM63A,OAS2,APOC1,ATF5,NUAK1,T
A2,SRGAP1,IPO13,ADAM10,FUT11,WBP1L,STAT1,ERCC3,RAB29,C14orf169,TNK2,DENND4B,SP110,ATP6AP2,LRRC39,WDTC1,ARHGAP24

1,USP37,UXS1,SUGP2,EIF2AK2,C3orf38,SLC30A5,AHI1,ARMC8,DENND6A,PYURF,ZNF763,RAP1GDS1,CCDC186,ATF7,COQ9,RABGAP1L,Z

KDM6A,KLF12,CHMP1A,FBXO9,SUPT3H,KIF13B,ASXL1,RAB8B,ATP2A3,SIK3,DIP2A,CDK17,RUNDC3B,HSF2,SOCS5,SEPT6,SMAD4,POU5
AKAP11,VKORC1L1,RP2,TNFRSF21,BOD1,SNX33,SFRP1,CAB39,DENND6A,PPP2R4,TMEM86A,NBPF1,TPD52L2,PDE8A,ADPGK,TBC1D14,S
ZBED5,WDR18,CASD1,CHD6,NARFL,TXNDC16,PUM2,POLR2D,MTERF3,PRPF3,MAPK14,PPM1A,LCMT2,FLVCR1,CSTF2,RABL2B,HEXDC
l,GNG7,LMBRD1,GAS6,RHOBTB1,GTF2B,CTIF,VAMP3,WWP1,ARHGAP17,ITSN1,STX12,FUOM,HOMER3,PRICKLE1,KDM6B,CRTAP,ZBTE
5A,TCF7L1,MARCKSL1,FSTL1,PLVAP,LYSMD4,CHCHD6,IGSF21,LMBR1L,LBX2,PLEKHG5,CDK17,ZNF548,TMCC2,RNF208,ZNF697,LINC
EF40,TCF12,SNX7,PIK3AP1,SEPN1,NRP2,CLCN7,PECAM1,MYO1C,SLFN11,OSM,CUX1,RRAGC,MTUS1,RASGRP4,CLMN,CACUL1,LINC00
GNL1,RPP40,LRRC28,RAPGEF5,EFEMP1,PTPRB,GJA1,PDLIM4,GLYATL2,TPPP3,RAMP2,HTRA1,SNCG,CLEC14A,NSMCE4A,MMRN1,FAM
RP6,LIMS1,PIP5K1C,SNHG12,PPA2,SRM,DCTN6,HTT,CKAP2,PRSS12,LEO1,ANXA4,SLC39A13,SIL1,JAK2,SEC24D,KIF14,SMAD5,MTOR

BX2,GORASP2,HDHD2,ZNF573,ARMC10,C7orf55,USP49,SP1,PARK7,FDXR,KNOP1,CMTR2,CTU1,DIEXF,RPE,RGS3,ODF2L,RSPRY1,AOX1,
RNAU1AP,CASP2,EME1,TIMM17A,SERBP1,HMGXB4,LIN54,ATAD2,PCNA,HELLS,WDR76,EXOSC1,MAP3K8,UTP23,NHP2,ISG20L2,RNASE
,CEP85L,RAP2C-AS1,ARHGEF12,AKTIP,MYBL1,ZNF264,PPP3CA,RBM39,ZNF600,PRIMPOL,GPBP1,KRAS,MAPK8,LYSMD3,PMS1,DUSP10,
A1,ARHGEF11,DOPEY2,ATG7,ZYG11B,BAZ2B,ABLIM3,SERINC5,CCDC88A,SWAP70,RUNX1,KCNJ2,TCF4,LAP3,PAPSS2,CEP170,APLP2,YT
31,CD63,CPPED1,USP32,CD81,TIGAR,GPAT3,DACT3,ATG3,ACSF2,TOM1,SPHK1,FLNA,CCL3L3,DFNA5,SEC62,LAMTOR1,CLECL1,GPX1,M
,QKI,HIF1A,DSE,ZEB2,CTNNA1,EPB41L3,NINJ1,FGD5,SLC37A2,CEP170,SAT1,NCOA4,FAM135A,TLR2,PMP22,RBM47,HK2,LGALS3,UBE2D
ZF1,ESD,MAP3K7,MFGE8,SDR39U1,C8orf59,SHMT1,SMAP1,NELFA,UQCRFS1,MIS12,TMEM59,HIST1H2BI,TSSC1,UBL4A,ZFP36L1,AZI2,LS
M8A1,GSTM5,ZCCHC24,PCSK1N,SOCS2,HYAL2,PAMR1,DCN,NRXN2,FRMD6,CTHRC1,APCDD1,S100A16,MLLT3,MMP11,MXRA8,HOXA1

FDC1,LAMC1,CAMK2N1,BCAR1,ITGA7,DLC1,ADAMTS1,MARVELD1,ACKR3,APBB2,FBLIM1,KCNJ8,PRKG1,TNC,OR51E1,REM1,PGR,SOX
TO1,PTPRO,C3AR1,TNS3,CCND1,SLC16A3,SLC7A7,RNASET2,CNPY3,PKM,CYFIP1,MMP14,FTL,GNB4,IFI6,TBC1D2,HTRA4,FTH1,PLEKHO

DPYD,PLEKHF2,ACAP2,ZMIZ1,GLCE,CAPG,FLNA,TUBB2A,CMIP,WARS,LGALS3,PSAP,ZNF518B,MXD1,LINC01094,SPR,ZNF281,WDFY1,

13A,OSMR,PCOLCE,NID1,PFN2,PDLIM4,DAB2IP,ALDH1A2,PTGDS,DZIP1L,PCSK1N,IL17RC,WT1-AS,TCEAL4,VCAN,PABPC5,LRRN4CL,N
SP15,MYBL1,UGCG,DDX18,GSK3B,KIAA1468,TRIQK,YTHDF2,INO80,SEC31A,METTL17,RBM18,RYK,ABCE1,SLC36A4,ADNP,SYNJ2BP,R
RBM15,PAPOLA,MIER1,PRRC2C,PDS5A,ARGLU1,G3BP1,UBN1,DDX6,MYCBP2,HNRNPDL,SLC4A7,EIF2S3,TCEA1,PTP4A1,CCDC107,NEK

57,SLC9B2,SLC38A2,SPAST,HIVEP1,TTC13,RBM39,EIF3J,ZNF596,ARIH1,SNHG8,UBR5-AS1,KHDRBS3,FBXO10,TOB1,NUDT4,CHD1,VCAN
FAM168B,PRKACB,TMEM260,ABHD17B,KANSL1L,PRKAR2B,TM7SF3,DOK6,DUSP6,ZNRF2,LPIN1,ZNF143,TUBE1,C5orf56,PITPNB,ZBTB2
SP44,ZNF426,MYEF2,ZNF595,DGKD,NELFA,ZNF827,SMARCA2,TTC19,MYLK-AS1,MAP3K4,TBC1D2B,HMGB2,ZFP30,MEST,RBM4B,RERE
,ZBTB17,SDF4,LMAN2L,PBXIP1,ATF5,NARF,KMT5B,ZNF195,SMAD6,FAM20B,EZH2,LINC01063,NDUFAF2,DIXDC1,SLC1A5,PIM1,LENG9,
D2,NID2,SYDE1,FZD4,ZBTB18,RGMA,STXBP1,PTPRK,ADGRL3,GNG12,RMDN2,B9D1,MAP3K7CL,FRMD3,CREB3L1,ADAMTS2,LCA5,DPT

RA2A,MLYCD,ZNF335,AKAP11,SP1,RGPD5,CUL2,BCAP29,ATMIN,MCFD2,RFFL,INTS6,FURIN,RRP12,HIVEP1,REXO1,VPS53,LIG4,SCIN,D
orf112,BLOC1S4,PPIA,CCL28,RRP8,POLD3,ZNF684,ATAD2,TCF19,NCAPH,APOL3,ABHD18,ATM,GIMAP2,TADA2A,PPP1R11,POLR2J3,ZFX,
S1,KDM1A,PSD4,EFCAB14,SLC36A1,ARID3A,RCN1,SLC35G1,CUL1,OS9,B9D1,FOXP1,NEK1,RBM7,ITPR1,ANO10,PHF14,VASH2,EPAS1,ZN
)0936,SCAF8,MAPK6,PLAC8,PAPOLA,WTAP,MAML3,MAP1LC3B,EP300,BZW1,ZBTB1,TJP2,OTUD4,MSL2,CAPRIN1,GPCPD1,OAT,SNHG8,
)F2,C17orf75,EIF4H,REV3L,DTD1,PHPT1,TADA1,SYCP2,ZNF81,KLHL9,HERC3,DLEU2,MECP2,RBBP8,DPM3,SFSWAP,ENOSF1,UBXN4,ATF
R3HCC1L,AKAP1,ANKRD13D,TMUB2,KCTD21,CAPN15,INO80E,PLGRKT,ARHGEF9,E2F3,FOXK2,ANKRD11,ITGAL,VRK2,SEC23B,NFU1,D
3,DOK4,SLC36A4,ANP32E,ULK3,AOX1,PJA1,MADD,AGA,PHAX,FAM207A,HPS3,GLRX2,GRAMD3,AFTPH,HDAC6,GOSR1,CYC1

,FOXN3,METTL2A,DMAP1,SEC22B,PPID,TRIM44,SZRD1,TMEM251,PPIB,TMEM50B,RFWD2,STX18,HYOU1,VPS53,MGST3,NFIL3,YKT6,C

F1,NAA15,LDLRAD4,RRP15,ZNF775,ZNF121,NT5C,SLC38A5,CSF1R,HNRNPA1L2,KMT2E,TRIM21,CCT2,ZNF684,AIP,TCAIM,NELFE,SDAD1
P,OCLN,DMXL1,GXYLT2,CNOT6L,DUSP4,AMIGO2,YES1,PLCE1,RNF10,RANBP2,JMY,TJP1,USP12,NCOA3,KLHL21,ANKRD12,PXDC1,PPM

TPA,NEO1,GREB1,SMIM12,C2orf47,GET4,TNFSF14,LINC00877,MED28,POGK,SYF2,LIPE-AS1,MTDH,LMO7,GDAP2,VWA8,ARRB1,SPOCK1,
AN32,C9orf142,PPP1CA,CDIPT,KLRK1,DNAL1,MANEAL,ZNF766,SCARA5,MLKL,THOC3,PITPNA-AS1,CERK,XIAP,L3MBTL2,BRF1,SH2B1,

D1,VAT1,ZNF517,SIRT1,CAT,PGBD1,C7orf50,PON2,SORBS3,SMARCA1,TRIQK,MIOS,LYNX1,TIMM13,ACTG2,ADPRH,SLC39A1,TBL2,CAE
1,ZC3H12C,ZSWIM6,TNFRSF10B,JDP2,SNX9,UBE2D3,NABP1,PXDC1,CYTH1,RP2,PDE4DIP,BASP1,LYN,FNDC3A,RTN4,SRGAP1,VAPA,DY
1,MEIS1,ISLR,GPX8,FLRT2,PARM1,GULP1,NAT14,APCDD1,KANK2,MARVELD1,TLR3,TNRC18,GXYLT2,CNN1,USP51,PRTFDC1,SH3D19,

DORA1,GEN1,LTN1,NADSYN1,PPP1R37,ZNF850,ORC4,TAF1B,UBXN2B,RNF168,TRUB2,GTSE1,FAM53B,TCP11L1,XPOT,MON1B,KAT5,ZN

FOXP3,SPIDR,TMEM38B,PIK3CD,ANK1,LATS2,PARP1,SOBP,CSRNP2,SMAD5,DYRK3,ZFHX3,STX16,BTK,HOXA9,C7orf50,LIMD1,PIGA,RN

46,ZNF654,CXCL9,TCAP,C19orf33,LGALS12,MIR210HG,TRPV1,DDAH1,ARNT2,SYNGR3,VASN,ANKRD55,LINGO3,LAD1,PCBP4,PAQR7,CB

RFIP2,LRP10,CLN3,ZNF273,AREL1,LRP5L,ZNF677,ZNF430,ING4,MAP3K11,GXYLT1,PYHIN1,MYO9B,PHYKPL,NFS1,ZNF100,MOB4,ERGIC1

6,NNT,DCUN1D2,PLEKHA5,RRN3,PTPRN2,ZNF398,DPF2,SEC63,PHRF1,AMN1,RPAP2,RAB37,CSNK1G1,SLC2A13,SLC33A1,LRRC6,SLC39A
C1,MYO1B,KMT5B,CHN1,ATP1B2,APBB2,SOCS5,IQSEC1,SEPHS1,LOXL1,KHDRBS3,SACS,HIGD1B,CTSK,ITGA11,COL1A1,FAT1,COL5A2,

AUS5,AADAT,KLHL18,CCDC184,ZNF83,GDAP1,ZNF708,RSRP1,ACSL5,CHST14,OLFML2B,HIPK3,ZBTB45,HERPUD2,ATP10D,TTC34,POLR
OCS7,SMG6,CCDC174,POLR1B,CUTC,TWIST2,PSMC4,C16orf91,NUP35,PHF5A,ZNF486,DISP1,RUNX3,FAM122B,ZNF146,ZNF544,CHMP7,SL

L1,LRIG3,RAB8B,ZFP30,EXOC2,KIZ,CABLES1,IHH,ZBTB16,TMEM2,ROR2,BRAF,CEP85L,C2CD2,HCG18,SMAD5,ZNF827,MAPK9,SENP5,A
K1,ATXN10,RTFDC1,RSRP1,ABCB7,PHF5A,SLC25A17,TRAPPC10,DLEU1,BUB3,TMEM261,INCENP,CASP8,STK38L,SNF8,TOMM22,TTC39I

S1,TULP3,RNF5,C17orf62,H2AFZ,TMA16,RIC8A,AAMDC,SAMD14,PPP1R12A,DNAL1,SNAP47,LMO7,SRRM2,C5orf24,C11orf58,CLPP,PAK3,I

OC6,GKAP1,FHL2,SETD7,PDGFC,FBXL3,PLEKHH2,AMOTL1,CD24,ZNF704,C6orf141,ZNF891,SETD2,TIMM23,ITPKB,IHH,CNTNAP2,TMTC1

-AS1,TPTEP1,MYBL1,PTPRN2,TRIO,ASH1L,SLC44A1,WDR37,PRPF8,SNHG22,C6orf106,STYK1,GTF2IRD2,SOS1,TMEM74B,KLHL36,SYNE1
,CYTH1,RIMKLB,KDM7A,ZBTB32,ADAM23,MAP3K9,SENP5,ST6GALNAC2,RALGAPA1,ANTXR2,SUSD6,NRG1,ARHGAP20,KIAA1324L,JU

1,CAPRIN2,OFD1,ACO1,NELFCD,GMPR2,CHFR,HIVEP3,GGPS1,STX17,GTDC1,DYNC1LI2,ZNF549,PNISR,COMMD2,NEK7,TARS2,SAMD9,

5,NCKAP5,FAM92A1,CEP170B,ARHGAP29,TCEAL7,LINC00900,SDC2,ZNF263,RARB,MECOM,IGFBP5,PRRX1,AVPR1A,THSD4,ACTA2,S10(
5,CXCL12,BACH1,FKBP4,MAFK,PELI1,SNN,PEA15,RCAN1,TJP2,FOXO3,IQSEC1,ITGAV,NEDD4L,TAB2,LGALS3,LATS2,SEC24D,THBD,GN

V,GON4L,FAM107B,TMEM167A,IER3IP1,WASL,METTL6,PPIB,URB1,REXO4,ITM2C,SRP14,EIF4G2,LINC01420,TAF1B,CPSF3L,DHX30,THU

STAG2,PYGL,AP3D1,XIAP,TNRC6B,N4BP2L2,MED18,ARCN1,ATF2,NR2C2,TCTN2,NAA60,ALDH3A2,RBM5,ZNF644,MFSD14A,PRDM2,NA
ATP2A2,TGIF1,TCF7L2,WWP1,ZMYND15,RALGDS,NR4A2,GADD45B,GAS6,RILPL2,NSUN4,BCL6,RGS12,GPR84,IL1RAP,POGLUT1,FGD5,I
0B,FAM133B,EIF1,TFIP11,ID2,VAPA,MAT2A,NOLC1,ZFAS1,ZNF638,RAB14,BUD31,ZNF217,ZNF33A,NRDE2,BZW1,TOPORS,EIF3J,SRF,DH
LC2,SRA1,GAA,PLEC,ADPRH,ABR,ZMYM3,SMAD6,GRN,PHACTR1,DPP7,RALA,AMDHD2,RAB31,NR2C1,RNF144B,OSBPL8,LAMP1,DOPE

A1,SLC9A7,LINC00877,RND1,RUFY3,CDC42EP3,RNASEK,ZNF267,PIKFYVE,TGIF1,THAP2,THRB,PELI2,ETV3,ZNF124,ADORA2B,HBEGF,R

CK9,TESPA1,TUBA4A,ODF2L,MLLT3,GNG2,LINC01550,ANKRD36,ASXL1,TIGIT,KLF12,MIAT,RAB39B,GRAP2,ITK,KMT2A,ACSL6,STAT5I
C24A,SEMA7A,FXYD2,LIMS3,CHMP4B,NFE2L2,PIM3,TRAK1,CECR2,LINC00309,NBPF10,NRCAM,STX17,CPNE3,ANK3,ANO9,LINC01358,C
IEM140,LIMD1,RAB13,PRR14L,DDX60,MIR155HG,PTH1R,CDHR1,HERC5,KMT5B,RIPK2,VPS18,BCL6,FAM129A,MLXIP,NLRP12,LMNA,TI
NA,CHD4,FAR2,SERTAD1,CACYBP,FAF1,SF3A3,GANAB,DDX21,ELK4,AKAP9,EIF3A,HNRNPC,ZNF451,SON,ABCF1,SERBP1,WBP11,DOT1I

H1,FAM105A,PRKCA,MGAT1,DST,LIMS1,CLECL1,KCNK13,RAPH1,CARD9,ACSL4,SH2B2,NDRG2,LAPTM5,ANXA4,SNX7,CLN8,FILIP1L,C
GALT1,CHD6,TNRC6B,ARHGEF12,PHF10,NCOA2,UBXN7,RBM33,AHCTF1,ARID2,CAPN7,EPC2,RALGAPA2,SOS1,DAAM1,UXS1,BRAF,WW
,DHCR24,PINX1,PIDD1,TIPIN,PRMT3,ZNF726,CASP8AP2,THRAP3,RMI2,COX11,CENPU,TIFA,ZRANB2,MCM6,CENPH,POLQ,KIF2A,BARD1
OLGALT1,TTYH3,DST,RAP2A,ITGAV,CD180,KCNE3,ALPK1,ACSL1,RAB7A,CD163,FUOM,LILRB1,PTPRJ,SOCS6,FRMD4A,TRPM2,SGK1,TN
N,KLF3,STX4,DSE,PMP22,IL10,BAG3,SHTN1,SLC19A2,FMN1,PLAGL1,MID1IP1,ARHGEF10L,NFIL3,CFLAR,LAP3,CLCN6,CCL4L2,FOXO3,C
OC170,FCGBP,NCF4,MCOLN1,OGFR,TMEM236,ITPR2,STARD13,TLR4,ENTPD1,IL2RA,CREB5,KCNE3,DUSP6,CRTAP,SCN1B,KLF3,AP2A2,C
,SRRM2,UBR5,CCNK,SERTAD1,BTBD7,BZW1,CHD2,MAP1LC3B,STAG2,COG3,RBBP6,ACSL3,KMT2E,C3orf58,NIPBL,SMAP2,POM121C,TI
SUN2,UBQLN2,CAGE1,ODF3B,TAF1,R3HCC1L,KCTD6,PRPF6,C12orf57,CLASP1,SARAF,UQCR11,PTEN,CREB1,OST4,MKL1,ZNF26,DCP1A,
21D2,MLLT4,FSTL1,BAZ1A,SIK2,ZNF217,ATP6V1H,CCNC,DLEU2,MBNL1,PIGM,CYP2E1,MAML1,FAM208A,SETD4,ARID4A,CLOCK,MSH2
RD8,EXOC3,DAD1,ZNF768,POLR2E,ARHGAP4,C1orf123,CHMP7,ARPC2,NOMO1,CFL1,UBQLN2,SPATA7,SAP18,COPZ1,KHDRBS1,FAM78A
DR89,DDX50,LUC7L2,DTNA,SRP54,ZC3H13,PURB,WDR5B,PTPRS,BCS1L,GABARAPL2,TMF1,TFB1M,ANTXR1,TMEM255B,BTBD3,SFSWA

331,SLC38A1,STK17B,WWC1,IDS,SAR1B,ARHGEF5,HBP1,TUBA4A,PPP3CA,FBXO34,SMCHD1,GNG2,LONRF2,RNF139,GSPT1,FNBP1,JAM3

MPO,DIAPH1,TDRD3,MBOAT1,TRA2A,RNF157,BCL2L13,RASA1,NDUFB1,PTCH1,TRIM59,RBM17,ARAP2,KCNQ5,DENND4C,OTUD6B-AS

'AD5,BRIP1,SFXN4,YPEL1,SLC25A22,SLC27A2,CDC45,ATAD3A,EME1,MCM10,RAD54B,FEN1,RHNO1,RRS1,HIST3H2BB,POLA1,LDHB,CTI
PGAP2,SRSF1,CD52,HIST1H4A,MYO19,TPPP,CDC45,BLM,FEN1,DNMT3B,LBR,BRD9,PIEZO1,LFNG,DDB2,YTHDF1,RASGRP2,NEIL3,MSH2
,TBCK,FLVCR1,AHI1,DDX39B,KDELC2,WDR5,TMF1,LIG1,SLCO3A1,DDX56,MTRF1L,PCGF3,FAM76B,RBM10,TTC37,HMGXB4,INTS3,TBL

A10,USP24,PIK3CA,PRSS12,ELK3,CDK13,SLC7A7,USP42,RDH10,KDM3A,METTL25,CUEDC1,IRF2,GABBR1,CDC42SE2,PLCB4,SPIN1,ABI2,
HIST1H2BL,RAVER2,FANCA,GAPT,LSM14B,CLDN3,RCAN3,SLC25A24,AZU1,WDHD1,CDC6,IDE,DHX33,TAB3,CSF1,EAF2,TRPM7,PITPNM
VD3,CLSPN,PMF1,PRIM1,SNRPF,FDPS,RNPS1,CTCF,TUBB,STIL,MMS22L,C14orf80,ATAD2,CEP295,MYBL2,NCAPG,THOC6,CENPU,SUZ12,

Y1A2,PTPRK,STON1,COL5A2,SPARCL1,PTPRS,IGFBP5,ECE1,EFHD1,PRRT2,ST5,TSC22D1,COBLL1,PDZRN3,LOXL1,ITGA7,BGN,PRICKLE

.RAP,ICAM4,SORT1,DUSP1,FGD4,AXL,ABCA1,RAB3IL1,WDR81,ZSWIM6,ATF3,RCAN1,ENPP2,CHST15,ADGRE2,LINC00847,ARMCX1,CA
l,REEP4,RCAN1,SLC18B1,C5AR2,APH1A,BRPF1,MITF,SNX18,MTUS1,PGPEP1,ZNF358,SGPP1,SIRPA,MAPK3,RIN3,C2,TMCC3,SYK,BCAT1,

CH2,FOXP1,PAPOLA,HOMER1,PCM1,DUSP10,NR3C1,G3BP2,IFRD1,PPP2CA,TMEM2,BCLAF1,ABHD5,L3MBTL4,ZNF331,STX11,UBR5,HIVI
1,ELL,LENG8,CASD1,SCAPER,RALGAPB,TM2D1,SYNGAP1,TYK2,SENP6,NGLY1,CNOT4,ZCCHC11,NARS2,NECAP1,ZC3H4,MBNL3,FAF1,
,DCAF13,MVK,LPIN1,SAMM50,CTPS1,BCL7C,ATG12,POLR3D,KCTD17,DOK2,YDJC,GCAT,PTPN7,C15orf39,RIC8A,ECHDC1,NDFIP2,OXCT
GLS,PGAM1,LINC01004,CERS6,GAPDH,DECR1,ATF7,CDHR3,MLKL,CCT5,RHOA,DECR2,KIF5B,RTCA-AS1,TGOLN2,CPQ,LACE1,KLHL8,P
SNN,SCML4,WHSC1L1,NCBP1,CENPL,TNRC6A,EP400NL,TNIK,SLC35A1,BRE,SLC30A4,TNPO1,FAM126B,ZNF41,DDX60,MLLT6,RUSC1,TM

P1,CAPN12,PLEKHF1,PIK3R6,TESC,ACTN4,STRBP,FAM46C,AGTRAP,NMUR1,PILRB,BCO2,ZAP70,STARD3NL,KIF2C,SASH3,NCR1,SYNRG
RS2,B3GNT2,RAF1,MIA3,OXR1,GALNT2,DOCK7,FXR1,KLF13,TEX2,WAC-AS1,SLC25A36,TMEM41B,KTN1,VPS13C,ARFGEF1,SLC38A2,GA
ND,KLHL2,AHR,MAP3K1,TPBG,MAGI3,TUBA1A,WIPF2,DENND5B,MVB12B,SCARF1,ZSCAN18,SMAD3,BTBD3,LMNA,MIDN,ERF,ZBTB20
APA2,MAGI1,RAMP2,TFF3,SDPR,SNCG,TM4SF1,FAM107A,LYPD6B,VWF,LINC00969,BGN,IGFBP7,HOMER2,AQP1,LGALS4,EMX2,SLC30A4

SPTAN1,SKAP1,IKZF3,IL2RG,IVNS1ABP,ANXA2R,KLF12,STAT4,CD96,PRKCH,NKTR,ARAP2,GPR171,GLCCI1,ABLIM1,SLC44A2,LRBA,IP
31,ZNF706,LMO2,GPR183,CEBPB,SAT1,ADAMTSL4,CXCL2,CCL4L2,CD44,DRAM1,HCK,PHACTR1,OTUD1,SCIMP,TREM1,HLA-DPB1,C1or
A5,NNT-AS1,CTHRC1,ABI2,CDH11,TRPC1,RNF11,CMPK1,GNG11,NT5C3A,MFAP4,ZNF672,EDNRA,G3BP2,TRPM3,LEPR,ALDH18A1,FBXW4
ART1,RRAS2,NDUFA12,NGLY1,SAAL1,PRADC1,HILPDA,MLLT6,SHMT2,RAC2,GNAI3,SLC25A11,PSMD3,KDM7A,JTB,HSH2D,HIST1H1E,H
NAT,RAB20,RPP25,MARCKS,FGL2,GBGT1,TNFRSF21,RHOBTB3,CLN5,SIGLEC14,CHST15,CEBPD,ADAM28,C1orf54,H1F0,NENF,SPG21,MS
NAQ,LPXN,OPN3,CTTNBP2NL,IER3,UFM1,LAP3,TOMM20,CIITA,CD74,PXDC1,NFKB1,AGAP3,RILPL2,PRKCD,GCNT2,ARID3A,TRPM4,KB
SLX4,TRIM22,SAMHD1,C16orf54,MTO1,TMSB4X,RNF157,BCL9L,RHOU,EEF1G,LINC00324,DOCK9-AS2,CC2D1A,STX12,CD3G,TBC1D12,Z
?,IQGAP2,MAN2A1,SLC25A44,TM7SF3,ATP2A2,ATF6B,NR1D2,HMGCL,ZNF131,ZRSR2,SIK1,NUDT18,SHKBP1,BBX,MCOLN1,MAT2A,PLEI
D1,TCOF1,TACC1,TBK1,SIRT1,FAM210A,KCTD15,PTPN23,ACBD5,IPO7,CSRNP2,TOMM20,RCC2,ARF4,WDR75,IRS2,SMAD5,E2F6,NBEAL1
LK1,ZMAT1,SNAPC1,MAT2A,MGAT5,CSRNP1,KLF2,STARD5,KLF11,BRD2,ATF3,WLS,ERO1B,MAFK,KLF6,CXCL12,CRY1,HIST2H2AA4,AC
IR1,NME1,TLR2,KHNYN,C11orf45,TMEM206,ST3GAL5,SERF2,NAB1,MUTYH,PDHA1,IMP4,RMDN1,LRRC37A2,EDF1,TEX264,FAM208A,CA
,TMEM131,KIR2DL3,RCAN1,ZFP36,RANBP2,ZNF394,PRPF38B,AGO2,PDCD4,SKI,TMEM2,SENP5,PHF20,JOSD1,PAPOLA,ZDHHC20,GCNT1,

,FAM72D,PRC1,CENPI,CEP70,ARHGEF39,FAM72A,B3GNTL1,H2AFV,CDKN2C,LSM5,GPSM2,UBE2S,PPIL1,CEP57,C16orf59,KATNAL1,LBR

NP1,FOXP1,ATP1B3,TMEM263,TSPYL2,TANC1,ELK3,KLF5,PLCL1,CFAP44,USP15,CTLA4,NR3C1,MFAP2,ATP2A3,SARAF,TNFSF8,CCNT2,I
M9SF3,INSIG1,CRLS1,MTF1,C9orf72,ZNF385A,TOR3A,MED13L,ST3GAL6,RALY-AS1,NFIL3,PLEKHB2,JMJD1C,TICAM1,UPB1,DYNC1H1,M

15A3,CHPT1,BACH2,TMEM243,TFDP2,LIFR,ADAM23,UBE2G1,LBH,RBM23,C7orf26,CDKN1C,NUDT16L1,WDR6,HECA,GATA2,ARHGEF5,
NA2,RNFT2,RNF157,CHRNA10,USP11,MAT2B,CDC25B,TMEM71,DLGAP5,MPP7,NOS3,HMMR,PEX11B,CDKN2AIP,IER2,CTBP1-AS2,C8orf8
HC8,AIM1,BANF1,SF3B1,SLC25A1,VRK3,SFT2D1,EMC6,NFU1,BRF1,ZSCAN29,HP1BP3,KDM5A,LRRC47,LARP7,SMIM19,CACFD1,PRKAC
SP10,AGPAT1,STXBP5,DCBLD2,SLC46A3,LBX2,RBPMS,GATA2,ANKRD31,CACNA2D2,LETM2,TMTC1,OAF,KCNK5,GNPDA2,SPIN3,SLC5
C44A1,KIR3DX1,SLC38A1,SHKBP1,PRKD2,RGL4,RGS3,NCALD,RBL2,PLK1,TTC39B,NEDD9,OXNAD1,ZFP36L2,CD7,SLFN12L,SH2D3C,AR

TMEM185A,PRDX4,CLN3,SYT11,LIMD1,PNPLA2,MUS81,TRIM44,AGGF1,TMC6,OTUD5,LPAR5,CCND1,SCAF1,UNC50,MARCH2,RRAGA,S
4I0714,PIF1,TRIM54,ZNF384,CFAP20,HMCES,SATB1,PLCB1,CBFA2T2,OTUD7B,LLGL2,TMX4,GLTSCR1L,ZNF329,ACSS1,CEP55,CDKN2A,I

H1,WEE1,PPP1CA,CCDC150,SUPT16H,CENPL,ATF7,TAF3,SMN1,HELZ,INPP1,RAB27A,PRKDC,PRPSAP1,CDC7,HACD2,SRSF2,BAZ1A,KAT
1,C17orf58,YIPF2,CEP63,FEN1,UBA1,SEC23A,ELP5,ELAVL1,HCFC1,COPS7A,PSMD6,TRMT13,ALG14,ZNF43,TCEA1,TFG,PSMA6,PDLIM2,
,DHRS9,RB1,CRIP2,GAS8,C2orf49,SESN3,TMUB2,LAMB3,PHACTR1,NFKBIZ,TMED2,ISLR2,PDE1A,ACTG2,SGMS2,LRRC20,LMO2,TRAF3IP
ND5,PTGS2,DTNBP1,FAM46A,THBS1,NRG1,ERF,FER,C10orf107,UST,KLF4,MORF4L1,YPEL2,CXCL3,SAV1,SH3RF1,NPL,ATN1,NUP58,CYH

,DENND5B,NET1,IDUA,COLGALT2,AATK,REV3L,NCALD,PRKAB2,GGACT,HMG20A,LMO4,PPP1R12A,HNRNPLL,CNOT6,NRP1,PDGFC,TI

BP1,NUDC,SYCE2,CENPJ,CDK11B,DHRS4,LMF2,KNTC1,EEF1E1,HAUS6,CCDC150,ZNF518A,RAD51C,SLF1,TBL1XR1,ANAPC1,FANCG,HA
A2,LINC00683,ITGB8,PLEKHH1,ATP6V1C2,WWC1,S100A14,MYH14,GPR65,GRAMD1C,ASRGL1,MAL2,TUFT1,SMIM5,MMP26,SMOC2,SLC
TBP4,TMEM100,NREP,DACT1,TEAD2,WT1-AS,ACY3,VSTM4,TSKU,MXRA8,SERF1A,SPON1,RBPMS,ALDH1A2,ADAMTSL5,SEMA5A,SALI
ARAPL2,NOL12,DBR1,VWA8,GNPDA1,GORAB,SYNGR2,LPCAT3,RBL2,CARNMT1,CHTF18,EIF2S3,PRKAB1,TRAM1,RICTOR,SGTA,CDK4,

RFS1,LINC01126,ARHGEF37,SUPT3H,CFAP44,APPBP2,DCAF11,ZNF180,RANBP9,STAT5B,SLC37A3,LIPA,ZBTB39,RBM28,PPIC,G2E3,PLAG

3,HMHA1,LINS1,MTOR,STK38,ABHD17A,CYTIP,PRKAA1,ANXA2R,RDM1,NLRC5,VSIG1,ACTR6,MDM4,TAMM41,KATNB1,ICAM3,EPB41,
NUDT11,C21orf91,ANKRD23,CFL2,CBX3,CENPV,BICC1,STAC,SCN1B,FAM169A,IGSF22,SEL1L3,SAMD12,SORCS1,B3GLCT,ZNF789,TMEM
GEF3,ARAP2,S1PR4,SYNE2,CCAR2,SMKR1,KIAA1551,YPEL5,ANKRD36C,HMCES,OXNAD1,CRIM1,SUPT3H,CDC42SE2,TRANK1,MDFIC,N
,HMGN1,CHCHD2,RPIA,FANCI,KIAA0101,VPS72,TARS,SMC4,CASC5,FAM32A,DCP2,RNPS1,BUB1,SMC3,PTP4A2,PPM1G,ADRM1,CMC2,EI
'B1-AS1,CYTH2,RASA3,TERC,PRPF31,NEK5,SPIDR,SLC52A2,OARD1,ZNF32,PIGK,ZNF426,RIOK1,ATG4C,MED28,FBXO48,SHISA5,C9orf10

3,ZBTB18,CAMTA1,HIVEP2,RASSF3,ATP2A3,REV3L,EZH2,ATP6V1H,RERE,CDS1,GPBP1,LAD1,PELI1,STX11,SKIL,SEMA6B,TMEM57,FBX
)C47,SKAP2,SCARB2,POGK,MFSD5,TPP1,MAFG,NRBF2,ADGRE2,SBNO2,ZSCAN21,SNX2,IL17RA,ATP6V1A,VEGFB,ZNF438,CH17-340M24.
2A18,UBXN1,OSM,UNC93B1,SP110,ALDOA,GPX4,RAP1A,C1orf43,GAPDH,SLC27A1,PHF11,KIAA2013,TOLLIP,PKM,GBP1,XBP1,IL10RB,CM
16,ZNF503,CDC42EP3,ACAP2,BIN3,SLC39A14,BAG6,CNDP2,CCSER1,RNF6,DDB1,CTBP2,CD38,EVL,RMDN1,TMEM120B,NFKB2,TLK1,TGI
L2B,DTX3L,SYNC,EFNA5,UBE2G2,CBR4,LNPEP,TMC8,MIAT,FAM219A,LINC00852,PHF21A,TMC6,NELFA,MFSD8,GDF9,FBLN7,ZFP90,DU

l,ANKRD10,ARHGAP6,TSC22D2,FAM57A,ICAM1,GPR155,RERE,NAMPT,TFRC,CD200R1,KLF10,CHD1,SLC38A9,SIRT1,ADGRG6,ARHGAP1
ΓG1,FAM177A1,ARID4B,PRMT9,CSRNP1,RNF139,TMEM2,UBE2O,RALGAPA1,HNRNPH1,SELK,PAPD5,AKIRIN1,CUL3,GABARAPL1,KLHL

RD10,MED13L,USP53,JUN,AFF1,CCNG2,AKAP13,AMD1,PHACTR2,ATP2C1,LINC01004,BTAF1,ZNF703,PHACTR4,PPP1R15B,ETV3,PTCH2,T

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ASRGL1,TGFA,PERP,PHLDB1,MREG,GATAD2A,CWH43,ZSWIM6,EMX2OS,PITPNC1,CCNG2,SLC39A14,PAPSS1,TRPC1,C12orf75,FAM212B
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ASC4,EPB41L5,ZNF329,NFAT5,DOCK11,SENP6,UGGT2,SCNN1D,JMJD1C,ZMYM2,UBE2Q2,ZNRF2,PARP2,RANBP9,PAXBP1,HIPK3,CHD7,P
3,SMARCA5,DENND2C,FBXO31,ZNF322,EIF5B,USP12,RCBTB1,SUZ12,ZNF644,POLR3E,TBC1D25,BRMS1L,CNTN4,SMARCAL1,WAPL,EML
GOLGA8A,GRAPL,ASXL1,EDA,IFNL1,TECPR1,PGAP2,ANKRD11,SCGB3A1,PWP2,PIK3R1,FBXO31,S100PBP,CCNJL,CCR7,AK5,CDC42SE2,T

L,FAM131A,DDX18,CHKA,PHLPP1,PRMT9,WDR91,NUPL2,TET2,BCL2L11,SDF4,TMEM39A,SELK,ANKRD9,CLCN5,FAM210A,ADAP1,UBE
LM,BACH1,IRAK1,RASGEF1B,ABCA1,PLBD1,ATP6V1B2,STX11,IRAK3,IPMK,NFKBIA,PQLC1,EGR1,CSGALNACT2,FARP2,BASP1,UBE2J1,

AP18,CTSA,IKZF5,MAX,KAT6A,NAGPA,KANSL1,TMEM11,PCBP2,LAIR1,JMJD1C,NARFL,BBX,B4GALT1,SLC36A1,SGPL1,SAV1,C5orf15,A
ST3,UVRAG,MAPK1IP1L,SLC7A1,SPRED2,PAPOLA,HMGXB4,MTPN,PPA1,OSBPL8,UBQLN1,RUFY3,KIF5B,SMG7,BATF3,DUSP5,ZC2HC1A

BACH1,SH3KBP1,KANSL1,ETS1,SUN1,ING2,USP3,TLE4,ANKRD11,SMAD3,CAST,NUCKS1,EVI5L,PHF21A,VAMP2,SATB1,TNK2,SMURF2,B

LDORA3,BNC2,TCN2,HEXB,RNASE1,SGPP1,PLTP,HTR2B,FTH1,NAV1,SLC35F6,SIRPA,PSAP,LGALS3BP,SLC36A1,TTYH3,PPARD,PLEKHO
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PR,CSTB,CDK14,GNPTG,GBE1,ALPK1,C3,LTBR,DPEP2,GRN,NPC1,SIGLEC11,BCAT1,LPAR5,GEM,MS4A7,LINC00937,RGL1,NCK1,HBEGF,
RSB,CECR1,VPS35,NHSL1,TRAK1,RUFY1,GBA,PTGES2,NAA15,MS4A7,FAM21C,ABHD18,POMZP3,BCL6,TPD52L2,OSTM1,SSH1,UEVLD,V

HIVEP2,IFRD1,VAV3,NXN,RHOB,ZMYM2,PBX3,ARID2,PLPP3,SVIL-AS1,SEC23A,NEDD1,TRIM39,RUNDC3B,XPR1,ATP8A2,BCL11B,PHC1,
CCNE1,ZFP1,COX10,BCL11A,MYB,SLC25A33,CMTR1,PHC1,LTA,GINS2,SCML2,USP6NL,NCAPH2,RHPN1,CD27,UBE2V1,BNIPL,EPG5,USP
IRC5,CKS1B,CENPH,AURKB,MZT2B,HIST1H2AI,CENPM,TUBB4B,NUDT21,RACGAP1,NEK2,NUCKS1,HMGN2,TICRR,CENPF,SPC25,ANKF
N,DMTF1,RBPMS,TINF2,SSBP3,MZF1,ZEB1-AS1,VAV3-AS1,APOO,NOS1AP,CEP162,P4HA2,FAM8A1,PTBP1,NCBP1,HMCN1,HOXA6,LMAN
NB,BCL2L11,RIPK2,SIK3,HES4,PTP4A2,ARIH1,TP53BP2,UBE2V1,KBTBD2,N4BP2L1,MGC16275,MAPK6,CHMP1B,PHACTR2,SYNJ2,FCAR,R
,MINPP1,MAST1,EHMT1,PPP3CB,PANK2,RB1,YIPF2,TMX1,MBTPS2,UBXN2B,MYO1F,SETD5,UCP3,MAX,GNL1,ETV5,SLC39A1,TVP23C,C

'DK3,MIOS,TRAF6,GINM1,MYO9A,SNX30,TAB3,PHYH,AHCTF1,SCAF8,CASC4,RAD50,CCDC36,ORC4,MAN1A1,PPP1CB,ABI2,SORBS3,SCY
SCAF4,SEC24B,CD58,ZMIZ2,WDR13,LRRC8B,SAMD8,AMMECR1L,ARMCX3,MINK1,IMMP2L,SLC16A5,PROX1,KANSL1L,UBQLN4,PAN2,C
'F3,IFRD1,FERMT2,MIB1,NAA35,SCRN1,SPG20,PLCB4,MOK,ST7,MYO1D,SNHG8,GALNT10,PLK2,CHD1,ICA1L,CLINT1,ST3GAL5,MID1IP1
,EFHD1,NR2F2,MAGI1,DLC1,ADRA2A,ITGA7,PPIC,MYO1B,ADGRF5,GNAI1,AVPR1A,CHN1,IGFBP5,ACTA2,FNDC1,LACE1,IGF2,RCAN2,PI
FOX2,HOXA10,SETBP1,ZNF608,PTN,ADGRF5,NR2F1-AS1,STAG2,MEF2C,BAHCC1,ZNF518A,MIR497HG,ATP1B1,MFAP5,NFATC1,NDRG2,
IF2AK4,SEC16A,ARHGAP20,NDUFC1,CNDP2,TTC3,TGFBR1,HDLBP,TCF4,ZFYVE26,RASA3,RPN2,ERGIC3,BMP2K,PEAK1,PSAP,WIPI2,CY
BIM1,ALKBH5,SMAD7,BCAT1,SLC25A37,CD63,APLP2,SDC4,ST14,ANXA4,BASP1,ANXA2,OAS3,KCNJ2,INTS6,CFDP1,CAST,CCND1,PRKC

ESPL1,TBL1X,MFSD14B,PCTP,CDCA2,GSTO1,ACSF3,SRPK2,PDCL,GOLGA4,KLRC4,CENPP,ENPP2,NFYA,TFRC,NUP214,STMN1,C7orf26,SI
I,ZNF700,DDX51,LEMD3,CENPH,UIMC1,HMCES,UBA6-AS1,FANCI,CCDC174,PCNA,TPRN,ZNF726,MYBL2,E2F1,NFS1,ZNF668,PTPRE,NAA
IF8,FAAP24,GLYR1,PACSIN2,RANBP10,DCXR,TTC9C,EIF3E,CORO1A,PGM2,ADCYAP1R1,EIF2B1,MKKS,SMIM7,COX7A2,YRDC,FBXW2,B
RNF168,CHRNA5,GSTM2,ATP2A3,ACSBG1,MYO7A,ZBTB16,NPM1,POLR3B,ODF3L1,CCR10,KPNB1,AKT1S1,SERTAD2,FAM107B
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B1,SEMA4B,ZNF596,TBL3,ST14,FAM131A,RCOR1,ZRANB3,RAD51B,FAM161A,POGZ,SPECC1,CAB39,CEP170,KANSL3,ACTR3B,CDC26,MI

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A1,DSTN,TMTC1,APP,FBXO17,PRRX1,BGN,PLPP1,LAMB1,SEMA5A,MPDZ,PTK2,LINC00839,CSRP2,CAV2,EMX2OS,SNCAIP,GUCY1A2,IG
KANSL1,YPEL5,LINC-PINT,TAB2,SETD2,UBR5,SARAF,CTSF,SMAP2,SON,PAPD5,CRY1,FAM84A,BPTF,DUSP16,HIVEP2,YY1,SIK3,MON2,

D2,FHL3,CSRNP3,TRPC1,MAP1A,CACNA1D,CACNA2D2,TRNP1,HSD11B2,PCDH18,EPB41L1,ZNF181,BRINP1,LTBP1,SNHG18,LURAP1L,NL
4,STMN3,DDR2,PEG3,ERRFI1,STEAP4,MYO1B,LAMA3,FOXO1,DLC1,GJC1,ANO1,WDR19,KCNJ8,UNC5B,PDE4B,DSP,MEG3,HEY2,RIMKLE

COPB2,ZPR1,IAH1,AACS,TBK1,DHX36,IL4R,SLC4A1AP,SLCO4A1,VAV3,SEC11C,ESCO1,CWC27,AKT1,KLHDC4,SACM1L,BCAP29,ZBTB1,

RNPM,RREB1,PTMS,PHF20L1,ATP2A2,CPEB2,ADGRL2,VPS54,SH3PXD2A,PLXDC1,MEX3A,ZNF516,NFKB1,SASH1,FAF2,FOS,DIP2C,ZFP91

ORB5,IPO8,USP2,ZNF331,PDGFB,HNRNPH2,GAS6-AS1,YPEL5,UVRAG,ENTPD6,NEU4,UBE2D3,GADD45B,SFT2D2,LINC00309,RGL2,PIK3A

AMTS1,ROCK2,ZNF639,POLR2H,NDUFB10,IKZF2,PHGDH,ATF7IP,PPIA,OTUD5,SPTLC2,PNPLA4,PLCB4,SYNJ2BP,NRIP1,PHF12,GAR1,TM2

,MEIS2,FAP,MEIS3,SETBP1,HYAL2,STON1,SLC24A3,ALAD,MAPK10,SULF1,AVPR1A,SORBS3,LAMA5,CRIP2,MYL9,DCN,TBX2-AS1,IFITM
.,RASA3,ZFP1,TLE2,SLC7A7,LRTOMT,THAP7,MEIOC,LAPTM4A,PFKP,PHC1,BCL2,GADD45GIP1,SUSD3,COL9A3,TBC1D4,VIL1,DARS,APC

P1R13L,NIP7,OSM,UBOX5,LINC00847,RAB25,HMGB1,CDK11B,NUP133,KIR2DL1,ATP6V1B2,DCK,ZNF668,BTG1,CRY2,CEP44

FR,RARG,SET,PKN1,ATP2B1,PAFAH1B3,BLVRB,FAM107B,PTPRS,ESR1,MICU3,SELL,NAGPA,PLEC,PDZRN3,DCTN1,PRKCB,SMG9,TMBI

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C17A,ERI1,NEDD9,B4GALT5,CNOT2,SRSF7,TRAPPC10,GCNT1,SACM1L,SMN1,GTPBP4,PRKX,ZNF394,ZRANB2,CTDP1,HCG18,NUCB2,GPI
.,MTR,SEC23A,MAPK13,AKAP1,ZNF333,MARK2,ZNF641,MUT,HUS1,CD63,UEVLD,PIAS2,EDIL3,RGS12,WDFY1,DDI2,MTHFR,ZNF136,BCL
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ACE1,MYO6,MECOM,NPR1,RBP7,TAF4B,PERP,NDNF,TPBG,FBXO11,MAGED4,BDKRB2,PYGO1,TIAF1,PLIN5,NEURL1,LIFR,EPB41L5,EPB
A5,MTM1,FLJ35934,C11orf84,WEE1,ZBTB18,ELOVL7,AMOT,USP15,TOB2,NPAS3,SPON1,SERTAD2,DUSP16,LIFR,PLAU,DDX6,FOXO1,AD

ANKRD17,CHD9,ICA1,NR1D2,LRRC8C,NNT,PRICKLE1,CEPT1,LONRF1,WASL,PAK2,MARCH7,TNFRSF11A,XPO6,CAPN7,EXOC6,NAA20,

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ET,ARHGEF19,USP2,PHLDB2,RAB11FIP2,MIR3180-4,LINC00863,AFF1,FAM81A,EP400NL,GNG10,TRRAP,FRMD6,UAP1,TUNAR,PDE4D,TM

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D21,IL6ST,MPPE1,SPTAN1,USP53,PHKA2,PHF10,HIVEP2,ATXN7,ANKRD11,CHD7,INO80D,GLI3,ADO,SUB1,ATP8A1,MFN1,PCF11,MSL3,G3
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NS3,GK,DFNA5,IFIT3,GSTO1,FNDC3B,IL18,LGALS3,PARP12,FGD5,IRAK1,IFIT1,LINC01094,COL4A3BP,HSD3B7,PLAUR,TMEM140,XAF1,A
,PARVB,EIF2AK2,SQRDL,OAS2,IRF7,PTCRA,OAS3,NSUN3,ITGB5,PARP12,SNCA,TMCC1,TARS2,RAB42,HERC6,PLEKHF2,GLMP,VDAC1,I

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5F2,PPIP5K1,BRD1,HOXB-AS1,CDKN2A,SAMD3,GATAD2A,MIER1,FAM133B,IQGAP2,TNFRSF18,ZNF322,PXN,STX16,KMT2E,KIZ,LINC006
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320,MARCH1,DOCK1,MTUS1,NEK3,SMIM14,TCF12,ITPRIPL2,HOMER1,SYPL1,SLC40A1,LRP3,OSBPL1A,FAM114A1,MEF2C,HECTD2,PDGF
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969,DOPEY2,RIPK2,TRIM8,DOCK11,CHST15,SNHG12,FAM151B,IL10,LRRK1,RILPL2,QKI,FAM53C,PBX3,TCF4,TUBB6,AGAP3,LGALS8,PPF
107A,CDC42EP5,LYPD6B,PLA2G2A,VWF,SLC9A3R2,LRP5,TEAD4,AQP1,UBR3,MEIS2,ACKR1,LOX,EGFL7,LIMS2,NTN4,PSD,ADGRL4,THS

TMEM161B,RASSF8,ATXN2,NDUFB3,SLIRP,PMPCB,FUBP3,TM9SF2,ZKSCAN8,CSTF3,FUT8,TFCP2,PRPF4B,TMEM234,EXTL2,SALL1,PSM
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NGLY1,CCL28,VANGL1,SUDS3,PPM1K,DUSP4,PTGER3,DDX6,HCG18,SMG1,PTPRF,NMT2,CDC42SE2,CARNMT1,RRM2B,MAP3K7,OSBP,F
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01,RALA,ARHGEF10L,CHML,LRRK1,TBC1D12,RRAGD,CTSL,DPYSL2,NLRP3,FNIP2,SLC43A2,CCNYL1,B3GNT5,ZNF267,PTTG1IP,SLC8B1,
M14A,MFSD8,PIAS4,LRRC37B,TRIB2,SCAMP3,PRR14,TMEM120A,KIAA1456,TMEM128,CKLF,NDUFAF4,ANAPC16,NDUFB5,SLC7A7,POLI
0,TEAD2,MAGED4B,SNCAIP,PLPP3,TUNAR,IFITM3,PTK7,EFEMP2,TSC22D1,CLDN5,DTX3,LOX,TMEM45A,PLXNA2,CXorf36,NOS1AP,NPF

2,TGFBI,H1F0,RRAGD,PEPD,KCNE1,FMNL2,CTSD,MS4A7,ARHGAP18,AKR1B1,LILRB4,ALPK1,BCAT1,IL18,SLC1A3,HEXA,SLC43A3,LTBI

IL4I1,PIM3,USP10,FBP1,TMEM138,CRTC1,PIK3R4,FCRLB,HTRA1,AKAP1,ALDH1L2,MPZL1,NFKBIZ,R3HDM4,MNT,ANLN,ASAP1,IPMK,EI

FIX,COPZ2,PRICKLE1,GOLM1,CD248,GREB1,RSPH9,OSR2,ADAM33,FBLN1,PLCL1,MDK,SERPINF1,C4A,BTBD3,PLPP3,SFRP1,PRSS23,LIN
AB3GAP1,SLC25A25,DHDDS,BMPR2,ERC1,SOGA1,MTR,SPRYD7,AKAP9,RNF2,SETD3,CRYBG3,MTFMT,PTPN13,SEL1L,PLCB3,ZCCHC9,A
1,SRSF11,RAB22A,DNM2,STK24,PHF3,UBXN2A,FAM193A,PIP5K1A,PCNA,TRPM7,ODC1,MARCH7,FAM208A,C1orf27,TBL1XR1,N4BP1,PN

,ASCC3,KLHL21,WDR7,PRRG4,KIAA0922,KMT2C,CHORDC1,TAF15,FAM46A,MBNL1,ATP1B3,FAM35A,CEP192,KLHL15,DHX15,EPC1,HA
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,COL23A1,TROAP,MYO5B,ZNF154,PDE4D,PTH1R,THRA,DAXX,ADHFE1,CHST10,CCNG2,NSMCE3,HOXB6,SSBP2,DOK7,RANBP17,SHC2,
CNOT11,EXD2,PDPN,C4orf36,KIAA0513,NIFK,AKAP5,ZNF517,EGLN2,CD58,ALDH18A1,MAST2,KCTD5,RNF130,EFCAB2,ZBTB11-AS1,PWI

DDX3X,SLC25A13,PROCR,ZCCHC14,SLC30A1,EIF1AX,DNASE2,PITPNB,PROK2,RBP4,HNRNPH3,SBDS,CD59,ILVBL,LRRC29,G3BP1,SMG1,
,RPTOR,TCF7,UBE2T,PRPF6,VTI1B,MCM8,SPC25,ZNF107,GPR180,CHURC1,NEK7,MAML2,PAPD7,LINC01089,PAG1,DHX16,FASLG,PSMD8
F41,BEX2,EID3,RABGAP1L,ZNF350,FGD3,BMS1,CWF19L2,SLC2A11,HCCS,RICTOR,PNRC1,SH3GLB2,SLC4A7,TUSC3,SPIN4,ZNF519,ARID
B4GALT5,TES,TRA2B,RNF138,VIM-AS1,BCLAF1,CSNK2A2,PLAA,OSER1,KDM4C,SMARCA5,PDSS1,PTP4A1,TIAM1,ST3GAL6,RNF6,CCNY
6V1D,PSMD14,NDUFA10,ST20,ZBTB20,ZDHHC9,FBXO33,ATP5G3,ARL17B,RGS17,GALNT3,SPCS3,DPY19L1,NDUFB2-AS1,KIZ,THUMPD1
ALRD3,TMX3,CNPY2,MTDH,ZZZ3,GOLGA3,XAF1,USP33,DOCK8,MFSD14A,PRKAR1B,LINC00680,TTC37,TFB1M,NAA15,RNPEPL1,SEC23

D46,MBNL1,CD63,SMAD7,ESCO1,TARS2,MARCH6,PSEN1,YAF2,CHMP2B,C2orf74,AP1AR,FDX1,PNRC2,POLG2,PSMA3-AS1,LARP4B,YIPF

l,DOCK8,RIOK1,ZNF664,ARHGEF12,IGBP1,TAF1D,LSM5,U2AF1L5,TRMU,TAF7,ME2,FCGR1A,MSRA,SLC12A7,SETD5,CBX3,TOX2,URM1,

,ZNF200,FIBP,CLPX,DGCR14,PSEN2,SDHC,NRBP1,CYB5RL,AP1G2,GOLGA5,EIF4E,RICTOR,TRAF2,RNF111,ST20,NAGS,COX6C,RPRD1A,S

NC1H1,CHMP2B,RHEB,B3GNT2,SDCBP,ABLIM3,MAPK6,GRB2,FOXO3,PDLIM5,ARL4C,GPR137B,PTGS2,MIR155HG,CTNNA1,NMB,C6orf1
FBXO17,ADPRH,ADGRL2,EMILIN1,IL15,NR2F1,SNHG18,CLMP,NXN,PHF21A,CLMN,GNL2,CD248,PRTG,GPSM1,ZNF300,ROBO1,TBL1X,GL

A7,STX16,OGT,MED16,HIPK1-AS1,DOCK8,TLR6,GPD1L,CCDC14,EVA1B,PMS1,JAML,FAM179B,ANKRD46,RABL2A,PTPN23,DLST,PPP1R1
C1orf198,PTN,LAMA4,ECM2,NFASC,IWS1,MAPT,SRPX,NKD1,CSPG4,PTPRK,AFAP1L1,RAB3IP,SNCAIP,MEG3,LMOD1,THBS2,MKLN1,SSH

3D,GMEB2,ITM2C,SHKBP1,CBX8,INSIG2,PTPN2,DOCK8,MICB,AEBP2,ZNF134,NSUN6,ZMYM5,SLC11A2,YRDC,RAB3GAP1,PGBD4,ANAP
C36A1,TRIB2,SMARCAD1,SMG1,HCFC1,ADH5,TMEM117,FAM89A,ENO1-AS1,TMSB15A,RPAP2,TMEM187,ZNF3,IDH3A,PUDP,CSTF3,MPZ

TF7IP,FAM126B,ITCH,C5orf42,ZNF800,MOB4,SLC38A1,BRWD3,SLC12A6,DENND2C,RNF150,KCNMB4,FAM177A1,CHIC2,DLG3,JMY,RMN
B,INTS4,FDXR,CTBP2,GSKIP,RAB4B,TIMMDC1,PSMB8,NPAT,SH2D3A,PNN,MXD3,TBCE,GLE1,XRCC5,ARF6,KCNQ5,SNW1,ZNF644,RNPC

RHOC,CUEDC1,EXOC4,CD2BP2,ZNF266,GSTA4,DCTPP1,EPHB6,SDHAF1,C9orf16,GATA6,CMTR2,BBIP1,NKAP,MYL6B,COX6A1,APPL1,PP

,AFF3,REV3L,PLCL1,RORA,MBTD1,UBR5,IFRD1,FARP1,CLOCK,SCAF8,ZMYM2,FKBP4,VKORC1L1,TPBG,PCSK5,FBXO11,RRBP1,XPR1,M

,TAOK1,SERINC5,BOLA3-AS1,ARHGAP44,TTC39B,UBP1,ATM,SLC25A28,ZDHHC13,CHSY1,CDKL1,MLH3,BOLA3,ABCA3,P2RX4,ZKSCAN
N,CLCN3,SGK1,TDRD3,MIOS,LAMB1,ZCWPW2,ATF2,GRK5,AZIN1,TMEM30A,NPEPPS,PDE4D,CSNK2A1,PIP4K2A,CAPN7,GRHL2,SMYD2

LPCAT4,SYNRG,PSMA6,RGS17,KCNA3,HERC4,ZNF683,ZNF655,VPS41,ZNF107,LRP5L,HGSNAT,ANKRD11,CD8A,PHLDB3,NMRAL1,NFAT

AI1,ELMSAN1,PPIF,FNDC3B,LPCAT1,GPAT3,LRRK2,MON2,SETD7,PPP1R9B,PRKAG2,PBX3,CPNE2,SLC25A37,MYOF,MEPCE,NCOA4,BAS

MPD3,PSMC1,NEK9,STRN3,HERC5,CCDC53,CSNK2A1,ZSCAN16-AS1,SLC39A13,DYNC1I2,NBPF11,ESD,CCPG1,PFN1,NGDN,SCO1,SLFN12

A15,UTP20,HHIP-AS1,UBE2W,LINC01588,RLIM,TRIO,USP9X,ZNF614,PHACTR4,WNK1,PRRC2C,PPP6R2,HNRNPH3,R3HCC1L,CPSF2,KDM
KLF4,JDP2,ERF,MPEG1,PLEKHG2,AVPI1,NEAT1,H2AFJ,ITSN1,MAT2A,KLF10,RASAL2,SLC3A2,EGR1,FAM105A,SLC4A2,TM9SF3,SEMA4A
X36,TMEM11,HMGN3,EPC1,TAF7,IRF2,BANF1,UGCG,RSL1D1,LCOR,PPP2CA,LARP7,MCL1,EIF3D,CCAR1,COMMD1,MAPK1IP1L,SSH1,HN
Y2,ZNF263,GBE1,FLVCR2,AMPD3,FNIP2,KLF3,GPX1,CD164,CTSD,EFTUD2,PES1,HIVEP3,SLC16A3,RAB5A,C12orf43,ATP6V1G1,CDYL2,A

ASGRP3,UBC,RIC1,CYP1B1,PABPC1,ARID3A,GJB2,ATP1B3,MEF2D,LGALS2,CREBBP,RNF6,EIF2S3,SNN,RASSF5,ARL8B,UBA1,INPP5F,C4

B,C10orf35,NKTR,CCDC109B,RASA3,NIN,CDC14A,TMEM204,TGFBR3,ITGA6,CD8A,CNOT6L,FOXP1,APBB1,EPB41,ITGA4,SLC37A3,MSI2,C

L,PRRC2C,TRIM28,TTC17,POLR3C,U2SURP,SFPQ,LUC7L2,KCTD20,IBTK,SFSWAP,SF1,COPB1,GLE1,CEP95,RBM25,PITHD1,PTBP3,HNRNP

NDP2,DUSP3,NEK6,HLA-DQA2,M6PR,BRI3,GAS2L3,DLEU7,IL18,C3,CD84,SLC29A1,TTYH3,CD81,NFIC,SLC1A3,SLC31A2,APOC1,MYO1F,A

,RRM1,ZNF714,NUP188,ESCO2,MDM1,NUP54,POLE2,ALDH18A1,MAGOHB,BLMH,SNRPE,NCAPD3,HAT1,SYCE2,FN3KRP,NDUFB6,FANC
NRC18,PLXNA1,NFIC,SLC37A2,MTSS1,ANOS1,SECTM1,RPE,SGK3,SCARB2,TNS3,ARHGAP18,GNS,HBEGF,ABR,ME2,RBM47,GNPTG,LAM
C5AR1,IRAK3,CSGALNACT2,TET3,ASGR1,TGIF1,NUMB,PLEKHB2,FAM198B,ZFP36L1,VMP1,LMO2,EPB41L3,PTGS2,GPR84,STAC3,LILRA
CHPT1,SH3PXD2B,ALDH1A1,DIP2B,SLC12A9,ARMCX1,PHACTR1,FECH,ELMO1,SH2B3,LYNX1,EFCAB2,PLAGL1,SUMF1,ANKH,SKAP2,TM
PARP,PMAIP1,SMG1,SNHG15,GPBP1,ZBTB11,PSME4,SLAIN2,LRRC75A,ANKRD28,ITPR1,CITED4,SOS2,CDC14A,PROM1,DYNLL2,RNF122
SNRPN,LPP,PODXL2,DKFZP434I0714,CCDC53,EBAG9,EXOC5,FAAP24,LYRM7,LINC01089,FAM175A,ICAM3,RWDD1,KIAA0319L,MYL12A
2,PURB,PRKAR2B,ANKRD20A4,DIAPH3,ZKSCAN1,ARCN1,PDCL,DENND4A,SMARCE1,MBTD1,LHFP,DSC2,APP,PBRM1,FAM192A,ROCK2
A,FAM228B,ALDH16A1,LATS1,FBXL3,GABPB2,SF3B2,TRAPPC1,MYL6,EIF4H,GCC2,GLYR1,HLA-DQA2,PSME3,ENTPD4,COG7,STOM,TMI
LP,C2CD2L,ERCC3,UGGT2,NAT9,RBM10,AQR,C1orf27,STAMBPL1,DPM3,C3orf14,ARID3B,ZBTB33,C3,TRPC1,SLC35C2,GTF2H1,EFNA5,API

3,CLK1,CD86,ZNF131,NAP1L5,LINC00852,BCAS2,DUSP5,IL12RB2,ZNF14,SATB1,MFSD14A,DENND4A,SMAP2,FOSL2,HIVEP2,METRNL,JAI

1,GTF3C4,PSMA4,LRR1,CCSAP,INPP4A,SND1,TMTC3,FNDC3A,TMEM200A,RBM27,LAMP2,STAG1,FAR1,NEK1,ADNP2,CENPJ,YPEL5,LRB

PS1,AK5,TPD52,C7orf57,NUDT8,METRN,MZB1,MRI1,SLC25A42,POLD2,BAZ1B,CASP2,C10orf2,SASS6,STRA13,HPDL,WDR76,NUP210,HAU
',BRCA2,FIGNL1,CCDC167,GMCL1,CDCA7,EHD1,TYMS,CREBZF,C11orf80,HNRNPUL2,NUDT21,ATAD5,BTBD11,MED1,PAPD7,HLA-G,E2F
,3,VCL,NUP85,DPY19L4,C16orf59,SEC31A,WASL,ZBED4,XRCC2,MFSD2B,CDKAL1,ROCK2,FAM111B,TDP2,GART,GDAP1,IL18R1,ASB1,PA

FN1,TRIM68,GYG1,RMDN2,PI4KB,KIAA2026,TFAM,GAB2,PPP3R1,FBXO42,MCCC1,HDAC1,TBC1D1,SYT11,SNCA,TAF5L,ICA1,FAM102B,I
M1,NUSAP1,E2F7,LAIR1,SPA17,KHSRP,GIPR,RAD51AP1,UBE2C,PTTG1,YOD1,CASP2,SEPSECS,MCM6,HIST1H4H,ESCO2,TTBK2,HELLS,FA
TDP1,BUB3,GINS1,SNRPB,CMC2,HNRNPA1L2,DLEU2,CDC7,CENPL,WDR34,NKTR,SNRPE,CENPN,TICRR,ZDHHC12,SPC24,RNF8,BARD1,

1,RARRES1,SDC2,THSD4,SSPN,ANTXR1,CCDC80,NREP,PDGFA,LAMA4,NGF,PDE3A,VAV3-AS1,ENAH,TRPC4,PRICKLE2,PMEPA1,DLC1,N

CUL1,RRAGD,DUSP6,LAMP2,IL10,SLC19A2,FAM20A,SCO2,NDST1,LAP3,FOXRED2,CD2AP,OSM,ATP1A1,PPFIBP2,C9orf72,WLS,SNX2,STX
EPHB2,MEMO1,GPR85,RASGEF1B,SLC15A3,SLC16A10,IL1RAP,LRCH4,DCAF12,CXCL1,TBC1D13,SERPING1,PTPN12,EPHX1,MAMDC2,SP

EP1,TOB2,KAT6A,CRIM1,ZBTB1,KDM6A,HECA,PRRC2C,SKIL,FAM3C,FAM177A1,LPP,ABLIM1,NAA35,PTPRG,BAZ2B,OSER1,TRIM39,IRF
RAB11B,PRPF38B,RAD51B,TMF1,TRIM24,HMGCR,NRIP1,MUM1,EXOC1,UHRF2,ZFYVE27,GGT7,RASSF1,FKBP5,FRYL,GRAMD3,TIA1,PRI
1,ARHGEF1,SRI,METTL13,TP53,N4BP3,EIF3G,C1D,MED10,RASAL3,TERF1,NUPL2,ECH1,TSTD1,MAPKAPK5-AS1,PWP1,ABT1,FAF1,DMC
TPN11,CERS5,PAFAH1B3,PTAFR,BRK1,RBP1,CCRL2,NMT1,LMAN2,SEP15,AUP1,SF3B5,YEATS2,NCOA4,TGFBR1,FAM72B,PPHLN1,KDM2
MC8,ZNF436,NOL11,ADD3,CUL4B,THOC1,PPP6R3,FAM134C,SUGP1,GSR,SYMPK,NUP205,CCNT2,FNBP4,OLMALINC,NDUFS1,C1orf52,GA

,TSPAN5,SEMA4D,SLFN13,NDFIP2,CCDC88C,KLHL23,GZMH,CCL5,COTL1,LINC00996,APBA2,CDKN2C,AUTS2,ERMP1,CXCR3,CASP3,SL
ABARAPL1,ZNF638,SLC25A30,MED13,RYBP,ZNF644,PHF3,HIVEP1,HELZ,WDR48,FEM1C,ZMYND11,ELOVL7,R3HCC1L,PTP4A1,FAM20B,Z
),NR4A3,TFRC,RCOR1,BAIAP2,MERTK,RASSF4,ZC3H11A,KIF1B,FOXO1,FOXK1,RNF2,FMN1,DRAM2,RASA3,HIVEP3,SERTAD3,PKP4,RNF
4,JAM2,BEX5,RPRM,TCEAL1,SMAGP,PCDH17,FAM167B,LIMS2,PSD,GAL,EMCN,TMPO-AS1,SPNS2,CD34,TSPAN7,CD8B,EPHX1,ERG,FAX

CEF1,CD3G,KIAA1551,KANSL1,KANSL1-AS1,TLK1,FAM134B,PDE4D,EPB41,ANKRD44,EIF4E3,DDX6,IL2,PDCD1,SLFN5,MYBL1,RBM38,B
f162,NCF2,CPVL,CXCL8,TRIB1,PID1,PLEKHG2,ARL4C,THBD,DUSP1,THEMIS2,LILRA5,HLA-DQA1,HLA-DQA2,TMSB10,PRKAG2-AS1,CD7
4,FOXJ3,PABPC4L,SLC25A33,LONRF2,RNF2,ARHGAP20,TPTEP1,MSANTD4,JAM2,SETX,CRIM1,ARHGAP12,ATG4B,UBE2D2,TNFRSF19,TM
GS,DTNBP1,DCK,LIN9,PSMA1,KHDC1,RAN,TPRKB,PIGX,CYP26A1,AURKB,ACY3,METTL4,HIST1H3H,CCDC51,CFLAR,NUDT22,IKZF2,GZ
4A7,NCF4,ENG,STAC3,TMEM37,MILR1,FTL,RGL1,HLX,ANKH,SAT1,CTNND1,TMEM26,CREBL2,HEXB,GAA,RAB31,EPS8,VMO1,TPP1,TM
TBD8,MCOLN2,IL18BP,SAMHD1,BIRC3,GNG10,C1orf54,LRRC8C,SPINT1,TJP2,LMO2,PICALM,DPYSL2,CLIC4,SNX3,PLCB2,SLC43A2,SGK1
NF425,CHAMP1,PEX5,SUMF1,TIMELESS,CLEC2D,LRP10,ARFRP1,ZNF641,SLC6A8,CHCHD7,TRIM69,PAG1,UBL4A,ISG15,MTPAP,SCYL3,A
KHM1,DPEP2,SPPL3,EXOC6,HVCN1,TLR4,SNAPC1,YIPF4,ZFP36,MAMDC2,STRADB,TMEM248,NR4A1,SYVN1,CCDC127,MPPE1,SRRD,PAI
,MAP3K3,PHACTR2,TNRC18,TBC1D22A,APEX1,BAIAP2,ARHGAP20,GIGYF2,KIF13B,IPMK,SPPL3,ICA1,MTHFR,PRKAR1A,YAF2,WDR74,
CSF2,CACNA2D3,ARHGAP6,SLC45A4,TUG1,PHACTR2,FCGRT,AAK1,TSC1,PRMT9,ULK1,ABCD4,NRARP,TMEM117,TRAF3IP2-AS1,ETV4,I

DOK2,ZFP36L2,NDEL1,TOP2B,ZNF567,ARMC5,HERPUD2,MEF2D,MIR22HG,PRKD3,MAML3,VAPA,IRF2BPL,CCNT1,EGR3,AUTS2,SRGN,C

.,ALG6,H2AFZ,ILF2,DCAF7,TMPO,MFSD6,ATP8B3,CCDC90B,TTC39C,APOLD1,TUBGCP4,CHTOP,CALM2,KANSL1-AS1,NMI,ARHGAP33,H

DUSP4,ZNF295-AS1,TAPT1,MAN2A2,GRAMD3,PDS5B,PHLDA1,IBA57,APPBP2,BTAF1,ARHGEF7,ITGA4,TPT1,CCDC6,TNFAIP3,ZNRF2,FO
MEPCE,HTR7,SERPINA1,CHMP2B,NCR3LG1,NAA50,HBP1,UBE2D3,BCL6,KIF27,GGA2,TBC1D7,PNRC1,CD55,RASGEF1B,TMEM255A,MAP

HIF1AN,SLC2A4RG,CDKN1B,EZR,ABCC1,HAT1,TMEM263,USP9X,ARID1B,BPTF,PWP2,ZFP30,ZBTB45,SLC16A10,CD6,CDK17,IFT22,ARH
38,PDK1,RCC2,GNG2,FNBP1,GGT7,PCDH19,MAP3K6,XPO6,ARHGAP19,HIST1H2AE,HMGB3,PAK4,SCYL3,FLT3LG,ZMYM6,USP42,CTDSPI
B,CD300A,PHAX,XCL2,BRAT1,UBE2E3,EOMES,ECT2,SUMO2,NDUFB3,FIBP,CAPN1,CPSF4,SEL1L3,ITGB1BP1,PKN1,PITHD1,RGS16,DGCR

EG,RBM38,CCDC141,SYNRG,GPR171,SPAG5,TSPAN5,MDFIC,TRAPPC10,GPSM2,CAPN12,AGAP2,PTPN4,PIP4K2A,SH2D1B,PTPN7,HOXB4,

CARB1,SRPK2,TSG101,CSTF2T,CFAP97,GNPTG,C2orf49,CLIP1,SLC35A4,SLC52A2,ERAP1,PLPP6,BBS4,BIRC6,PDE8A,ORMDL1,FAM98B,W
3UB1,OCIAD1,ZNF430,URI1,GYG1,HELZ,GFI1,AKAP1,GOLGA8B,ACTB,TRIM39,PLCL2,PPP1R2,NEK7,TESC,RBM38,GOLGA8O,SEL1L3,NA

5,SH3GLB2,NCAPD3,WDSUB1,CAMKK2,YY1AP1,ARHGDIA,MIF,TOR2A,TRAIP,UBE2D1,C19orf48,FDPS,RAD18,IMMT,HNRNPR,E2F6,CEN
OPN3,NUDT1,CTDSP1,ZNF782,CTBP1,MAPKAPK3,CLN6,PSMF1,CHCHD3,EIF3D,SNRPE,ALKBH1,NUP54,UBE2J2,ZSCAN21,PCBD1,TFB1M
P2-AS1,TOLLIP,PABPC1,TCF4,HSBP1L1,TOPORS-AS1,OSER1,PLAC8,TRAF1,CHGB,FBLN5,NINJ2,NARS,ENTPD1,TOPORS,FTL,TAS2R19,H
P2U1,JAK2,GATM,CAMSAP2,KBTBD11,EDNRA,ZSWIM6,MTIF3,SLC46A3,ELK3,DLC1,BTBD3,DOCK5,HHEX,TSC22D2,RB1CC1,DUSP6,HS

FRC,CAMTA1,GPBP1,GOLIM4,RNF2,POU2F1,MSL1,PTPN9,TCFL5,AMMECR1,B4GALT6,ANP32A,HIC1,CCSER1,H3F3B,GABPB1-AS1,GNA

T1,CCP110,MAK16,ARF6,ARL16,CEP97,TCEANC2,CYFIP2,SFI1,DBR1,CCDC171,LINC00539,HIST1H4K,ZNF592,TTPAL,SH2B1,MYBBP1A
25A29,ACSL5,PRSS22,FOXB1,PAPSS1,HOMER2,WNK2,MAOA,TMEM117,PPARGC1B,LAMC2,RGMB,PCDH1,SLC30A2,ANK3,GYLTL1B,TO
2,HOXD8,PAMR1,THRA,SFRP1,PACSIN1,PDLIM4,RORB,CDH11,HOXA10-AS,HAND2,GTF2IRD2,REEP1,CCDC74A,AGPAT1,ALDH1L1,SLC
,LUC7L,ITPR1,ZFYVE19,THOC5,RFXANK,FNIP2,DKFZP434I0714,ABI2,TGM2,JPX,HCFC2,EEF2,GLRX5,ZCCHC7,TEX264,LINC00426,CCDC

1,CERS6,PDIA4,RBM27,NFIX,GRB7,BCL2,MBNL3,TRAF3IP1,LPGAT1,C4orf32,TMPO,ARID5B,ING1,ERGIC3,LCK,SCAND1,MDM1,S1PR4,LI

,TRAPPC2,DERL3,BUB3,SLFN5,CHMP7,TTC14,TOMM7,RAP1B,MTA2,STX17,ZBTB25,HIBCH,CDC42SE2,SYNRG,ZRANB2,PHF3,DDX55,SP
184B,ZMIZ2,MTG1,CBFA2T2,RPAP2,PCF11-AS1,IKZF2,FIGNL1,TANC1,SLAIN1,DCAF5,FOXN3-AS1,PRKCQ,PIAS2,LINC00869,ADGRA3,SO
EDD9,SUN2,PIK3R1,ITGA1,SP4,LINC00869,SPRY1,LINC01138,RRAS2,C17orf67,GPR68,LNPEP,BPTF,AMOTL1,LBH,KIF21A,SHPRH,FAM214
F5A,SEPT7,PSMD8,SKA1,MAGOHB,PPP6R1,HNRNPD,CDCA5,KIF23,CDT1,DHRS4,CCT2,ANP32E,EZH2,CBX5,NUDC,PFDN6,HNRNPH3,SH
5,ANKRD31,PPM1K,RAD54B,ANAPC2,PRPF6,ALDH6A1,C2orf74,RPF1,ALMS1,ZCCHC2,PASK,METTL2B,DIEXF,ZBTB20,GIPC1,PPIH,RPA2,

W7,TBC1D8,REL,JMJD1C,THRB,CDC42EP3,MYO6,ZFR,ANKRD6,PCGF5,IRF4,SLCO5A1,SIK2,UBE2N,SVIL,KLHL21,LRRFIP2,FOXO3,KPNA
.3,FRMD4A,ASPSCR1,TTYH3,PTTG1IP,ZFYVE26,LAMP1,NDST1,SSR3,WIPI2,COA7,APLP2,PROK2,PDIA4,TRAPPC5,GNPTG,GTF2A1,TCEA
MPK2,LYSMD2,SQRDL,NFKBID,FAM127B,VPS45,FEZ2,AKR1B1,ALKBH7,TRIM21,TPGS1,B3GALT4,FCER1G,ALOX5AP,DHRS11,ADAR,CT
F2,ARHGEF7,NEDD4,DBNL,ATP6V1H,ZBTB22,CD1A,FLJ13224,ARHGAP9,KCNK4,RNF111,STRBP,MAPK1,WDFY2,PPM1D,FNBP1L,IRF8,N
S1L,ZNF700,ZSWIM8,MORC2-AS1,PHLDA1,ZNF808,SUGP2,SEC31A,MGP,UBTF,YIPF4,UBXN2A,ALDH3B1,PCYT1A,RASA3,PARP10,INPP4

7,ST6GAL1,ABTB1,OTUD1,SRGAP1,FAM133B,TMEM26,ZSCAN18,DUSP6,CRTAP,GAREM1,FAN1,SERTAD1,MEF2C,CD163L1,PRKCA,WW
18,SPTAN1,ZBTB1,DUSP4,RBM33,JMY,DDX27,TSC22D2,GOLGB1,KLF13,CCNT1,TNFAIP3,BRD1,DDX5,ABHD5,TNFSF9,GADD45A,ABCC1

TSC22D2,KIAA1191,MYLIP,CERS6,TLE3,SERTAD2,DCBLD2,SOX4,ERN1,CYCS,NUFIP2,TAGAP,TACSTD2,NME5,RABGEF1,RASSF2,CSRNI

ARD10,CAMK4,ANK3,KLHL29,ZBTB25,CLK4,SNRNP70,MBNL1,SMARCA5,LINC00886,ADTRP,MIA3,CFL2,SOS1,IKZF2,FAM118A,RBAK,FI
4,ATP10A,ZNF445,INPP4A,B4GALT4,MBNL1,REL,ZBTB11,PRKCH,SMARCC1,TMTC4,ZNF800,MAML3,PIP4K2A,STAT5B,EPC1,ARFGEF1,R
B,MCTP1,CSTA,RIPK2,SNX30,PDE4B,RILPL2,NCKAP5L,H2AFJ,LILRB2,SH3BP5,SPRED2,NFKBIZ,ARHGAP31,CAHM,NFKBIA,IL1B,ACTN1
,CLDN10,FAM84B,NXN,KDM2A,MECOM,FAM107B,AMIGO2,SYNE2,AGO2,USP12,SETD2,CTNNAL1,ENAH,FGF2,DSG2,UBE2H,RNF10,SM
H1,YTHDC2,RAB5A,RNF216,TRPC4AP,ABCE1,CLINT1,CAMTA1,EPSTI1,FZD1,PATL1,ARMCX3,ADPGK,SIRT1,RCC2,GPRIN3,SNN,TOMM2

KN2,FAM19A5,C3orf58,ADAMTS12,PDE4D,LINC-PINT,LMNA,GORASP2,USP9X,CD2AP,PHF10,BRMS1L,ZBTB16,ZNF891,LUZP1,TFAM,MI
4,PHF10,CCDC186,DEK,YES1,RAB8B,VPS13C,DLG1,NUP153,KIF13B,TSC1,MEF2A,MAP1B,HELZ,LINC-PINT,GADD45A,INO80D,WDYHV1
RNT1,LINC01550,USP10,FLCN,CSAD,FYN,DGKD,IFITM1,SYNRG,KLHL29,FANCC,NSMCE3,SESN3,CEP68,ANK3,PPP1R3E,PTGIS,MDS2,FA

2M,PHKG2,VPS26A,AFF4,FNDC3B,IRF2,FRAT2,AACS,BTBD7,PJA2,MCPH1,STK17A,TOP1,IDI1,USP36,ZFP36L2,HMGCR,PTPN1,GAPT,ACT
TPRA1,GAB2,PLD1,SUSD6,LILRB3,RRP12,ZFYVE16,ZEB2,SNX9,SLC37A2,ARL8B,PFKFB3,SLC15A3,C9orf72,TSPAN33,UBTD2,PTGS2,TNF

HSA2,ITM2B,APEX1,FOSB,ITSN2,THAP5,FAM192A,MAGOHB,ARID5A,VMP1,PTPRE,GLYR1,DDX3X,KAT5,ZNF672,C22orf34,NEURL2,AR
A,SQRDL,TFDP1,SOAT1,PACSIN2,PPP3R1,PAQR3,FKBP4,RIF1,BIRC2,SFT2D2,VRK2,RAB21,PEA15,DEGS1,LSM6,WAC-AS1,TCEB1,EIF3A,A

RAF,MAP2K4,FAM107B,ZBTB20,DSP,TBCC,SLC12A6,ZNF687,SENP5,E2F3,CAND1,NCK2,BCL11B,SPTBN1,RAP2C,SLC41A1,SMG1,TRA2A

2,SNX2,VAT1,LINC01094,GNS,PFKL,MS4A4A,OLFML3,RIN2,SLC7A7,BMP2K,LILRB4,BNIP3,MTSS1,IDH1,TPP1,KCNQ3,SNX24,ANG,S100A
IF216,RAB42,FBXO28,CD53,CTSD,TPI1,MIEN1,CCM2,PMVK,ISY1,NIF3L1,NUCB1,SMIM15,OSBP,UROD,TP53RK,KDELR2,DHX8,M6PR,IL1I
,ALDH3B1,GAA,PTGS1,SLC46A1,VPS41,BRI3,RNF130,GALC,RAB3IL1,BIRC7,KLHL6,C5AR1,LRP1,ENO2,DHX32,PTGR1,FAM198B,APOE,L
PS53,STXBP3,ATP6V1A,APC,WSB2,ST6GALNAC6,CHD7,FCGR3A,TSPAN4,SNX33,AARS,ZFHX3,ANKHD1,WDFY4,SLC26A2,CYP4V2,BNC

MKLN1,C1GALT1C1,ZDBF2,ADK,CCNG2,PIGN,SCAMP1,PHYHIPL,P2RY1,ADGRL2,SLC37A3,TRIM13,PDE9A,AKT3,KIF12,PAM,ABHD17C
12,RASGRP2,NANOS1,INTS8,STXBP6,SLFN11,LIN54,IL1R2,ADGRE3,CPNE2,FAM124A,ANO6,C11orf80,CD3D,OTUD3,SEZ6,STX17,PDZD2,L
RD36B,KIF23,UBE2S,NIP7,DIAPH3,HMGB1,YEATS4,TTF2,DEPDC1B,CCNA2,C21orf58,UBE2C,CBX5,ARHGAP11A,CDKN3,CGGBP1,BRCA2,
N2L,ZKSCAN8,DLG2,C1orf226,PNMA1,ZBTB20,TMEM204,PBLD,AP2B1,PXN,LTBP3,RAMP3,VAMP2,C16orf74,RBM23,MEN1,DAB2IP,ZNF58
NU11,SNHG8,NFKBIZ,TBC1D4,PLAC8,SMG1,FAM65C,C3orf58,GABARAPL1,DENND4A,DYRK3,GNG10,RASGRF1,SRRM1,THBS1,ELMSAN
TBP1-AS2,COG6,OFD1,CASS4,DOCK11,C10orf76,DHRS3,SPPL3,HELZ2,C1QB,PCDH9,TAF1,FAM102A,LINC00467,RING1,STK36,TAF1C,NRI

YL2,EZR,AKAP11,FBXO10,EIF2AK4,FAM114A1,UBE2W,CCSAP,GLCE,ATG4B,SGMS1,ATN1,ITGB5,DDX60L,FKBP5,PPP2CB,ANXA7,FAM1

,PPP1R9A,STRN3,MPPED2,BRD1,MICU3,LRRC37B,TNFRSF12A,SIK3,BICC1,MAML1,AKT3,ATP1B3,TBX2,ISOC1,RSBN1,STK38L,ELOVL6,
DZRN3,WWTR1,MIR497HG,FGF13,PDE3A,CRTC3,BAZ2A,RAI14,TUSC1,YAP1,DENND5B,COL5A2,ENAH,GPC6,PRICKLE1,LAMC1,SGCE,CI
ADAMTS5,PCF11,NAV1,SORBS3,ROBO1,NLGN4X,TPBG,HOXA11,EMP1,SPATA6,FRYL,MID1,CACNA2D1,ANK2,YBX3,NR6A1,TANC1
P20A1,GLUL,SLC35F6,HEBP1,KLF3,SPRED1,CLN8,LAMP1,SLC11A2,RAP2A,ACER3,GTF2I,ADIPOR1,MTUS1,FMNL2,UBE2W,FAM213A,TC
CD,ITGA5,OSM,CDH23,LAP3,SOD2,IQSEC1,NFKBIZ,DPYD,WDR48,KBTBD2,MYLIP,STAT1,NCK1,CXADR,P2RX7,ZFAND5,GINM1,PLIN2,A

ETD2,DCTN2,ZNF131,PHRF1,CASC5,MRO,HIST2H2AB,MTPAP,RLIM,TUBA1C,CCT8,EPS15,HIST1H2AG,QRICH1,CNTROB,ATOX1,LCP1,TI
,60,CENPU,C1orf56,PRKACB,CTTNBP2NL,ACOT7,CTCF,ICMT,SPC25,DGKZ,STMN1,KIAA1524,WHAMM,MND1,SLC2A13,KIF22,ASF1B,ITM
BCL2L12,C6orf1,GMPPB,LRRC59,CD38,PPP4C,ZNF551,LMBR1L,NDUFS5,PSMB2,DAD1,ATP5C1,GTF2A2,VPS39,NCOR1,TRAPPC1,ASL,TCE

,RAC1,PIGN,TIPARP,SOCS2,ERN1,IGF2BP2,LRRC8C,IRF2BP2,MAN1A1,FAM46A,FHIT,PDZD2,DSC2,CHORDC1,RERE,DNMT3B,C5orf30,CE
,EPHB2,ARL4C,PTPRO,SEC24B,ATP1B3,AEBP2,PPP3R1,SUSD6,COG3,FARP1,NEDD1,KLC1,BRAF,FNBP1,CGGBP1,ITSN1,IKZF2,FURIN,TAI

G1,ST5,RAI2,FBLIM1,INAFM1,TFAP2C,ZNF577,PLPP3,DIXDC1,ADGRA2,SLC6A12,NUMBL,MAP1A,LAMB2,P2RY14,SH3D19,SCN2A,LOXL
F2,TBX3,LAMB2,PTPRS,KLHL13,PLS3,PRRT2,PDZRN3,FBLIM1,TCEAL7,CDH11,GUCY1A3,ZEB1,PDGFA,TSKU,CCDC80,C1QTNF1,NCKAP
FSIP2,SRPK2,RTN4R,KMT2D,MORC2,NR3C2,ARHGEF5,TAF4B,H3F3A,GPBP1L1,ETS1,SERAC1,SATB1,EPC1,IBTK,ASTN2,JMY,RND1,TRIM

GN2,C3orf70,CACNB3,APBB2,MAPT,CCDC102B,ADRA2A,PRR16,LARGE,CDH6,SRCAP,ADGRL3,NBEA,LRRC3B,TMEM161B-AS1,CBLN4,A
3,IL1R1,BACE1,FAT1,CTIF,SNCAIP,TNFAIP3,AHDC1,CCDC6,HOXA11,C1R,COL12A1,PPM1K,MAPT,TPST1,COLEC11,UBE3A,KIAA1841

TIAM1,RNF139,RASSF8,IQGAP1,ANKRD9,TAF1D,DNM2,SLA,FBXO22,SREK1IP1,FASTK,CLASRP,COPB1,HUWE1,TRIP11,ZNF655,SMARC

,KLHL29,SDK1,ACBD3,EPB41L2,NOTCH2,SCAMP1,BAHCC1,EEA1,MAP1A,PSTPIP2,ZNF608,ZNF704,NT5C2,MVB12B,ARID3A,MORF4L2,T

P1,NEDD4L,SUMF1,FNIP1,TMEM8A,UBE3A,UPB1,DUSP23,CXCL8,YTHDF1,APEX1,TOMM20,ZNF783,ATRAID,TRAPPC8,EIF4A1,TPI1,PLI

D3,CMPK1,LAS1L,CRY1,CMTR1,TMEM5,POGZ,MCPH1,RPIA,UBB,STK24,EML2,OMA1,ATF7,PDK3,IARS,UBTF,NUTF2,SRP54,COX8A,KD

1,TPM1,AEBP1,MGP,EPHB6,NR2F2-AS1,ASCC1,EPHX1,BGN,SMIM10,GABPB1-AS1,POGZ,CNRIP1,MAGED4B,CACNA2D1,CNTNAP1,LMC
LD1,CBR1,VASN,TREM1,KCNA3,ELK3,TSC22D4,PWWP2A,ARRB2,DCUN1D3,EEF1A1,BTBD19,LRP10,WT1,IQSEC1,CETN3,OGFR,IDH1,T

64,SPRY1,CRISPLD1,ARNTL,PIGQ,FAM189A2,TLE1,ARSJ,SPTAN1,ERN1,TTC39C-AS1,MPPED2,ELK3,TMED8,MATN2,YPEL2,ABCA5,PLF

65,GPN1,GNPTAB,KDM5B,MAD2L1BP,RGS16,DR1,USP47,CYTIP,NKG7,SRGAP3,MDM2,SPAG1,SDAD1,PDCD7,CHST12,GFOD1,NUP54,TM
2L1,ZNF397,G6PC3,TBK1,CDK18,HAGH,DCTN4,ARAP1,CSTB,MPV17,ZXDC,VSIG10L,HTATIP2,LRIG3,ATP9B,NNT,PAK1IP1,PLBD2,C16or
C00680,DLEU1,P4HTM,PTGER3,FRRS1,MPP5,LRRC75B,TSC22D3,SLX4,HOXA10,RHD,BSPRY,ZNF101,ZNF717,PYCR1,TTC32,NUDT14,ARR

AM22,ST3GAL6,SERINC5,FBXO17,DUSP5,UBR5-AS1,HIPK1-AS1,UBR5,DUSP22,FURIN,NR3C1,MGAT4A,BCL11B,SMAD3,FAM102B,C12orf

ARHGAP12,RAB12,SLC11A2,AUTS2,REV1,VPS13C,CMPK1,AHR,RWDD1,DCHS1,DUSP22,SMAD5,CCPG1,RAP2B,OSBPL9,RABL2B,SELT,SI

QO1,TIPARP,C5orf49,JMY,PEX5,GNB5,OPN3,TMEM187,DDTL,TTC21B,RHOV,PYM1,CENPU,CRIM1,PIK3CA,BMPR1B,FYN,G3BP2,BLZF1,

,GSR,KLHDC4,ZFP69,TBPL1,THEM4,BBS4,PPM1A,FANCM,CSTF2,G3BP2,TP53I13,GLYCTK,UIMC1,ZNF574,CHERP,SOCS5,FUT8,TRIM59,F
BP2,TAOK3,CYB5A,FARP2,DENND4C,GALNT3,STXBP5,PACS1,RALA,NEDD4L,PDCD4,KLHL23,CAMTA1,SMAD5,CAPRIN2,FBXW7,LEPF
,ZCCHC6,IMPAD1,DCP1A,KPNA1,TECPR2,UPP1,MCEE,MAPK1IP1L,INTS8,BIRC6,BTBD3,STAG2,LMAN1,CCAR1,SRSF5,RAP1B,STT3B,TB
A1,POLA1,NSMCE3,LUZP1,RTTN,FAM107B,NMT2,TFDP2,STIL,XPC,PPM1D,EXO1,CCL28,ATM,TDP2,AKAP5,ISOC1,SLC5A3,KIF21A,C2CD
ROBP,SCIMP,ITGB2,IFI30,C1orf162,IL13RA1,MAFB,LILRB1,LAIR1,MS4A6A,SH3BGRL,TYMP,C1orf54,H1F0,PLBD1,PTPRE,KLF3,CD9,FGD2
)3,GRK5,ABCB4,MEF2C-AS1,UNKL,NFKB1,USP6NL,ELMSAN1,PLEKHA8,INSIG1,NRARP,EMX2OS,MIOS,PARP1,TBC1D4,ARRDC1-AS1,CD
N1,AP1B1,CNDP2,PTPRJ,DENND3,ACSL1,PARP14,VEGFB,COLEC12,BRI3,AMDHD2,FCGR3A,LAIR1,SLC35F6,COL4A3BP,FMNL2,MGAT4A,
PL,ASH1L,ZNF512B,FAM174A,PSMD7,PBRM1,VOPP1,CARS2,HELZ,SIDT2,FBXO38,FAM49B,SH3BP2,FUBP3,ELP2,TRAFD1,SPATA7,SF3B6,
ANOS1,GCHFR,ST14,TYMP,PHF11,MARCO,EIF2AK2,LTBP2,AAK1,FCHO2,IRF7,DBI,STAT2,GPR155,AGRP,CAPG,ATP6AP1,TMEM173,GLG
LARP4B,LAIR1,RNH1,RHOBTB1,CMTR2,CHCHD6,DDX58,ASAP1,TMEM251,STX7,ASAH1,MFSD12,NBPF1,RGS12,SNTB1,ACTR3B,FDX1,AS

2J3,LSG1,NOC3L,LEMD2,E2F3,SYNE2,SRSF1,RABEPK,TPCN2,TMTC2,MOB3C,TBP,ZNF84,VASH2,CDC42EP2,GLI3,RPE,TBC1D1,POLE4,ZN

2I,KIAA0895L,KCNMA1,RBMS1,GLT8D2,PLCL1,SSR3,HAND2,ARHGAP12,OSR2,EEA1,PRRC2A,PANK3,FAM219A,GNS,FTX,ARHGEF11,DU
GL2,TBC1D13,UTP3,HNRNPD,PPIL2,ZSWIM7,H3F3C,IPPK,LRCH3,LLGL1,CDK10,TCEB3,CETN3,H2AFZ,SENP2,CEP68,SLC25A39,TRIM27,M
FC,MKL2,SLC38A7,TNFRSF21,TLR5,DENND5B,OSER1,ITPR2,STARD13,DRAM2,KIAA0355,TSHZ3,CNRIP1,SMCR8,LEPROT,KIF13A,NME4,
RRC3B,XKR3,KIAA1147,PDK2,NHLH1,ITGA8,RNLS,SEC62,RC3H2,HOXD9,SPAG6,EMCN,HIST1H3A,GSTO2,ZNF141,MACROD2,ZNF251,IQ
P2CB,MEPCE,TLR2,PIAS2,OSGIN2,SSFA2,ZFAND5,FNIP2,TBC1D16,PLSCR1,SPATA6,FNDC3A,SLC15A3,LINC00998,ACOT9,HIPK3,FAM65A
SD7A,PLXNA2,POSTN,TAGLN,FNDC4,MMRN2,PTCD2,FABP4,TIE1,NRN1,TPM2,GVQW2,EHMT1,MMP16,DNALI1,IL33,PDGFRA,ERG,TCEA

B7,UBE2K,MAGT1,GEMIN4,GPR89B,GOPC,SEC23IP,POLI,CKLF,SRBD1,ARL6,OPA1,MARK2,ACTR2,ITGB1,SORBS1,PLA2R1,DLST,H2AFZ
IM8A,AP5S1,POLA1,CDC6,FADS2,RCL1,PKMYT1,MCM4,GTF2H3,PTGES3,PUM3,CLSPN,RNPS1,SLC25A29,PFN1,DUSP4,FIGNL1,DNLZ,UC
OXP1,CENPC,BCAR3,CLK4,ASNS,TWF1,MFN1,HIVEP1,MED23,SENP7,FOXJ3,G3BP1,WIPI1,PHF12,OGT,IDI1,RTF1,EDEM3,KCTD5,AGO4,X
K5,MICU1,ABHD13,SNX27,PITRM1,PKD2L1,IRS1,UAP1L1,DPY19L4,DHTKD1,SNX7,ABCC5,TSPAN33,ACSL4,CAMSAP2,TIMM44,COPS7A,
,FAM127B,VPS41,PDXK,PLA2G7,FAM162A,C6orf48,CXADR,MAPK13,TPMT,NCK1,KCNE1,B4GALT7,BIRC7,LINC00937,FAM127A,TMEM2
,SAMHD1,PLIN2,ACRBP,CLCN6,EMILIN2,SGK1,GSAP,C10orf11,RCBTB2,MIR155HG,ATP6V1H,RIPK2,ZSWIM6,KDM7A,RAB32,TTL,ATP11
R2M,UQCC3,CDKN2C,IP6K2,STX12,TFPT,SPTY2D1,JAG1,ETFB,BLOC1S4,TOB2,MRRF,KLHL36,NAA38,AATK,DIEXF,PHF12,ANG,DERA,R
R1,ADGRL1,SFRP4,MAGED4,DDR2,TMEM100,PHLDB1,WNT2,RASSF9,COX4I2,GPSM1,PTPRB,DNM3OS,COL4A5,CDH13,FERMT2,SEMA5A

P2,ANXA2,LIMS1,GLUL,ATP6V1B2,FBP1,FAM129B,CTSA,HEXB,NAGA,FCGR1A,IFIT3,SOCS6,FYB,GLB1,PPP2R1A,HOMER3,APOE,SORT1

F2B4,PLEC,TMEM205,STXBP2,ITGB3,IRF1,FDX1,NUP62,IL18,RCAN1,SEC11C,KCNE1,RAB13,ANOS1,TMIGD3,GNAS,HPS6,GSN,ZNF24,RM

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,TXN3,OTUD6B,ZDHHC17,SCNN1D,KIAA2026,PTDSS2,CCDC146,ANAPC10,DUSP7,TRIM5,FAM208B,CYHR1,NPIPB8,RPP14,LYSMD3,RAP
O1,SLK,BZW1,TP53BP1,ARCN1,ACAP2,BRD4,KPNA1,POLDIP3,BTAF1,SMURF2,RLIM,OXSR1,RBM19,EML4,CPOX,AKIRIN1,DPY19L1,IVN

T1,ADNP,SAV1,ROCK2,STOX1,RALY-AS1,VWA8,ZNF638,RFC1,FAM102B,MAP4,MYLIP,PTPN14,ZC3H8,IBTK,SMARCC1,FBXW11,DDHD1
CLOCK,SUCLG2,PARD6B,TACC1,RBAK,CKS2,HACL1,HOXA10,ZC3H13,LRR1,SNHG22,B4GALT6,CLP1,ARIH2OS,MYOM1,AK5,XPC,RAP2

HPS6,BBS5,MAPRE2,TNIK,PTGIS,SP4,NCBP1,ATR,GTF2A1,PIGN,SWAP70,NUDT14,HEBP2,FAM20B,LGR4,CREB3L2,CLIP4,ZBTB21,CLPB,
,FANCI,COG1,CHCHD1,CCDC127,USP18,FAM175A,NAGS,PIGG,SLC25A5,LINC00324,ARHGAP15,CARS2,NFX1,JADE2,ZDHHC2,IL7R,GIGY
2,RNPS1,TAF6,PLA2G16,SIDT1,LINC00954,PRKACA,ZNF841,PAIP1,LENG9,ASCC1,FEZ1,PHACTR2,UPF1,MEN1,PPP1R2,FAM131A,ATL3,EX
7,LYST,HECTD1,VCAN,SPAG9,UGCG,GALNT6,TMEM170B,CCNK,ARHGAP26,FIP1L1,SOS2,ZNF326,KPNA4,PAFAH1B1,DYRK3,PPP2CA,M
,OTUD4,CCNT2,TRAF5,LUC7L2,USP15,ABI2,PPCS,MTFR2,ZZZ3,ARHGEF5,ARGLU1,PPA2,TTC22,TXNL1,PPP2R2B,LMAN1,C3orf14,CEP83-
IP,CDKAL1,EP400NL,ZRANB2,ZZEF1,STOM,EGLN2,RELA,ATL3,DOCK10,GALNT6,SP100,COMMD10,XPNPEP1,MGA,GCC2,BCL2L1,NSMC

1,NFATC2IP,LTA4H,GTF2H2C,LRRFIP1,TYK2,SCAF4,UBXN7,IL15,PPIP5K2,CAAP1,KDM5C,TSC1,R3HCC1L,RBP4,KDM3B,PPP1R10,LMAN

RWDD1,HJURP,CHD1L,SLC37A1,CARD19,SMARCE1,PTMA,CEP135,PRSS12,USE1,FAM72D,ANKH,NRG1,EED,CCDC18,NAP1L4,TNFSF4,RI

PIN3,CHMP7,PBRM1,ADAMTSL5,RAB11A,AKR1A1,RFXANK,RHEB,ECSIT,FAM161A,TOP3A,SMIM19,EIF3CL,HAX1,CPED1,TMEM230,CC

06,TFRC,MED13,ABCA1,PTGER4,BACH1,RREB1,AFF1,CHORDC1,ITSN2,FCHO2,DOCK5,IMPAD1,AFF4,KDM7A,ACSL3,ETV3,ST6GAL1,TN
T1D1,ZNF322,TSKU,MTUS1,IFNG-AS1,MGEA5,EFNA5,USF3,KLHL5,SYT11,DPY19L1,GUCD1,COL5A1,DCN,PCDHB10,CDH2,HTRA1,LPP-A

2C,ZNF519,CNPY2,TRIOBP,HGS,POLR2F,GTF2I,SNX13,ADGRL1,TMEM163,ABHD16A,ARL1,APBB1,TRIM4,MUM1,WDR74,RABEPK,ZNF1
H3,TRPC6,LTBP4,SPA17,SIX5,KAT2B,COBLL1,PACSIN1,FZD10,GPX8,CC2D2A,PRDM15,MIR497HG,RAB23,SMTNL2,DMWD,LINC00092,TH

'C16,ZBTB7A,DPP9,UBR1,ZNF808,ZNF816-ZNF321P,YIPF4,CEP162,RSPH3,CIRBP,HELZ,TSC22D2,SSR3,CCDC174,AGPAT1,PEF1,CCNL2,AH
ZL3,CX3CR1,SLC35A5,GORASP1,CDK6,AFF3,LRRC45,NDUFAF7,MTFR1,HELZ,H2AFY,MIR34AHG,CKAP2,COG4,MPG,HMGN1,PTGES2,IN

D5A,GALNT3,HOMER1,PCMTD1,ZNF326,KBTBD3,HELLS,FZD6,SMAD9,NUP62CL,CCSER2,BEX1,KANSL1,FLJ13224,FBXW4,DDHD2,PRK
C3,UBE2I,PRELID1,NUDT5,RCL1,UBXN8,PHLPP1,GPR89A,GLRX5,BCLAF1,NOL10,ECH1,ACBD6,ADSS,LSM5,PPIL3,ANAPC11,RSL24D1,CD

P1R12B,TCEA3,FAM228B,ADAM23,TXN2,COL4A5,TPR,ARL1,CTDSPL,ATG101,HMGB2,ZNF639,CBLB,EIF3G,PGM2L1,CCDC88A,NFKBIL1

MBTPS1,SPRY1,CHMP2B,DECR2,NCOA7,PLS3,PGAP1,TSPAN3,EDNRA,TCF12,IVNS1ABP,CNN3,PAQR3,TFDP2,MKRN1,ATP8A1,ZDHHC14,

N1,CUEDC1,ZNF24,CCDC144A,CETN3,DIDO1,S100PBP,DIS3L2,IKZF1,FBXO34,PSMA3-AS1,FRMD6,DOK6,RABL2A,PARP12,ZBTB25,PKN2,
,CCNA1,LCMT2,MYH10,CSRNP2,PTHLH,PAQR3,PROSER2,MON1B,ZNF195,ARG2,INO80D,SMARCC2,GLUD2,POLR3E,OSGIN2,SLC1A4,M

C2IP,ZDHHC20,LAT,TAS2R14,PHF21A,ZSCAN12,XPA,DZIP3,CCDC77,SYT11,LONRF3,RHOC,SSBP2,LRBA,DOCK8,SENP1,ZNF658,SEC16A

SP1,MAFG,ZBTB40,RUNX1,PHACTR4,STK40,VMP1,CARNMT1,EPB41L3,SLC39A13,GORASP1,SCN1B,WWP2,ZNF471,FTX,ACSL3,GAS2L1,

,ERGIC2,RTN4,FASTKD5,PHLDA1,SFSWAP,PDIA6,SCAF11,PCBP1,AP1AR,FBXO38,ELOVL6,AP3S1,TXN2,MANEA,TSC1,HYOU1,SNRPB2,

2A,LPXN,KANSL1-AS1,SLC39A9,BLZF1,TAPT1,ARHGAP5,WIZ,RNF40,MCM5,ZNF585A,YTHDF3,UBTF,SYNCRIP,TMEM131,STAG1,LAG3,
,INSIG1,FZD1,TCF4,NFKBIZ,MIR155HG,ZNF804A,KRT18,SH3GL1,HES4,ICOSLG,STARD8,NR4A1,GLIPR1,NFATC1,LMNA,KANSL1L,DST,
RNPUL1,NDUFA13,AFF4,TGOLN2,FYTTD1,KRIT1,LONP2,ZFR,NPM1,FBXW11,SPATS2,ZHX1-C8orf76,PRRC2A,AGPAT5,PPP1CB,CAPRIN1
LDOA,SKAP2,ARL2,LAMTOR3,CD63,SLAMF8,ENO2,CD83,UTP18,TPP1,INSIG1,DACT3,ZNF124,ITGB2,SLC12A5,GK,COL8A2,RAB39A,ALD

orf36,FXYD2,CACNA2D3,HIPK3,SRGAP2,RMND5A,FRMD8,JMY,CAST,ECE1,AFF4,CRLS1,PIGA,PAM16,NIPAL4,FOXO3,PDE4DIP,PPM1L,C

ORAI1,VSIG1,TMEM173,GPR155,CXCR6,MLXIP,KRBA2,ARID5B,TBC1D4,BTN3A3,SESN3,CYTH1,CYTIP,FAM53B,SP4,BATF,PPP2R2B,TSH

F,POLG,ABHD3,SF3A1,RHOA,RNPEPL1,FMR1,SNW1,CHSY1,SDE2,PRKACB,RAB1B,EIF4A2,TCEA1,HAUS8,PRRC2A,PHIP,PUF60,TAX1BP

ALPK1,CXADR,GPX1,LINC01480,ABHD12,RAP2A,SIL1,KCNE1,WNT5A,KIFC3,GEM,SLC7A5,LGALS3,GPRIN3,ALOX5,LPAR5,C1QB,BNIP3,

B,NUP210,UTP15,ITGB1BP1,SLC25A53,WDR34,GRPEL2,UBR7,RFC1,LRRC34,SNRPB,ELAC1,PRIM2,WRAP53,LUC7L3,TOPBP1,C1orf131,NA
P1,PDIA4,APLP2,PRDX1,FLVCR2,ADAM17,ZFYVE26,SLC39A11,ARHGEF11,C16orf70,DISC1,ST3GAL6,AMDHD2,RIN2,HCAR2,BNIP3L,SOD
5,ZNF703,RAB31,SETDB2,NCOR2,S100A6,PHACTR1,LRP1,ETS2,LST1,MTF1,GNS,TNRC18,PFDN5,RAPGEF2,SRGAP2,ARHGEF2,MNDA,AT
MEM144,AOAH,CD86,CEPT1,RUNX1,EVA1B,CNRIP1,FAM13A,MUM1,ATG4C,RGL1,PDE1B,ALPK1,TNFSF15,SGMS1,ZNF469,PEAK1,SLC39
,PDE4A,EML4,SERTAD2,GCH1,HNRNPDL,FBXW7,MBTPS1,DYRK3,TNFAIP3,MAPRE2,BICC1,POLR3E,UBE2H,TOB1,TMEM57,PAXBP1,FE
,NDUFS5,USPL1,THAP1,LAMTOR4,PNPLA4,CDC42EP3,MAD1L1,UBAC2,YME1L1,TRAPPC12,NUTM2B-AS1,NACA,ZSCAN16-AS1,DDA1,F
,PTGS2,CCDC126,MAGOHB,ICA1,UTP3,PSMC6,TTF1,YBEY,RBM28,POLQ,GPATCH2L,INSIG2,LPGAT1,USP34,CCPG1,FRMD6,PARP4,MAC
EM50A,MED7,PSMB2,SEC23A,ZNF681,PSME2,ARHGDIA,EDA,COPE,OST4,CALM3,TXNDC17,SLC4A7,NDUFAF3,ZFAND6,DDT,PI4KB,SUG
EX2,OAS2,COPA,POLE4,ODF3B,SELK,LRRC8B,LINC01184,ASXL1,CCAR2,PRPSAP1,NIFK-AS1,TRAK2,NUP35,SLC25A20,KDM3A,RPP25,C1

DE2,ZFYVE28,ANKRD9,FOXP1,ZCCHC11,CCDC107,PAFAH1B2,SERINC3,B4GALT4,ZBTB1,CDK17,TSPYL2,ZNF266,NUDT11,SYAP1,FOXO

S7,PKMYT1,SLC43A1,CALML4,POLA2,WDHD1,DDIAS,ZNF660,POLR3K,CHEK1,CENPI,ZNF577,PSMC3IP,POLD3,ZNF609,GCAT,EPT1,SLC
'2,ILF3-AS1,PCGF3,FANK1,TIFA,ZNF668,LRRC58,GCAT,SPDL1,TCF19,BRCA1,DHFR,BRIP1,WDR3,MSC,MBD3,GCH1,FAM111B,TCAIM,E2F
.XIP1,ITPRIPL2,GOLGA3,UGGT1,EHMT1,PA2G4,MSANTD2,SDCCAG3,C15orf41,LRRC42,TCF3,PHF13,ZMYND11,PPIA,EMSY,GLO1,CD5,SM

LINC00936,RC3H2,CASC15,DACT3,SYNJ1,PLAG1,ZNF219,RMI1,ACTL6A,PLEKHA7,STX12,PFKP,ELOVL7,NIPBL,KIF27,C1GALT1C1,ETNK
AM72D,ZBTB18,DYNLL2,MAFK,MAL2,PLK4,HACD2,RPA3,TUBA1A,HIST1H2AI,LAMB3,TUBB,HADH,CD44,CDCA2,PARD6A,CKAP2,EPM2
WEE1,PCBD2,H2AFZ,RFC5,RPIA,MAD2L2,CCP110,CENPI,KIF22,CCDC171,ERH,DSCC1,BANF1,DTYMK,WHSC1,SHMT2,TMEM237,HIST1H

NR2F2-AS1,SLIT3,TPM1,RERE,AOC3,EDNRA,LINGO1,LAMB1,KLHL13,PTCH1,CAMK2N1,SMTN,PRRX1,COL6A3,MAPK10,ISYNA1,PGM5,S

X12,GIMAP1,GLMP,NBPF1,HPSE,TSPAN3,PAG1,WSB1,HSD17B4,TXNIP,TMEM70,ORAI3,MCOLN1,USF2,TOM1,RASGEF1B,ZNF263,SLC25A
'PL3,TMIGD3,CTSB,GPNMB,CACUL1,DPEP2,ETV5,PID1,ITGB5,SASH1,PDK1,VSIG4,ME1,APOE,RASAL2,ADAR,CCL4L2,SNX24,STX7,CMP

2,ANKRD36C,CNOT6L,IKZF5,MYLIP,MIER1,SPECC1,AMD1,CLASP2,AFF4,NR4A2,USP15,ARF6,NCOR1,IL12RB2,BBX,RUNX1,CHD2,STK17
R5,TPR,UBN1,ARHGAP6,PIGQ,KAT6A,SON,GTF2A1,SRRM2,CCNT2,ZNF460,MED10,CALCOCO2,BPTF,CDC40,SCLT1,PRPF4B,ATXN7L3B,I
1,ABCB7,RGS3,DDX52,LDLRAD4,RCN2,ORAI2,TIMMDC1,IGFBP2,IL2RB,KIR2DL4,ITGB7,PTRHD1,SACM1L,DDIT4,NAA40,THOP1,DOHH,A
2A,STX18,SSR3,PDCL3,ARPC5,NOP10,EMC7,CCDC127,EZH1,LYRM2,TXNDC17,SYS1,LIG4,BBIP1,LRRC58,ITGA5,CYB5R3,CSNK1D,COX6C
BPB2,WDR6,UBN2,CHD2,NIN,SNIP1,TGM2,FAM65B,BCL9L,RAF1,AP2B1,FCGRT,UPF3B,SEC23B,ECHDC2,C1GALT1,ZBTB25,ERAP1,RUFY

C44A1,RHOC,PTGDR,MNAT1,PRKCH,CLDND1,FGR,CLNK,KIR2DL3,HPGD,MYO1E,COX6A2,ITM2A,SFMBT2,TRG-AS1,CENPN,MZB1,HER
ZBTB7A,AP1G1,CSNK2A2,HUS1,CAPN7,CDK12,ZNF333,SPTLC2,GTF2A1,PCMTD1,RAB11FIP2,DENND4C,INTS6,CAMKK2,PDZD8,E2F6,MY
'223,MAPK6,HOOK2,LRRC8C,LIMA1,JAM3,MED26,SSBP2,MARCKSL1,SPPL3,IRS1,TSC1,SMURF1,NEO1,ATP2A2,NMB,NATD1
DC2,FABP4,MAGED4,CALD1,TIE1,NRN1,PTPRB,MEIS2,FBXO32,FHL2,ZBED3,TRIM7,TPM2,NLGN4X,CDC42EP1,DNALI1,MMP16,ADAT3,I

ACH2,PDE7A,CCSER2,SLC2A4RG,SYTL2,GOLGA8A,ARHGEF3,SIT1,KLF13,TNIK,IFITM1,CPNE7,LINC-PINT,RAPGEF6,SPRY1,OGT,SEPT9,
74,NEAT1,ADGRE2,CHPT1,UPB1,NUMB,CLEC5A,QSOX1,FCGR2B,HIF1A,MBOAT7,ZFAND5,GNAQ,RAC1,SIRPB1,LACTB,LILRB1,BACH1,I
NFRSF21,L3MBTL3,ANKRD36B,ASPHD1,NDNF,PIP5K1B,ZNF639,MOXD1,C4orf36,PKP2,KCTD1,NCOR1,TSPAN13,PRKAB2,STXBP5-AS1,RI
ZMB,MSRB1,CHST9,CDAN1,BOP1,IDH3B,PACSIN1,ELAVL1,IPO4,COPS8,KIR3DL1,PPP4C,C1QBP,CD160,COPZ1,TIMM44,SFRP1,SNRPD3,H
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L,TNFRSF1B,CDKN1A,CHMP1B,TOR3A,FCHSD2,TIGAR,GNA12,RAB7A,AGPAT3,HIVEP3,HLA-DMA,KLF6,TMSB10,TGIF1,PDE4DIP,PLEK,C
ARL4C,ATF7IP2,CMAS,MAN2A1,LSR,SLC19A2,TRAPPC12,ZBTB45,STAT1,STRADB,NSG1,MAP3K5,FAM78A,HMGN1,PGAM1,SSR1,PHF11,
RP4,NAMPT,ABTB1,AOAH,TLR5,CD300A,KLF2,AAK1,SNX29,FGL2,TMEM173,PDGFB,GALNT6,MBD6,CCL4,SMIM15,VRK3,ZRANB2,TME
ITPK1,KLF11,TMEM117,RASL10A,ZNF33A,TM9SF3,ZNF804A,HDLBP,SMAD7,NF1,PITRM1,RDH10,MCFD2,CCDC130,SPG20,SEC23IP,HMG
DCAF11,WWP1,ZNF644,WDR74,CASC4,LATS2,CHD2,DNMBP,PRCP,ITSN1,ITPR1,OTUD1,PIK3CA,HPSE,MESDC1,CYCS,ERRFI1,KIT,DYRK

YLD,PCBP3,AMMECR1L,PRPF8,CUL1,EGR2,LDLR,GZMB,SLBP,TIPARP,CSNK1D,SAMSN1,SF3B1,ZFHX3,STAG2,CD300C,ARCN1,MAT2A

IRIP3,RAB8A,CNTRL,KMT5A,PLK4,ZCCHC3,PDP2,ZNF530,TRIM28,ERCC5,AP5S1,DESI2,ANAPC7,SHMT2,CHRNA10,LIN9,NUDCD2,CLOC

KP3,NDFIP1,H1FX,FOXO1,SLC37A3,PFKFB3,NUP58,TVP23C,MSX1,ECHDC1,DIRC2,MXI1,LENG8,LIFR,CPEB2,PELI1,PERP,TPRA1,ADAMT
4K3,UBE4B,FAM20B,SSFA2,VMP1,TPRA1,LATS2,SLC25A33,PAFAH1B2,CTSF,DOCK7,SMCR8,OTUD4,EGR2,ELMSAN1,SLC38A2,SLC25A2

GEF7,CCDC186,RALGDS,HES1,ANXA2R,MAK,LAG3,MAG,G3BP2,PTPN12,EIF2AK4,PAN3,ACSF2,FOXP1,MAP4K4,ADGRL1,SP4,TMX1,DYF
2,TRAK2,NOL9,GAPVD1,DCAF8,TNS2,TARDBP,THOC5,TRIM39,TUBGCP3,MARK3,IBTK,DPY30,ITCH,ATG5,G2E3,SLC39A13,GTF3C1,AH
R14,SAMD9,COQ4,MAGOH,KXD1,METTL23,MPHOSPH9,SF3B2,TM7SF3,TERF2IP,HDAC8,QARS,PHF6,ARHGDIB,DUSP10,ARHGAP30,ZNF5

HERPUD2,CXCR3,LCK,PTPN22,PSTPIP1,AURKB,ACTN4,INCENP,THUMPD2,ETS1,PDE7A,TXK,CDK6,TSNAX,TMX4,TTC39C,ERMP1,NAP

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,C16orf59,TOP1MT,SSRP1,H2AFY,RSL1D1,WDR61,NACA,MIF,RXRA,LEMD2,FRS3,GCSH,NCAPH2,ZMAT2,HIF1AN,HNRNPD,STK25,AZI2,
TR7,TWISTNB,PMP22,IGSF10,YJEFN3,ARPC1A,CD36,CCND1,TARBP2,MLX,RUNX1T1,RND1,ABCC1,FREM2,RMDN2,KIAA0232,ANKRD26
3ST1,IRS2,SALL2,CCDC106,BHLHE40,RBBP6,BACE2,CLIC4,C11orf45,YBX3,MYO10,FKBP5,ACOT11,RAB40B,FXYD1,FZD1,HES1,KCTD3,K

Q,NRIP1,COPS4,FAM126B,RUNX1,SPPL3,SPG7,TCERG1,MAPK8,FASN,FAM172A,EDN1,LSM11,RTF1,ZMIZ1,UPF2,TUSC1,PTPRE,VAV3,ME

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41A3,PFN2,NR2F1,REEP6,AADAT,ETV1,DPYSL4,DTX4,ADPRHL1,PTGER1,TUNAR,DNM3OS,SERF1B,CNIH3,RGS11,PIP5K1B,GAB1,SLITR
86,CD109,CDKL3,ST3GAL5,SMIM12,ANXA2R,BSG,RAB22A,RNF8,FGD5-AS1,TMEM192,RNF165,ZNF398,CASD1,MIB1,TCEB1,CORO1A,CD

NC01569,JAG1,FZD6,PTBP2,CUL3,IGBP1,ZNF596,ZEB1,HAUS7,HMG20B,MEN1,ZDHHC5,NBPF12,RORA,LCOR,GREB1,MARCH6,TMEM121

100,GLTSCR2,CARNMT1,CEP57L1,TEX30,PRPF6,ARHGAP15,SIRT7,LAT,RNF213,CORO1A,CD38,ST6GALNAC6,CDKN2C,PRMT2,SAMD9,A
CS2,ASNS,AACS,PLCL2,ZNF3,HECA,ALDH18A1,MPP6,TTLL10,SOBP,MTA3,LL22NC03-75H12.2,PHLDB2,NADK2,AKAP7,MYO1D,SPRY4,Z
A,MLLT3,HERC4,STIM2,LZTFL1,RORA,APBA3,ZNF273,TRAF5,OCIAD2,FOXA2,CREBZF,ZNF507,LINC00623,MATK,SENP7,SACS,FAM46C
FM1,HIGD1A,SLC7A1,NAA38,PPIB,SPATA5,TMEM126A,C14orf166,ACTG1,HIST1H2BL,MND1,RFC2,WEE1,C21orf58,TTK,BANF1,ATP5B,TF
TFCP2,MYNN,SENP5,ADAMTS12,COQ3,LRP10,TOMM7,LMO2,ACOT8,PPIB,ZNF18,ZFP64,ADAMTS1,MAGED2,PPP1R2,TMEM123,THOC1,I

1,ZNF804A,RAP1B,NRCAM,CHD7,PKN2,UAP1,ZCCHC2,SLC12A6,DYSF,CCNI,EFCAB2,PRKD1,TICAM2,SPOPL,FBRSL1,DENND1B,GLRB,S
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SD,UBXN6,P4HA2,RTCB,FCGBP,FAM162A,IFI6,C7orf50,AK4,DYNLT1,M1AP,TMEM219,NDST1,FYB,SNX7,SERPINB6,SPATA5L1,PARP9,EC
ET1,PINK1,TRAK1,PDCD6,MKKS,HAT1,FKBP3,PDE4DIP,IQGAP2,ACSL5,SESN2,ZFHX3,MPZL1,IRF2,ZNF511,TET2,RBM24,SEL1L3,TNFAI
B,SH2D3A,HELZ2,ETV7,NDUFS1,TMEM259,RASSF3,LMTK2,APOL2,RSAD2,KIF21B,CYB561D1,TNRC6B,CRTC3,DHX38,TAP1,USP10,MX1,

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,HIPK1,ANKRD28,ABHD17B,RASSF5,PNN,NFKBIB,SP3,SRSF5,RAB8B,COQ10B,DNM1L,TTC34,KPNA4,SMAD7,LDLR,STARD4,ZNF331,PPI

P1,GNG10,CFAP44,USP12,PPM1D,TRA2A,MID1IP1,MLLT4,TNFRSF10B,PELI1,PRKAG2,RERE,GAK,YWHAH,MAGI1,TLE4,RIPK2,IGF2BP2,S

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,HNMT,SLC46A1,DCBLD2,PLB1,ARL4A,SRGAP2,ZNF703,UBE2J1,ZNF503,NCR3LG1,RBKS,FOS,RGS18,PTTG1IP,PLAGL1,EVI5,RAB34,EPE
G7,ZNF295-AS1,SMAD3,GRAMD3,USP9X,CSRP2,ZNRF3,BCL11A,RASEF,BMPR1B,FAM189A2,XYLT1,TUSC3,CXADR,TRPM4,PPP4R3A,SL
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,CYLD,GPRIN3,HECTD1,ARHGEF40,GTF2A1,ANKRD44,CYTH1,SMARCA2,SNX9,ITPKB,EIF2AK4,ATXN10,HECTD4,SRPK2,PTPN2,ELK4,S
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N4,NFIL3,SLC12A7,PLCH2,MAPRE2,BCOR,PNPLA8,PAPD5,TUG1,SRGN,NXT1,PPP1R15B,ZNF263,TIPRL,P2RY6,AFTPH,AFG3L2,SPAG9,GA
RSF14,JDP2,CEP170,LRRK2,NAPA,USP40,ME2,HIF1A,TLR2,LMO2,GPAT4,SPNS1,NEDD4L,KIAA0100,TCF7L2,ADIPOR1,PLEC,AFF1,PSEN1

L4A,TAF7,EEF1D,NARS2,STK38L,ABL2,HDAC9,PROM1,ELAVL4,NCK2,HOOK2,IL10RA,UTP6,PPIG,NOXA1,TTC37,STARD13,KIF21B,KDM
NXA5,RASAL2,NETO2,MAP4K4,STK24,MTHFD1L,MMGT1,CANX,ABCD3,HDAC2,PAFAH1B1,RASSF5,ANXA4,ANKIB1,CNIH4,ZMIZ1,DSE

,NMT2,SOCS4,CEP85L,KAT6A,LPGAT1,RMND5A,KMT2A,ANO9,C5orf49,LARGE,NKTR,SIK3,CCDC126,DENND4C,ZMYM5,RICTOR,ZNF28

,11,CDCP1,MTUS1,MSR1,SIGLEC9,CTSA,RHOBTB3,RHBDF2,SCARB2,P4HA1,OSBPL8,PLEK2,LIMS1,APOC1,GPX4,FAM89A,SLC18B1,KCN
RN,NRDC,S100A4,SCARB2,KRTCAP2,YIF1A,C11orf24,TM2D3,EVI2B,PATL1,MAEA,SH3GLB1,CCT5,CYB561D2,HELQ,GOLGA7,ERP29,DDX
AMP1,IL18,PATL1,NUPR1,ITGB2,GNPDA1,SUMF1,LAMTOR4,GAPDH,LEPR,GAS2L1,UTP18,CYFIP1,ACP5,RND3,TMEM60,SLC15A3,IFI30,C
2,ARAP1,MNT,ACOX1,RUFY3,DCTN4,GPR161,SLC16A1-AS1,PEMT,TMEM117,TKFC,MAFG-AS1,HS1BP3,VPS8,BTBD2,FUT11,WDSUB1,UF

,SLC25A4,MARCH8,PARD3,ZNF347,TBCEL,DNM3,CACHD1,OVCH1-AS1,PGM5P3-AS1,IGF1R,FZD3,TTLL7,SLC22A23,NR2F1
RRC23,NUP153,ZSWIM5,MINA,SIAE,GADD45G,TRIM46,LUZP1,MEST,HAUS4,STYX,CAB39,DLGAP1-AS2,CLMP,SCAF4,SPSB1,PID1,GMN
RHNO1,H2AFV,SRSF1,HIST1H2AG,SKA2,MXD3,PCNA,NCAPG2,LIN9,KIF20B,USP1,MAZ,UBE2G1,AURKA,HCFC1,CCDC34,VRK1,GEMIN2
5A,SPON1,ETAA1,ZNF784,ARHGDIB,HMGB1,PSMC4,PLEKHA5,SMIM4,ABRACL,CCDC186,SLAIN2,FOXO1,CYB5R3,CCDC174,PIGZ,IL32,M
N1,CLIC4,NFKBIA,PRKAG2-AS1,BLCAP,RASSF3,G0S2,DSE,TBC1D8,MNDA,OCLN,PIM3,DGAT2,SUPT5H,ETV6,NCOR2,BCL11A,SVIL,PRKA
ROS,THUMPD2,TTC31,SIPA1,MMADHC,TECPR1,SAT1,SLC35C1,WRB,SLC9A9,PNISR,GLE1,LINC00987,C1orf54,ATG16L2,TMEM248,CNRIP

20B,SLMAP,HDAC2,RABL6,DICER1,STOM,ARHGAP24,SIRT1,CUX1,DOK5,CMPK1,RYBP,XPO6,NIPBL,CTNNB1,FBXL3,C7orf50,FAM3C,US

FYCO1,DNMT3B,NDRG3,FBXO10,TRIB2,URI1,ENPP1,ANKRD28,FNBP1,ZNF706,GNPNAT1,RAB5A,LATS2,CSRNP2,MAP1LC3B,TAOK1,IRF
PE,ADAMTS19,RNF180,SDC2,GNG11,EPN2,MPDZ,CAP2,APBB2,CNN3,EMSY,ZBTB20,KLHL13,PPM1K,SBSPON,ID4,GJC1,RARB,TDRP,NID

)MM20,LARP4,BSG,AMDHD2,SOCS6,SOAT1,CHMP3,LAPTM5,UGCG,MGA,SNX6,LHFPL2,PTPRO,ARL3,EEA1,UACA,KIAA1033,REEP3,SPN
TP6V1B2,FOXO3,EIF1B,SMG1,CTBS,MED13,YY1,OSBPL8,HECTD1,AK4,WNT5A,HNRNPU,SSR3,FMNL2,MMP14,TFEB,GNS,CSNK1A1,RAF

3C1D23,DIS3,GOLGA8O,G2E3,RIT1,ATAD2,P4HA2,PHF10,KLC1,CCSER2,EPHX1,GNG10,WASL,RELA,SEPT6,AAK1,ZNF181,XRCC5,SLC39A
M2C,PRKCA,CMC2,TMEM238,SF3A2,RAB22A,LSM8,TTK,ILKAP,MSL2,PSIP1,DPH7,RCC1,RAD51C,FBXO5,ARRDC1-AS1,VRK1,CDCA5,SM
RG1,SEPT7,MYDGF,TUSC2,LSP1,ATP5D,SLC25A46,SAR1A,CIRBP,ZFAND6,MIER2,FNTA,SLC35A5,ACAA2,SETD1B,SNRPD1,EMC7,MYL12

RS6,GRHL1,GOLGA8A,FEM1C,STAT1,PAK3,BCL11A,RASSF3,NFAT5,SPTAN1,GOLGA8B,IL18R1,DCK,SOCS4,FARS2,ELOVL3,SPOPL,ZFY
B2,CDC42SE2,KAT2B,PRNP,PDE8A,RALGAPB,ZBTB20,IGF2BP3,EPS15,SHOC2,OTUD1,NUAK1,PHF10,RIC1,TNS3,PIK3C2A,PKN2,NUP50,R

1,PRKAR1B,TEAD1,SCN5A,MEX3A,RARG,PRSS23,FOXP3,COPZ2,RAB13,EFNB2,FSTL1,DPT,SNHG18,COBLL1,GABPB1-AS1,ZEB1,NADK,C
P1,NFIA,EPS8,CRIP2,LGI4,SSPN,TMEM100,EBF1,OSR2,ESR1,PTN,EDNRA,EFHD1,ISYNA1,PI15,INAFM1,ARFGEF3,FXYD6,PABPC5,RBFOX2
M2,ZNF704,RORA,NR1D2,PMAIP1,EGR2,FRMD4B,GPBP1,SMCHD1,SMURF2,SMARCA1,ZCCHC11,PAG1,PTPN14,KMT2E,RNF115,SHOC2,EI

AD1,DVL2,COQ10B,METRNL,NFU1,RRP8,ARFGAP2,RASA2,CRCP,NVL,PRKAA1,FAHD2B,ERCC5,GPR88,CUL1,SLTM,SEC22C,TMEM220,T

TSC22D1,LMNA,LAMB1,NUMBL,CSPP1,TCEB1,CDC37,CD2AP,AIG1,KIAA1462,TMEM196,FAM169A,GABBR1,BLVRA,SSH1,UBTD2,PDGFC

N2,STX4,MMP12,NAGPA,PFKFB3,STX19,CORO1B,PTPN2,DHX34,SIRT1,C17orf96,HMGN2,HBEGF,PNPLA6,MCL1,GTF3C2,TMBIM1,TIMM1

M1A,TIMM8B,FAM172A,PPM1B,PQBP1,LPGAT1,CCDC102B,ZNF322,AKT3,SLC25A53,TFCP2,EEF2KMT,RYK,URB1-AS1,KIAA2026,ITGB1,

D1,OLFML1,MIR497HG,SHISA4,TIMP3,CLMN,DDR2,PLPP7,ZNF827,NFATC4,MAGI1,PXK,NCAM2,LINC01572,NREP,TMCC2,RUNX1T1,THS
TC39C,BORCS6,LDHB,TVP23C,NUP62,FOXN2,GOLGA7B,TMBIM1,TMEM26,RALB,BPIFB1,FAM65B,BACE1-AS,TMEM204,PGR,TNFRSF21,

P1,ZFYVE9,NUDT4,PLD1,RASEF,GNPNAT1,JAG1,LPAR1,KDM4C,TRIB2,SCRN1,SORCS1,FZD6,DUSP16,INPP4B,MID1IP1,ISM1,SYNE2,SCI

MEM2,NOM1,CHMP6,VPS37B,LDLRAD4,B4GALT4,MED6,SPINK2,AUTS2,CRCP,TSPAN5,TERF2IP,RSRP1,C9orf142,CRTAM,KDELC1,ITM2A
f72,SLC2A13,ATG10,MAP2K5,APOC2,ARHGAP12,NAPA,GLTSCR1L,RXRA,AKAP10,SEC23IP,TRAPPC8,AMZ1,PSAP,B3GALT6,ACOXL,MA
DC3-AS1,EGLN2,TUBB2A,CBX8,MTIF3,REEP6,GFOD2,FNBP1L,SPON1,CRTC3,CEP72,ZNF398,PTPN21,CTNNA1,LINC01393,SYK,ZBED3,EI

29,AEBP2,CAND1,PPP2R5C,PSPC1,C21orf91,TAF4B,SNX30,FAM84A,ATF7IP2,FNBP1,TLE4,TANC1,SYCP2,KLF5,ABTB2,DARS-AS1,C1orf61

LC39A10,SUSD6,ARHGAP21,GSTCD,CTSV,ZMYND11,IDH3A,PPP4R1,ZFAND5,ATXN1,CTSB,IMPACT,SORT1,PTPN12,ABHD13,CLIC4,KLF

FOXA2,MPP7,GPT2,SLC23A2,C16orf45,PGGT1B,COCH,CAMTA1,CCDC6,SPATA18,BDH1,TGIF2,PDK4,EGFR,MTURN,USP10,FAM214A,CDI

ITPNB,SENP7,ASB1,KRCC1,GRWD1,LYPLA2,SSR2,CCDC82,LANCL3,PNISR,KIAA1524,COQ4,PDCD2,ECHDC1,TERF2IP,RNF34,ALG10B,M

CCD1,IGF2R,FRG1,NAA16,MTRF1L,LINC01588,UBE2A,GOLPH3,VWA8,VDAC1,FDX1,AACS,ARMCX6,RCC2,VAPA,LRRC37A3,ATF2,UBE2
5,GFI1,ZNF573,KIAA1456,RAB5A,ARL3,LPIN2,L3MBTL3,L3MBTL4,NOS3,APOLD1,CENPC,VGLL4,FIGNL1,CCDC39,HENMT1,CDK17,KAN
,HNMT,LMO2,SAMHD1,TMEM14C,MARCKS,MARCH1,SLC31A2,CSF3R,CLEC11A,LAMTOR2,CD33,VSIG4,PTTG1IP,UBE2E2,SNN,PLSCR1

,PLEKHM2,FPR3,LILRB4,FAM20A,PTPRO,PARP12,MRO,GPNMB,CTSD,TP53INP2,ABL2,CD276,LIMD1,SLC7A8,TPP1,GM2A,DST,CEP170,AI
,IPPK,SPCS3,PSMA3,LIMA1,SDHAF4,STK4,MAN2A1,SCML1,SEH1L,SCAF4,ADAT1,RABEP1,COX5B,SLC15A3,SREBF2,CDC42BPB,PPIL4,H
1,ASAH1,CTSD,BRI3,MARCH9,S100A10,ERO1A,FTH1,DPYD,DNASE2,TNFAIP6,FBP1,PLEC,GEM,DENND4B,ASPH,TLCD2,N4BP2L2,LHFPL
SCL2,SYNE1,ATP2A2,NCEH1,KCNJ2,RMDN3,CTSO,FAM89A,POMZP3,ITGAM,LTA4H,RHBDF2,HTRA1,SOAT1,TAP2,BOLA3,PIK3R2,IFI35,

MAT2,ABHD15,TRAPPC5,FAM175A,MCRS1,SH3BP2,CDCA7L,KDM6A,MSL2,DAAM1,DIAPH2,PHC3,ANAPC7,PCDH19,ARRDC3-AS1,BRF1,

USP3,FAM53B,AADAT,SGMS1,MXRA8,OSTM1,TCF4,TBC1D16,SCG5,TCTN1,SGPL1,DKK1,PPP1R42,VWC2,TMEM259,RDX,FEZ1,DTX4,NA
NEMP2,GPN2,DCP1B,ELOVL5,EEF1B2,CLCC1,ZNF398,OLFML2B,CDC16,ZNF569,GTDC1,TATDN2,SLX4,ZNF253,CEP85L,TMEM8A,NUTM2
CTNNA1,RAP2A,SLC45A4,SPATA6,MSRB2,CLIC4,FEZ2,SLC17A5,SLC2A8,FRMD4A,KIAA0430,EML1,CHMP3,HPSE,ZFYVE26,LIMA1,PDK4

,DENND4B,ZFYVE16,HS3ST2,GINM1,FCRLB,SNX27,MT3,MAP3K1,ANTXR1,SMCR8,NCKAP5L,NEU4,CNBP,HOMER3,SPATC1L,NPTN,RT
AL1,LRP11,IL11RA,ZBED3,ZNF557,LPCAT3,WDR91,GSKIP,DTNA,MAMDC2,PHF13,PDLIM3,LIMCH1,CNN3,ANKMY2,DDX23

,ING4,IFT22,TUSC1,ARL14EP,ZNF578,KIAA0196,DIDO1,RBFOX2,YTHDF1,PNKD,DAAM1,FAM172A,GTF2IRD2,TDRD3,COX10,C2orf74,ZNI
K1,NUP85,CLASRP,CPSF3L,TMEM185A,SH3BP5L,ZNF593,MSC,E2F7,TES,TBC1D10B,C10orf35,CDC45,CCDC25,HIST1H4H,C1orf50,BZW2,Z
RN1,TFDP2,AMMECR1L,HAT1,HHEX,MPHOSPH8,ATXN7,CCDC186,ST20,CENPJ,IGF2R,CDYL,B4GALT6,R3HDM1,FGFR1OP2,SNURF,STA
PDGFC,KIDINS220,NIN,PIP5K1C,RSPRY1,SLC19A2,NUDT9,C10orf55,ARL4C,LRP3,TTC3,FCRLB,TCF7L2,TTC37,USP18,CTSA,DOCK1,NDR
51,MCCC1,FGD2,CNPY3,NUAK1,PALLD,RGS12,MTIF3,M6PR,DOK1,GPC4,ADAM28,BCAP31,PATL1,RMDN3,GNPTG,BMI1,CECR5,GNPDA
A,IRAK3,ST14,LYN,APLP2,SLC7A7,CD302,RAP2B,GBGT1,ADAM8,SGK3,PDE4DIP,NFKBIZ,SNX27,SWAP70,CLIC4,GABARAP,LINC01503,T
FESD,PURA,PYURF,PFN1,C11orf31,DPY30,TRIM44,RSL24D1,JADE2,ZFYVE9,UBXN1,SNHG19,ERCC5,PSMG4,UBA3,SPSB3,PSMF1,FANCB
A,EGFL7,NUDT4,FKBP10,ARHGAP29,NOTCH4,CDH5,CRMP1,SNCG,IGF1,LYPD6B,EPHB4,SLC6A12,KLF12,TFPI,JAM3,SMAD1,P3H4,TPPP3,

,LGALS3,FGD5,CNDP2,COL4A3BP,FRMD4A,TPP1,AGRP,LHFPL2,OSM,TNF,ATP6AP2,PLD3,GRAMD4,SNX2,CREG1,ALOX5,GRB2,RNF13,I

DN3,IQSEC1,VDR,KCNMA1,GLG1,FBN2,DIAPH1,UPP1,NIPAL2,OSBPL1A,DR1,PPARG,SBNO2,GBP1,ARHGEF11,ZNF782,SEC31A,NDUFS2,

4,KANK2,C1R,ITGB8,GNA11,LONRF2,SEMA5A,EFEMP2,ADCY1,THRA,MASP1,SYNPO2,CERCAM,CRISPLD2,DKK1,NRXN2,FHL2,CBY1,A

S1ABP,UBR2,GCLC,TTC7A,DDX24,GTPBP1,HNRNPH3,ATRX,TOP3A,ITGA4,ATP8A1,ARID2,PCM1,TMEM184C,ZFR,BDP1,CMIP,IGF2R,CSI

,ZCCHC2,BAG3,SGMS2,MFHAS1,DBF4,CEP112,ZNF644,IKZF5,GTF2A1,CRNDE,SMCHD1,CTSZ,PDS5B,EP300,STAMBPL1,MLLT4,CENPF,P
B,DCAF8,PMS1,PSMA3-AS1,RBBP8,ZNF322,MAPKAPK5,STYK1,DOCK4,MMAA,KIAA1715,KPNA1,CPNE1,ZNF280D,CTSV,FAM184B,GAB

KDM6A,ZNF219,LPL,HLA-E,DMXL1,AHCTF1,THAP8,NUDT16,PANK2,DYNC1H1,ARL6,EIF5,DCHS1,TDRD9,WSB1,ZNF267,NFE2L2,RAB21
TF1,TMEM106C,ATP8B2,MARCH9,TMEM106B,THAP11,SCML4,TRAF3IP3,IKZF1,CCL23,PFAS,HACL1,TMEM123,ZBTB14,KLHL36,RECQL4,
KOC6,PIGH,MEOX1,TARBP1,RUFY3,UBQLN2,DOCK10,MBNL1,LMNA,USP7,EMX2OS,SHB,PNPLA8,TCAF1,TMUB2,TNKS2,NCBP3,FOXO3
BTPS1,VRK2,FBXO11,ZC3H7A,CSNK1A1,IFRD1,UBE2D1,GCH1,LRRK2,NUP54,SERBP1,SLC38A2,GNG10,MFSD14C,NFIL3,SLC25A33,ESYT
-AS1,RAB18,CSRNP3,ZNF17,NAA16,TOR1AIP1,TRPC1,SLC25A46,GEN1,UBE2M,MAP3K8,GLRX5,PLAG1,M6PR,KDM3A,SATB1,MSH3,SOD
CE4A,DGKZ,CTBP2,API5,TBC1D20,STX18,SEC11C,MR1,SH3BP5,LFNG,DCP1B,PPIL2,MARK2,ZNF280D,ERAP2,MBIP,BPTF,BOD1L1,MUM1

2,NTAN1,PAPD4,CDC42SE2,HERC4,MEI1,CDK11A,TAF1,EIF4A2,SEC62,KIF5B,KCNJ2,UTRN,PANK3,AKAP11,LINC00680,MREG,SMN1,TRA

BBP5,SPON2,ZRANB2,UHRF2,EIF2A,PPTC7,PPP1R12A,HNRNPK,CHD1,NCOR1,ZNF786,SRSF5,RNF13,USP33,RSF1,STARD4-AS1,NFKBID,K

DC13,NAALADL2,HOXA11-AS,NUP88,PSMC4,KCTD18,WDYHV1,NOL7,ENO1-AS1,B3GAT2,SAMD3,SYPL1,CSDE1,TAZ,RCC2,USMG5,TAZ

FAIP3,BCL6,RIPK2,AFTPH,HBP1,CCDC47,IST1,EIF4G1,EPB41L3,RAB1A,C18orf32,B3GNT5,TIGAR,SPAG9,TAOK3,HIVEP1,NUP58,UHRF1B
AS2,DCUN1D3,PLEKHA5,ID3,TSHZ2,TWIST2,GABBR1,CBLN4,CACNB3,CLIC4,TMTC1,ORC5,TPD52L2,NDRG4,ZEB1,STT3B,TCF4,EIF4ENI

2,PRDM8,MPZL1,ARHGAP1,WDR46,UPF1,ZNF652,HLA-DQB1,UFL1,TMEM107,DENND1B,RABGAP1L,ZGPAT,TMBIM4,BRWD1,TBC1D9B,
TPA,DCLK2,ADAMTS7,GPM6B,AMPH,GSDMB,PAK3,TMEM196,EPB41L5,CEP112,PRRG2,PRR16,STEAP4,ERMN,CIART,GDPD5,IGFBP6,FH

CTF1,MAFK,ZDHHC5,PTPN6,ZNF579,ZC3HAV1,SIPA1,CHPF,LSM14A,CREBZF,LINGO1,RHD,INO80,KRT8,ZDBF2,TMED7,TRADD,CPSF7,V
TS6,DDX46,GTF2H2,STAT5B,RIC8A,CEP164,FBL,CWC25,YTHDF1,ATIC,YWHAQ,SLC46A3,MFSD5,PTBP3,SLC25A26,SSH1,SF3B5,BIRC2,TS

X,TMEM74B,ADAMTS10,COL23A1,PTP4A1,SERPINE2,COBL,PPP6R3,TACC2,OSBPL9,HOOK1,FBXO34,PPP1R16B,PYGO1,RANBP17,MAP3
C123,CDKN2A,HIST2H3D,NFKBIL1,PPP1CC,UQCC2,MORN1,PTGER2,POM121C,HAUS1,EIF4EBP1,HOXB4,DCTN3,AATF,LINC00449,ZNF1

,JMJD8,C19orf53,CXorf40A,SSR2,METRNL,UTP6,GTF2H2,SCD5,ZNF551,CCDC137,CDC7,PDCD10,NOL11,DMWD,TMEM230,CREBZF,PAWR

MVB12B,MLLT3,SORBS3,RUNDC3B,RUNX1T1,HECTD4,KCTD20,FZD10,ZNRF3,CNBP,TOB1,MPP6,PRKD3,HHIP,FOXN3,FAM214A,NFATC

ZNF286A,EFCAB2,PRR14L,JAK2,COPS7B,MFSD8,ZBTB20,MOB1A,KIAA0368,FAM217B,SWT1,NPAS2,MIA3,ASNS,BPTF,TBL1XR1,RNF13,I
GAT4A,GLRB,HIVEP2,ADAR,CFAP54,LIG4,RNF111,CNOT6L,SEC24A,HPS3,PARP8,DEPDC1B,PDIA4,TMEM200A,TPRN,PHACTR2,PAXBP1,

,AVL9,TRNT1,FAM13B,CMTR2,EIF2AK4,ELMOD2,BLOC1S4,POP5,ADNP-AS1,ZNF680,NUP35,THEM4,ASH1L,LCORL,ACOT8,ARHGEF9,ZN

PIM3,G0S2,KLF4,MTHFD2L,SBF2,UNC5B,GRASP,SLC6A8,ZFAND5,TPCN1,ZNF532,LRRC20,GNA12,AP1AR,AMBRA1,ERI3,HDAC5,ZNF804

HMGXB3,ZNF230,PEF1,ZSCAN9,BNIP3L,RNASEL,SERF2,RMDN1,CEP41,TRAK2,GSK3B,TAOK1,RABGAP1L,EGR1,ERLEC1,SPPL3,GTF2H2

PUM1,DENND4C,ING3,PRKAR1A,NSD1,TAF4,ZNF677,RAD23B,DGKH,RAB30,MIOS,PHF8,SRRM1,ARFGEF1,SLC23A2,SLC25A4,NCAPH2,Z
HIST2H2AA4,LOXL3,RASGEF1B,TIMP1,MED13L,CLDN7,UGCG,ZFYVE16,SCAMP5,PROS1,VEGFA,LPXN,GATM,CCNL1,PRNP,ERRFI1,CX
,DPM1,CCNC,YWHAE,NFKBIB,WDR83OS,ITPRIP,SLU7,KDM5A,RNF138,BIN3,EIF2A,SLC7A1,ECD,ZNF322,CHD9,YME1L1,TRMT6,YWHA
)H3B1,RGL1,GAS6-AS1,VPS41,FAM21A,EIF4G1,SPG21,CCDC9,DUSP1,ZNF532,CIPC,NAPA,VAC14,PLXNA1,CALR,UEVLD,GALNS,NADK,I

:HMP1B,TRIM7,KBTBD11,PTK2,FZD2,ABCB4,PFKFB4,MAST3,ZNF516,NAA50,ULBP2,SIK2,PLIN2,CUX1,EHD4,CSNK2A2,SOCS6,SLC25A3

Z2,GOLGA8B,LRRN3,BIK,TRAF1,FBXO31,STK4,TRABD2A,USP10,PLCL1,CACHD1,G3BP2,ATP2A3,FLJ35934,ABCD2,ARHGAP23,ANKRD1

1,PINX1,SMG1,ACTR3,GGNBP2,CDK11B,PDIA4,RBM28,CSNK2A1,FAM102B,NMT1,TRIP12,JOSD1,ACTR2,ATF4,SNRNP70,PNN,EPS15,UBN

,HS3ST1,ACOT2,TLR6,CEBPA,KCNQ3,ALOX5AP,TGFBI,ATF5,MMP2,TM6SF1,TNF,LYN,PLTP,CAMK1D,PSD3,COPG1,PPT1,C1orf54,EMP1,I

ABP2,RMI1,SLF1,MSH2,GMPS,SMIM12,SIGMAR1,ZNF841,FANCL,HACD3,RAD54B,EXO1,ZWINT,SFR1,DNA2,ICMT,DDX42,KCTD17,ENDO
)2,CD276,HOMER3,CUEDC1,GLB1,SIGLEC9,CTSA,NAGK,LAIR1,FHAD1,GAA,ZSWIM6,RNF130,TLR5,PTGS1,PICALM,NLK,MPP1,ABCC3,G
P2B1,PRDM1,NFAM1,HIPK3,IRF5,KMO,STX11,ADGRE2,TNFRSF10D,CCDC88A,ARRB2,SLC2A6,ACAP2,CLEC5A,NEDD4L,ATP6V1H,SSR1,
)A10,LRP3,LAPTM4A,TWSG1,RTN2,PDK4,GPC4,PMP22,LY96,KLF6,SPG21,DUSP1,SYNE3,RRAGD,SLC38A7,MGAT1,ADCY7,MTSS1,TMEM
M1C,PHACTR2,UBAP1,TTC19,IRF2BP2,RMND5A,FNBP1,ATXN7,KAT6A,BTG1,SOCS4,ARIH1,YWHAZ,PTGER4,TOPORS,AKAP13,KBTBD2
OXP1,VPS53,ANAPC5,ZNF19,NIF3L1,ELOVL5,TSR2,COG1,FAM98B,DFFA,TARS,COG3,HDHD2,NSA2,ATP1A1,NSUN6,FAM200B,WDR37,TS

T1,MARS,LDHB,PFN1,PPIB,TTLL12,HIBADH,GLRX5,C14orf166,GIMAP6,SCAF8,SNF8,FAM212B,MYDGF,TMEM69,COMMD4,ATP5G3,UQC
18orf21,MFSD14A,ARF4,CCDC71L,CMTR2,MKLN1,B3GNT5,UHRF2,GLYCTK,NXT2,TBRG1,ZNF273,R3HCC1L,SCAF8,ELMOD2,CLTC,PCYT

)1,AGFG2,HIPK1,STAT4,KAT6A,PIK3R1,STX11,SPATA2L,PHLDA1,ATF7IP,ZNF165,MFHAS1,SALL1,PFKFB3,SMARCA1,ATG16L1,IRF6,IGH

19A1,ENO1-AS1,TMTC4,ELP6,NETO2,CYP26A1,SLC25A10,RECQL,CENPV,SMARCD1,ZNF367,ZNF574,THEM6,TMA7,SLF1,SNRNP25,NPRL
F7,SSX2IP,FTCDNL1,NMRAL1,THBS1,DDA1,ACOT4,TRIB3,VPS50,SEPHS2,LPGAT1,EIF1B,TPRKB,PAM16,SUB1,FAM199X,CASP2,RRM1,C
MARCD1,FUBP1,ZNF430,SIVA1,NDUFA13,UTP23,TRIM28,MECP2,USP42,YTHDF1,CENPH,ZBTB40,GLOD4,RWDD2B,LSR,WDR20,RBFA,CR

.1,RAB30,IQSEC2,HMGB2,MAP3K3,JAZF1,EP400NL,FAM160B1,TMED10,RBPJ,ARCN1,FAM89A,FAM118B,DERA,DKK1,BZW2,DENND2D,Z
2AIP1,ATE1,FBXO5,HIST1H3J,ABHD18,LRRC45,MSL3,FKBP3,RANBP3,SOCS7,ICAM3,PCNT,AP2A1,RMI1,PERP,KIF11,RACGAP1,FAM72C,
1E,LRRCC1,ZNF841,LSM4,PPIH,POLR2K,NUP210,CCDC167,RABIF,RAD51C,FAM111A,PA2G4,SKA3,GGH,HAUS6,TRAIP,PIN1,YIPF5,NDUF

STEAP4,CLMP,SERPING1,LINC00924,TNS2,ERF,NDRG2,PNPLA7,CASKIN2,SCRN1,RAI14,CTDSPL,TMTC1,COL21A1,ATP1A2,KIAA1217,TC

A13,NAGK,C6orf106,SAMD4A,UAP1L1,PDGFB,TMEM26,CLCN6,GNS,SLC35E3,CECR1,ATP7A,SMYD4,ZNF33A,NAMPT,SLC35F6,CLCN7,PIK
K2,SOCS6,KIAA0355,WDTC1,DENND4C,EMP2,CNRIP1,AATK,PPP1R3G,TNFRSF11A,L3MBTL4-AS1,PBX3,SLC7A8,SQSTM1,ZNF511,ANTX

7B,SPRY2,YES1,PAFAH1B1,SLC25A36,UBC,PHF20L1,SRSF7,SPIDR,PPP2R2A,PDGFC,TBC1D23,PDCD4,JARID2,ELOVL7,LATS1,KLF6,HNRN
DGKE,SAP30BP,ZNF407,ZNF766,ABHD13,THAP5,UBAC2,MBNL2,SMIM1,EFCAB11,SLC35A3,CYSLTR1,MVB12B,RAD17,CRISPLD1,PPP1R
ATXN10,PXYLP1,CTSW,SYNGR1,EIF6,AGTRAP,FGF2,RAD17,SLC15A4,XCL2,GPN2,CDC34,FAM49B,ELMO2,TRMT10C,UBAC2,AFAP1L2,R
C,AKIP1,UBE4B,ATP6V1G1,CREB1,BAG4,YWHAH,PSEN2,ELK1,SLC9A6,FAM104A,DCP1B,TPRG1L,FOXO1,SSR1,VPS28,PARP9,WIPF2,TM
72,MARS,PHTF1,CMPK1,RIC3,PALMD,LSG1,POGZ,IDI1,KIAA0907,PNN,RASSF3,ASUN,SCML2,ZNF791,RBL1,DTX3,CHUK,STX16,MBNL1,M

RC1,AFAP1L2,C5orf56,STK17A,FAM72D,TTC39B,KIR3DX1,PTPN7,RNF187,PDCD4,PLCH2,GATA3,RRAS2,ACOXL,TMIGD2,GTSE1,MAPK1,S
7O9A,AGPS,ANKRD13A,FAM168A,CDYL,FAM208A,ANKHD1,ABHD13,MSL2,TAF5L,IFT74,RANBP3,MIR194-2HG,RNF38,IQCH-AS1,SWT1,

IQSEC2,CTNNAL1,C1QTNF3,SYNPO2,SOX13,GPSM1,RFX7,HOXD8,CELA1,TEAD2,ZBTB39,NPR1,MANSC1,CNRIP1,ADAMTS6,HMGN5,PD

AGFG2,NLRC3,CD226,IL12RB2,CLIC3,SLC38A1,TRAF5,TTC9,TRANK1,VPS13A,SPTBN1,ANKRD36,HCG18,FNBP1,BTG1,CCL5,PSIP1,NMT2
LRRC25,PTGER4,FNIP2,HLA-DPA1,SNN,CLIC4,CREBL2,NCF1,RAB32,PQLC1,ITGA5,FOXO3,SHTN1,HIVEP3,FGL2,PLSCR1,IFNGR1,MAFG,
PRD1A,BMP2,PNPLA4,ASAP2,ASRGL1,FAM13B,PTPN11,ROCK2,KLC1,BTBD9,SLC37A3,USP6NL,NEK3,CBLN4,REEP3,PCGF5,MYO6,VLDL
NF1B,SUB1,QDPR,ANAPC16,ITGB1BP1,PRC1,HLA-F,TRIM41,TSPAN32,THOC3,TIMM10,UBE2Z,L1TD1,XRCC6,LAMC2,KCNN1
NFRSF11A,LIPA,PLA2G15,ANAPC13,IFITM10,OLFML3,LYL1,LAPTM4A,MSR1,CYTH4,C5AR2,SLAMF8,TLR4,IDH1,RNF130,RHOG,CPT2,TM
C10orf128,AFF1,INPP5F,SERP1,CAMK1D,GNA13,ATOX1,ETF1,CARD9,JUP,TTYH2,ST3GAL6,RNH1,DNASE1L3,SPINT2,DUSP5,BCL2A1,ATI
MLXIP,SERPINB8,ZNF416,SLC25A5,ZNF846,EPSTI1,FAM118A,RMI2,ZDHHC4,MGAT2,IFIT1,RNF130,KRTCAP2,TMEM173,RANBP1,KCNQ1
M41A,PDCD2,C3AR1,MXD4,LCMT1,ANKRD9,PDCD4,GORASP2,RAB6A,STX16,RBM10,LPCAT1,FYB,GPATCH3,SLCO2B1,KIN,MGST2,CRY
20A,EML3,SGK3,APOOL,RBM18,MBD3,DNMBP,SEC23B,POMZP3,POGZ,MAP7,TBC1D15,DHRS11,RING1,MNT,PARD6G-AS1,FZD2,RMND1
3,HCAR3,SH3KBP1,ST3GAL5,PDK4,SPTAN1,NABP1,VEGFA,SHB,MPP5,NFATC2,ZNF662,DIRC2,TUBB4B,APOL4,RTN4,STARD8,RASD1,TA

,LINC00996,GTF2B,SESTD1,CRTAM,PSME4,ACIN1,KLF4,IQGAP1,VIMP,SLC44A1,ATG2A,ADNP,ITCH,NGRN,B4GALT5,L3MBTL2,LRPPRC

K,TAGLN2,TUBGCP3,DEK,PKHD1L1,MMAB,STIL,HIST1H4D,ZFP91,ECH1,RASSF1,EPCAM,WASF2,LMNB1,TTC25,MAPK9,GTF2F1,HNRN

S8,PIK3CA,PEX5,JMY,STAT5B,ZC3H18,TSPAN4,SMN2,NSMCE3,AP1S2,TTC9,RELL2,BTG3,PHF14,FOXK1,CXCL10,CYP1B1,LYG2,STRADA
4,UBE4A,THBD,RRAGC,DSE,TPCN1,CLCN5,CEBPB,SLC25A13,CAST,F3,TSC22D2,SLC23A2,MAFG,IRS2,ABCB9,HBEGF,AFF1,SH3RF1,NBP

RK2,SLC37A3,FAM83D,OGFOD3,SNX9,CCDC6,MARCKS,JMY,MLLT4,SLC25A33,CLK4,TTC39B,KAT6A,RBBP7,LCK,SPATC1L,DYNLL2,TR
I1,WIZ,NCOA6,NPR1,MFHAS1,KBTBD4,ZNF33A,ALDH5A1,STK26,ATP2A3,NEK7,TMEM184C,CCZ1B,RACGAP1,PVT1,GNL2,ABCF2,GPSM
511,UNC13D,RIOK2,RNASEH2C,MTF2,UROS,SDF2,C2orf68,SUCLG1,TAF5L,DPH5,MXD4,AQR,SEC22B,HSF1,SIKE1,RAP1GDS1,JMJD6,TFDI

1L4,GSE1,LINC01572,ARHGAP33,TSTD1,RORA,MATK,ARPC5L,CENPA,FASLG,GCNT1,TSEN54,STRBP,GOLGA8B,RHOH,EFNA5,MCPH1,R

F4,NDUFS1,SOBP,PLBD2,TTC5,EEA1,CRTC3,OSBP,SNRPN,EPRS,FBXO4,RSPRY1,KLRD1,LMAN2,SLC15A4,KCTD5,FAM45A,LINC01184,SI

S,HAUS2,SSH2,LINC00936,SLC25A44,BANF1,PITPNB,GINS4,DCLRE1C,BARD1,TPM3,SHKBP1,PSMD14,FTSJ3,EEF1E1,SRSF4,NDUFAF3,MI
ARF3,PUDP,SIT1,MED8,FAM208B,ZNF518A,TROVE2,PPM1A,SERP1,UHRF1,TRNT1,FYB,ERCC4,COPE,G6PC3,RALGAPB,MTFR1L,ALG3,C1
,REXO1,HRH2,DAP,FAM127A,BLNK,ZFAS1,NEURL1B,HIST1H2BJ,CPNE2,SPTLC1,FCN1,CSTA,H2AFY2,RNF43,CPEB2,NQO2,TMEM128,AI
LHL15,DTNA,HOMER3,EPB41L1,CHST2,JUN,HOMER1,GLUL,RGS17,DUSP10,PLS3,SOCS6,SIAH1,CNRIP1,RGS2,NAMPT,CNIH1,ETV5,KRE

D13L,FNIP1,COG3,LARP1B,FAM214A,JAK2,ATXN2,RABIF,RLIM,MEF2A,MED12L,OGFR,IL15,TMEM2,CPSF6,SLC44A1,GPR35,STRN3,RAI

LIPG,FDFT1,RAB11FIP1,PLLP,C1orf106,DSG2,PPARGC1A,MYL12A,RFTN1,IRF1,ZBTB10,KRT17,HDLBP,LMO7,AP1G1,ITGB4,COL1A2,TIFA
K4,ZKSCAN8,TWIST1,ANKRD13B,NOVA1,KIAA1644,RSPO3,HOXA10,GAL,LRRC17,VWC2,TRPM3,EPDR1,GATA2-AS1,GREM1,KIAA1462
C16,SEMA4F,CDK1,PTGER1,RABGAP1L,OSER1-AS1,HADH,RAB6A,RHPN1,ZNF273,RGS12,FN3K,STAM-AS1,LIPE-AS1,ZNF681,OARD1,GU

1,FOXP1,SIT1,GPR155,NFATC1,RAB1B,FRMD6,BBS9,MAP2K1,CDYL2,TGOLN2,POC1B,DCHS1,CHAMP1,ACBD5,SATB1,DEPTOR,NDUFV2

,RL14EP,C1orf56,PPL,GNL3L,SLC39A8,THEM4,RBM15B,CASP7,MIATNB,GPR89A,DDB2,CCL28,CCDC88B,KRR1,EIF3C,EIF6,GPR180,AAK1

:,KIZ,USP28,C11orf21,PELO,CDK6,PITPNC1,GNB5,ZCCHC7,ANKRD36B,ZDHHC20,EMB,KMT2A,CEP85L,SLF1,PTPN4,GOLGA8A,PDGFD,AI
HAP1,NHP2,SEC13,SNRPA1,OSTC,MTFR2,TRMT6,TCF19,U2AF1L5,LDHA,SNRNP70,CENPM,CCT6A,HNRNPUL1,CEP57L1,BCL2L12,PRMT1
FAAH2,STAT6,LACTB2,PARP12,DHRS7B,PNPLA4,MINA,UBA6-AS1,MKKS,SEC22A,ING4,HIBCH,CACNB2,KIAA0355,TMEM5,NCKIPSD,TA

SLC38A1,ELAVL4,FANK1,AFF3,FLT3,TMEM263,YPEL5,SERTAD2,GLIS2,MAPK8,ABCA5,RFX2,PHC1,HP1BP3,BBX,GPAT4,CYLD,PHLDB2,
R3,TRIB1,SLC15A3,LRRC8D,LAMTOR1,FUT4,C12orf66,PLIN2,LINC00493,SLC38A7,SPINT1,USP32,SLC1A5,VPS11,MOB3C,LACTB2,AP2A2,
GLN2,PARP14,RSAD2,GSN,SIPA1,SSR3,APOL2,ADORA3,GPR65,N4BP2L2,PFKL,TEX264,FDX1,NENF,PGA3,RIPK3,CBWD2,CARD19,TRAPP

,VPS54,CHFR,TRADD,XPO4,ZC3HAV1,APBA3,LINC00969,ARPC1A,VGLL4,TNRC6A,CAMTA2,SYNE3,SERINC5,ZNF587,SSR3,IFI44L,SCMH

)28,FRMD4B,SASH1,PRCP,CDYL2,TNFSF12,STX12,PPA1,RHOU,RYR1,DUSP16,GNA13,ACVR2A,ZNF141,GAS6,THRB,TLE3,WLS,ZMYND11
P1R10,BRD2,CHERP,NXT1,HNRNPL,TLK1,SRRM2,RAB11FIP1,TSC22D3,KBTBD2,CITED2,NAA35,ALG13,DUSP8,DDX6,POLR2A,DTNB,TGI

STON2,CFLAR,MAN2A2,FOXO3,ELMSAN1,PPP2CA,DYNLL2,SGK1,MXD1,HIPK3,GNAS,IL1R1,PPP4R3A,BTBD7,OXSR1,CHGB,NOTCH2,MC

SF7,CEP85L,KLF12,F2R,LINC00623,LDB1,YEATS2,LENG8,ZBTB11,TSGA10,ATP10A,KLF9,ARHGEF12,FLT3LG,KLF13,ADAM12,ATP2A3,G
LT8D1,STK39,AAK1,UBE2J1,CRKL,SMIM8,NCOR1,ARL17A,ATXN10,PIK3R1,ITGA1,PTBP3,ZBTB1,TLE4,ZCCHC11,JMY,C17orf67,ANKRD4
341L2,ZFAND5,ARHGAP32,CEBPD,CLEC10A,MBOAT7,SCARF1,NAAA,CD93,GAS2L1,ALDH2,SCML1,FOSB,CFLAR-AS1,MFSD2A,VEGFA,
C34A2,NOM1,ZHX2,NAV2,RBM24,TLK2,PER2,SLC7A1,ADGRL2,FBN1,F2RL1,JMY,ANKRD12,FAS,NPTX2,MAL2,COG3,FLJ31104,YES1,CRI
,CYTH1,YTHDF2,RNF217,LITAF,CCDC47,IST1,ZCCHC6,PHACTR4,SCRN1,MIOS,MTR,POGZ,USP37,PDE4B,SYPL1,UGCG,KLF10,PTPN2,CX

32,FAM107B,OSBP,ERN1,BCLAF1,ARID5B,MARVELD1,RALBP1,TGFBR2,VPS13C,OLFML2B,WDR82,FEM1B,LINC01089,CACNA1F,PCDH1
LC38A9,ENTPD5,BHLHE41,FKBP5,SPTBN1,UXS1,POMC,STAG2,OPTN,ABCA5,SOS1,SLC35D1,BCLAF1,CDC14A,ACACA,KAT6A,PLOD2,U
-AS1,PRMT2,LINC01138,ZBTB39,FAM13B,MLLT3,ARAP2,INPP4B,CDKN2D,RASA3,HABP4,ATP8B2,SYNC,MAL,RNPC3,TVP23C,CIZ1,UBXI

ALNT6,RCAN1,FAM21A,ATXN2,SRGAP3,TMCC2,CLEC2B,YTHDF3,CREB5,HSCB,MAP2K3,SGK1,SLA,TBK1,RRP12,HIVEP1,C10orf25,NDEI
,MCFD2,FNDC3B,TRIO,RELT,NCOA4,HSD17B4,CCNYL1,RDH10,RREB1,CD93,CD302,TNFAIP3,INSIG1,PELI1,THBS1,PIK3R5,OSBPL1A,RAI

6A,VOPP1,IGF2BP3,RNF44,AFF1,TMEM128,MAFG-AS1,ERP29,TBC1D25,BORCS5,ARMCX1,PSMG2,FMN1,NLRP3,LRRC58,SLC12A7,MED2
E,ZBTB43,LRRFIP1,MEF2A,CASP8AP2,S100A10,MTHFD2L,UPP1,ID2,DOPEY2,ENOX2,CAMK2D,DNM1L,ZFAND4,ATN1,CA2,RMI1,GSTCD,

31,B4GALNT1,ZBTB40,ANKRD12,TANK,PICALM,CREBRF,RIC1,SPEN,PCM1,ZBTB7A,ADSS,GPCPD1,PPP4R2,GPAT4,IQSEC1,TBC1D25,TUI

J5,ANXA4,METTL7B,SQRDL,SDCBP,PADI2,AMDHD2,HEXA,NRP1,SLC1A3,CD59,ADSSL1,CYFIP1,ATP6V1A,EMP3,RAB31,TRPV4,MTHFR
(42,MLEC,FDX1,NOL7,FAM210A,RBX1,SAP30L,C17orf62,H2AFY2,XBP1,RASAL2,PTPN2,SLC25A11,RIC8B,DOK1,MYOF,CHFR,MIEF1,TME
C17orf58,TMCC3,TMEM219,FCRLB,HLA-DRB5,PGM1,RASGRP4,TRMT1,PKD2L1,RRAGD,TOM1,TUBB6,NRP1,PLA2G7,SERPINA1,GLMP,TF

N,TRIB3,SMIM14,PHACTR2,PABPC3,FTCDNL1,NUP160,MFSD6,CLASRP,MAST4,KCTD21-AS1,SKP1,EXOC6,TOX,UGP2,GPHN,BICC1,GLB
,PLK4,WHSC1,ZNF367,DEK,PSRC1,ARHGEF39,SNRPG,SLTM,MGME1,RNF4,PDS5B,YWHAQ,C2orf48,CEP152,KMT5A,HIST1H1E,HIST2H3A
MMP25-AS1,ELOVL6,S100A13,MME,CIRBP,PNISR,GFPT2,GNB5,MESDC2,USP48,ITGAD,UEVLD,LINC00847,CPNE7,RAB3D,UTRN,SET,STX
AG2,RASD1,ARL4A,CDK2AP1,ECE1,CDKN2AIP,CWC25,UST,TMEM38B,CXCL2,FRY,NOD2,TRIP6,TMEM97,SCN4B,IPMK,TIFAB,FCHSD2,S
P1,RAB20,MUL1,GLI4,TRPM7,ZSCAN16-AS1,MUC5B,MAP2K5,ADGRE2,PPP1R15B,TMEM26,TNK2,C15orf39,MTG2,VEZF1,PITRM1,ARPIN,I

SP46,ITSN2,SPPL3,NADK2,CALU,DPY19L4,TWIST2,RFC1,ZNF263,CPM,IST1,USP34,LRP3,DPP8,SRGAP1,KIAA0922,PDLIM5,CHST15,NBEA

F2BP2,PPARA,GADD45A,RASEF,PLEKHO1,LGALS8,NFATC1,PCDH10,IDH3A,BZW1,CAMSAP1,GPBP1L1,TMEM64,ZFYVE9,NFAT5,TNS3,E
2,RNF152,SLC24A3,SALL1,CACNA2D1,CACNA1D,JAM3,ITGA11,RAB23,FAT1,NR2F2-AS1,NEXN,KLHL9,TSPAN13,MICU3,FHL1,DOK6,PRI

NS1,MOB1B,UAP1L1,KCNJ2,ADAM17,MTHFR,USP6NL,FARP1,FRMD4A,NUAK1,ARL5A,CANX,ACOX1,PMP22,C16orf70,MGST3,TCF7L2,PC
331,ADAM8,SLC39A8,FAM129B,PRDX4,SENP5,USF2,TESK2,FNDC3A,USP3,MX1,PFKP,PTP4A1,MNT,SYNCRIP,MEF2A,CSRNP1,ASPH,TTC

A6,PYGB,STUB1,JKAMP,SFMBT2,ZC3H12C,CSF1R,LSM14B,ATP6V1F,ATXN10,SGCE,PPP1R35,SEPW1,BUD13,INPP5D,THBS1,DCK,DDX6,I
URF2,NAA40,SERGEF,PRIM2,TES,GINS4,TTF2,RFC4,ZNF682,ISYNA1,CEP162,SF3B5,KAT7,NMUR1,TOMM34,ANKRD39,C9orf142,NOC2L,N
2A,EFCAB14,ECE2,SNRPC,UBXN1,SUCLG1,CFL1,DDX59,NGDN,ZYX,PSMA5,INIP,SENP8,SPATS2,SRP54,FAR2,RNASEH2B,NOP10,RAB11F

VE9,L3MBTL4,PIK3CA,FAM210B,ZNF295-AS1,LINC00884,LPP-AS2,ZNF703,CLN5,SLC26A2,ATXN2,RAB4A,ASXL1,SYNJ1,FOXJ2,KTN1,NA

C11orf96,CBLN4,PHYHIP,NPW,LRRC3B,LINC00969,NR2F1,APP,GABRA2,BMPR2,CACNB3,DAB2IP,ZNF799,GDF7,CHMP4C,ARHGEF10,ETV
P,STON1,RAMP1,ID4,SLC37A3,FAP,PRICKLE1,MAPK10,SERPING1,AMOTL2,CNTN4,LAMA5,THSD4,ADAMTS1,RAI2,MYH11,RBM24,TMEM
DN1,AKIRIN1,LBH,CDR2,HIPK1,PTGER4,DOCK11,TBC1D4,SPRY4,WIPF2,JAM3,FAM222A,BCL11B,ARID5B,SLC25A26,ADIPOR1,MBNL1-A

MED4,C1GALT1,MBIP,RIPK1,PTPRC,GPD2,EIF4A2,SCAF11,CSNK1D,SFMBT2,MGAT5,CRELD2,SBF1,TRIP4,SLC33A1,GOSR1,OFD1,PPP2R

,TTC28,PRNP,BTBD3,ERLIN2,ADAMTS5,NEO1,NFIL3,NRIP1,CCNG2,PBLD,ARF4,RCOR1,WTAP,NCKAP5L,RARA-AS1,TCF4,KCNJ5,HDLB

3,CFLAR,POGLUT1,FNDC3A,AK6,CIC,IZUMO1,GGA2,MAX,TFDP1,VNN1,STAT3,TXN,MPHOSPH6,FHIT,GNAI2,TLR2,ARAP1,SLC16A1,ZC

ASH1L-AS1,ANXA2R,NELFA,UGCG,DNAAF5,ZNF143,EIF3I,C11orf58,CITED4,NAA38,WDR12,COMMD4,JOSD2,PSMG3,CCDC25,RICTOR,T

SD4,PTP4A3,EBPL,FXYD1,COL3A1,IGFBP3,TRIM2,NUAK1,RRAS,SEPW1,ADD2,C7orf55,LGALS9C,ETV1,TSPAN13,FGF13,VGLL4,RASSF9,
BCKDHB,TAF6L,GGPS1,RAI2,PUS1,DHX40,SLITRK4,NOL6,MYL12A,PRRX1,NYNRIN,UBE2V1,DCTN1,ZNF816-ZNF321P,ZBTB25,NCKAP5

05,HIPK1-AS1,FNBP1,SOCS2,SMG1,ZNF135,ELOVL5,DOCK9,STK26,FRMD6,RAB40AL,PPM1B,DOCK1,LPIN2,FAM46A,GRB10,PLCB4,CA2,

,TAF7,ASCC1,OBFC1,KLHL23,METRNL,TOX,TCTN3,FBXO34,RHOC,SLC1A4,LASP1,SLBP,SDF2,FYN,KIR3DL2,UPF3B,PITPNB,NFATC2IP
PRE2,MAVS,GBE1,C19orf70,FAHD1,LDAH,NRBF2,GALNS,C1orf43,DVL2,APOC1,TUG1,DPP7,ESF1,WSB1,TMEM8A,MAPK1,SNAP29,FAM1
PHB3,ZNF793-AS1,MEST,RCE1,FLJ13224,CSNK1G2,COL15A1,RAB11FIP3,DLG2,SERGEF,MLLT1,FRS3,NAPB,NDUFB4,C17orf67,SPIDR,ZMY

,NFAT5,ANKHD1,SMAGP,ZNF295-AS1,TDRP,H3F3A,NBEAL1,CHRAC1,ABHD17C,DOCK1,EVI5,NRIP3,ARHGEF7,SOS1,TMEM50A,FOXJ2,I

6,MPZL1,LATS2,APBA1,ACAT1,TMCC1,PLXNA4,SPECC1,DPY19L3,KCTD6,PDSS1,CD163L1,STX16,BAZ2B,SIDT2,ADAM10,HLA-DOA,REI

P1,JAK1,OXSR1,C12orf75,SLC25A53,RNF138,GATA6,LINC01023,IFNLR1,SORD,TCAF2,HIST2H2AB,PAIP2,MIOS,CWF19L2,GABARAPL1,NM

[CRS1,KHDC1,SNRNP70,CRELD2,UBE2N,KDM5A,SKIV2L,PEX2,PSMA6,SLU7,TAF1D,ELAC1,NIF3L1,NCOA3,TTC19,HIBCH,TADA3,C7orf5

?K,MSANTD3,COQ2,TMEM57,TXNDC15,SQLE,MDM4,ACAP2,TUBGCP2,PTBP3,PNRC2,U2AF1L5,MYLIP,DDX42,HSD17B12,MOGS,DYNC1
SL1,LINC00909,NDUFV2-AS1,KIF24,ZBTB11,GPHN,ATG16L1,RORA,BTG1,SAYSD1,C21orf91,ARNTL,SIK3,TXNDC16,NAV2,PRKCH,TNIK,S
,VASH1,AXL,CTTNBP2NL,HLX,SH2B3,ALOX5AP,LTBR,PLEKHO1,LY96,GLIPR1,MLXIPL,AP2S1,CARD9,SUSD3,TBL2,GRN,GNAQ,PRCP,T

RHGEF11,C16orf70,ABR,CEBPA,NFIC,ST14,MAF,FHAD1,WSB2,HS3ST1,CREG1,SLCO2B1,PAPSS2,ATP6V1A,PDIA4,DMXL2,GAA,ALPK1,G
ECTD1,ALG10,GPBP1,FUCA2,SLK,PVR,CDS1,UPF2,ZDHHC21,REL,LENG8,UNC45A,CTDSPL2,FSCN1,AREL1,NAB1,DSC2,USP6NL,SOCS3,S
2,FAM65B,FAM129B,DDX60L,PPARD,PKM,FHAD1,MFSD12,TNK2,RAB13,VAT1,LINC00969,TECPR1,MAML2,VIM,C1orf132,NFKB2,SLC1A
ATP6V0D1,IL1RAP,DDX60L,CAPG,RASAL2,GLCE,ZFYVE21,ENO3,FAM169A,HM13,ISG15,ARL6,RPP14,PPP1R14B,CMPK2,PPFIBP2,UBE4B

KIF9,CAB39L,C15orf57,TRAPPC12,MTG1,SLC25A20,PARP4,RC3H2,MED12L,SGK3,PAM16,LDLRAD4,KCTD6,PRMT2,JAK1,ADPRHL1,IGSF

.DK,FAM78A,TXNDC11,HERC3,C1GALT1C1L,SNX6,MAPK7,APC,VPS37D,FERMT2,ZNF518A,GAA,ABL1,ITGAV,OXR1,HOXA10,FILIP1L,F
?B-AS1,PDE6D,ALG10,GNG7,C16orf59,TMEM206,BRICD5,TBCK,TRIM28,SHMT2,ATM,HUWE1,NUP88,DSC2,PAN3,LAS1L,TMEM248,ADGR
4,PSD3,USP6NL,ME1,CALU,CD93,PIKFYVE,SHPRH,PPARA,EPS8,AKAP11,ATF3,CLCN7,PEAK1,HPS5,RHOBTB3,GAREM1,ARHGEF11,CDK

N4,REPS2,SAMD4A,HRH2,TSPAN31,TNKS2,HGF,CLUH,E2F6,ZFYVE21,RASAL2,DST,OAZ2,NUMB,PPFIBP2,CCDC71L,IGFBP3,TSPAN4,AR

KSCAN1,TOMM5,OTUB1,FANK1,STAG1,TPRKB,HMGA1,C16orf59,XPO1,DGCR8,PSMC3IP,ANXA11,THOC2,THOC6,EIF4H,RFC2,BIRC2,EIF
ARD3NL,ABHD17B,DDIT4L,SAMD4A,BZW1,SLK,PREX1,RABGEF1,SMCHD1,METTL21A,STIM2,TPST2,ZNF680,AKAP5,CEP78,RNF125,MPI
G2,FAM212A,SEC61A1,OPHN1,GPRIN3,ARHGEF40,FAM21A,WASL,SLC7A7,ESR1,VPS37C,PI4KA,SLC30A4,NME8,PTPN12,ARL5A,MED16,A
1,TBC1D16,LSS,FCGBP,ANKRD33B,RAB5A,SYK,PLCD1,NCF2,LINC01503,TRPM4,DUSP23,CD1D,SLAMF8,HPS5,CYBA,ATOX1,NME4,PTOV
BC1D2,VMP1,HSD17B4,ZFAND5,ADAM9,ANXA5,CTTNBP2NL,TRIB1,ADPRH,IFNGR2,BACH1,GCNT2,BCAT1,SIGLEC14,LILRB2,C20orf19
,AIMP2,ZNF254,ATP10A,ZFAS1,GPR108,MAN2B2,DDT,CRACR2A,PLCB4,PCDH9,LDAH,SUMF1,ZNF35,FKBP11,SLAIN2,SLC37A1,GOSR2,S
,CENPBD1,CTDSPL,ACKR1,OAF,NTN4,ATXN3,CAV1,LIMS2,OSBPL5,PSD,SORBS2,TNXB,THSD7A,KIAA0922,CNTNAP1,ACTRT3,SLC9A3F

DFNA5,ABCG1,ASAH1,MARCH1,TMEM51,RNF130,GEM,ANXA5,RALA,INF2,SNX24,FNDC3B,SGPP1,LAMP1,SIGLEC9,HS3ST1,BNIP3,LIPA,

RHGAP20,TMEM98,SMOC2,OXR1,GLT8D2,FERMT2,RHBDF1,NLGN4X,PTN,LARP6,SLITRK4,MAP1B,VSTM4,TUNAR,MAGED4,CILP,RUN

NK2A1,PRKCI,GPBP1,USP7,SLC20A1,SMC5,FUS,SLC35D1,PROSER1,CCNE2,CSNK2A2,RSF1,ACBD5,DOCK2,GPBP1L1,MPP6,CRTC2,GTF2F

PM1D,MDM2,USP3,ZNF622,TRAF3IP2-AS1,MXD1,GPCPD1,ZBTB11,ANKRD50,CDKL1,PLBD1,NUMA1,ZNF217,GCH1,STON2,EFCAB13,INT
l,LINC00869,ABCF2,HNRNPA3,SEC31B,ZNF518A,ENOPH1,SNRK,EIF3M,RFXAP,XAF1,TMX1,ABHD10,PRKAA1,WDFY2,MPHOSPH6,ACAL

,TAOK1,IFNAR1,XIAP,REST,IRAK3,UPP1,UTRN,SLC9A1,PLK2,RPN2,PHF3,MITF,RRAGD,AZIN1,DDX41,ZNF879,ARHGAP20,ZC3H13,MKS
,PRMT2,ATRX,CUL4B,CRLF3,NUTF2,SDCCAG3,PEX12,THOC3,PCED1B,AQP3,DBF4B,ATHL1,ABCB7,CARHSP1,SNRNP35,GLTSCR2,COX8

2,TP53BP2,ANKRD13A,ZNF706,LEKR1,AP1S2,H3F3A,SGMS2,MOGAT1,ZCCHC2,ATP2C1,MYLIP,AGTPBP1,STARD4,LINC01481,NOTCH2,

,MIEN1,ATMIN,PIDD1,RBL2,LEPROT,PHF21A,HPS6,MAFG,GBE1,CLK4,ZNF652,YIPF4,TMEM181,GTF2H1,NOTCH1,ATF2,NOC3L,FUT11,P

AF1,SMKR1,GCH1,PRR15,FNIP2,B4GALT4,AHSA2,CCNT1,ATF7IP2,SOAT1,HIGD1A,BIRC6,SLC44A1,ORMDL1,LEMD3,EIF3D,RAB21,ABHD

CTD10,ANG,FNTA,PCBD2,BATF,ARHGAP11B,PUS3,C14orf80,DCAF8,SRBD1,EIF4G2,PTCH1,DZIP3,SNX10,TMEM208,SUGT1,MAD2L1,FBP

X1BP1,OCIAD1,DTX2,CTNNB1,BANP,ERMAP,SLK,ZCCHC18,KCTD11,B3GNT2,EIF1AD,CDK5RAP3,FAM204A,DDIT3,TPR,ZNF217,USP8,MS

P1L,MXD1,ARHGAP21,ZNF330,NFATC1,SHTN1,TCF7L2,BNIP3L,PDXDC1,AKAP13,LRRC8B,SCAMP1,CPEB2,RRBP1,UVRAG,ARHGAP24,P
F1,SEMA5A,PPM1D,PLCE1,ZNF516,RASA3,SCARF2,RORB,SNURF,PALLD,SDK1,NUMBL,TLN2,HOMER1,BTBD17,EBLN3,UST,PAM,PWWI

PPM1M,PRDM1,TFCP2,LATS1,RNF2,LTN1,ADAT1,DAPK2,STAG2,KIF14,HDLBP,E2F6,CNOT6L,UBE2I,ELL,KLHL9,B4GALT6,NCR1,UTP14A

/EZF1,PMM2,AHSA1,ISY1,ZNF487,C1orf112,C16orf54,ZZZ3,GNPTG,TCF7,SLC39A7,LIMA1,GEMIN4,PPM1A,SLC25A26,ZNF430,C1orf27,ZNF
SSC4,ARL2BP,NOL11,ZNF506,ZNF708,UBE2G2,BCAS1,RNF31,TERF2,DDAH1,NAPRT,THOC5,AHI1,TMEM67,B3GALT4,AAK1,C6orf89,KRI1

K4,NAB2,ASNS,DNAH14,LINC00839,ZDHHC20,TRIM58,LMBRD1,TTC21B,CDH2,PPM1D,ARID2,SERP2,TEC,ZDHHC13,KMT2E,TPTEP1,PDC
21,CDT1,ZNF227,SDAD1,VMA21,MAP3K8,NME2,LSMEM1,NCBP2,SNRPA,YRDC,AURKAIP1,SNAPIN,SUMO1,PDE8A,OLMALINC,ZNF253,S

ʁ,NME2,MDK,FBXL3,THAP5,MYH9,CIZ1,EIF3D,EFTUD2,OXR1,RAB8B,ROCK2,MPG,TOPORS,TFB2M,MAGED2,TRPM3,KIAA1586,NAA15,I

:1,MAP2K4,FGD5-AS1,CDH2,CREBRF,LARP4B,SOX17,TSC22D2,SMURF1,C8orf88,NHS,ERC1,PARD3,MAPRE3,SOCS6,RCC1,ZMYM4,SIAH1

PUM2,KLC1,PANK2,UFL1,IKZF2,SLC2A13,PXK,ZNF714,LIN9,PDCD4,KIAA2026,B3GALNT1,AGPS,LINC01089,PNISR,ATP8A2,IPO11,TEC,DI

NF83,MGA,RHBDF2,UPF3A,SIGIRR,XPC,ACTR1B,CTSZ,NOC3L,ZNF641,ACSF3,RABGAP1L,ZNF490,ZNF136,C3orf38,EIF4A1,SDCBP,CHN2,A

A,PAM16,FRY,ZNF281,ZNF618,CBX6,GALNT7,TNRC18,AGPAT1,PLD2,CCDC62,UBL3,SLC25A35,GAB2,PTBP3,RRAS,MBD6,RAPH1,TBC1D

C,ARHGAP21,ANKRD10,COPS5,PMS1,CACYBP,DPM3,ACVR2A,UBR5,CMTR2,FAM204A,RNF170,ARHGAP1,PIK3CA,NAAA,GHITM,CD164

orf21,CHMP1B,GPR183,EPHX1,PSD3,TSPAN31,ING1,KIAA0226L,FAM213A,MAP2K1,SLC35B2,LITAF,ARL4A,IL6,B3GNT2,LCORL,ECHDC3,
B,CSNK1D,U2SURP,CCT2,AP3D1,ZNF335,SBDS,OPA3,SFPQ,SRRM2,RIC8A,ATXN2,ANXA7,POLR2L,IARS,NPLOC4,PRKAR1A,PNISR,ST8SI
RAK3,TSPAN4,SLC15A3,TBC1D8,MAEA,ADAR,WSB1,COPRS,WBP2,SLC7A7,SIAH1,TUBA1C,PRR5L,TUBB6,SCAF11,MFSD13A,BEX4,TXN

7,UBN1,ST6GALNAC3,FRY,PLCE1,ACOX2,TBK1,FSCN1,ALDH2,TWISTNB,NEDD4L,LINC01220,HNRNPLL,TP53INP2,CHMP4B,JMJD1C,PDI

1,HNRNPLL,TMEM71,FOXO1,PHTF2,NPAS3,HIVEP2,TSPAN18,PLCH1,CECR2,ARHGEF7,TAS2R4,LIFR,HELZ2,LRFN3,GIMAP7,TMEM184A

J1,USP25,UHMK1,XRCC5,FAM133B,CLK1,BCAS2,RRN3,TAF10,ISG20L2,FXR1,BNIP1,IDI1,HBS1L,AP1AR,RIOK3,SAFB2,DCAF7,IQGAP1,MA

LAMP1,RGS19,DHX58,RHOT1,FRMD4A,IL4I1,SPHK1,GPNMB,IFNGR1,BMP2K,RGS12,OSBPL8,MLPH,INF2,AMPD3,CDCP1,SLC3A2,TBXAS

D1,TUBGCP4,SYCP2,POLR2D,SSRP1,NUP88,EME1,SSX2IP,PSMD7,CBX5,MTBP,C9orf40,RPP30,TMTC4,MAPKAPK5,EED,SCCPDH,TTF2,PPI
BA,DIRC2,VEGFB,PARVB,MFSD7,LY96,OSBPL1A,FAM114A1,HIVEP3,KIAA1033,GATB,SLC15A3,CFLAR-AS1,MAPK13,WWC2,CALML4,A
TAB2,FNIP2,JDP2,SRGAP2B,AP1S2,BTK,CD55,GNAQ,ALDH3B1,GPX1,LRRK2,CTSD,ZNF267,RALB,LYZ,ARL8B,ARL5A,HBP1,KLF10,TMEI
39B,ACTN1,FAM109A,CYFIP1,BNC2,LINC01503,RTN4,SCML1,PIP5K1B,HDAC9,NAV1,SMIM4,FNIP1,SSR1,WSB1,ZNF580,TGFA,PCDH12,C
,ERO1B,ZFAND5,RABGEF1,SCNN1D,TRA2B,PPP1R2,KLHL21,AHR,CUL5,TRAF4,ATHL1,GALNT11,CCNY,MED26,SOS1,PHLDA1,SETX,KM
SN,SMNDC1,MARCH6,LINC01184,DALRD3,SLC44A1,VPS39,COX7C,TCAIM,EXOC1,TANGO6,PACERR,SEPT9,DENND4C,PON2,TRAF1,DYN

C2,MDH2,APEH,ARF1,MED11,RBM10,FIBP,RER1,ZNF200,RTFDC1,EXOC7,COPA,EIF3F,PNKP,TIMM8B,ETFB,GOLGA1,CLDND1,EMC7,NC
T1A,PAK1,NUTM2A-AS1,COMMD3,MLPH,CCDC77,RAB14,ZC3HC1,ARL5B,SYT1,COG3,CDC42EP2,ITPA,SNX14,RFWD2,PDK3,PIBF1,RNPC

MBP2,POLR3E,PRKX,SARAF,MSX2,REL,DSP,RAB8B,BAIAP2,HES4,COG3,AKAP10,ZNF704,PARD6G,CLEC2D,CSRNP1,PRMT9,FOSL1,SOD

2,ZNF717,NKTR,NELFCD,FIGNL1,NUPL2,TOPBP1,ARPC5L,TUBGCP4,ADCK5,RBM48,FH,NIT2,CLSPN,SPC24,SUB1,NOL9,MTBP,MFNG,RF
HEK1,FANCI,GINS4,WDR74,TMED8,FANCD2,PPP6R3,NUBP2,PLK2,PARP1,SLC43A1,RTKN2,ATAD2,SUZ12,TIPIN,ELMOD2,TFDP1,CDCA5
EBZF,NUS1,UCKL1,PRPS2,GMDS,BCAP29,ARIH2OS,RWDD4,HNRNPD,SPSB2,SNAPC2,C3orf38,CD99L2,CLTB,DPM1,ZNF160,BOLA3,DLGA

MIZ2,AAGAB,CDK4,WWC1,HCG11,SPIDR,RAB22A,SALL1,SOS2,EPC1,SIK3,LPGAT1,TAF1,HP1BP3,SLC36A4,UBR5,PCTP,GOLIM4,DLG1,D
HIST1H3C,CRIP1,SHFM1,SMPD3,C21orf91,KIAA1715,FADS2,TOB1,NCAPD3,TRERF1,PBLD,TCF19,MICU1,EPT1,TFPI2,AP5S1,RBMX,ZNF44
B6,ELP6,KIF2C,NUCKS1,HNRNPR,MDM1,GTSE1,TCHP,COPS3,CDCA5,SHCBP1,H2AFX,MAD2L1,PPM1G,SNRPG,LSM8,CARHSP1,YEATS4

EAL7,TRPC6,NRIP2,MME,SHISA4,ADGRF5,DMD,SLC24A3,IGF2,CFL2,HRC,EMX2OS,TBX19,AVPR1A,GJC1,JAM3,RASL12,SYT11,SEPT4,H

K3C2A,MTHFR,OAS3,UVSSA,RREB1,TRA2B,ATXN3,PKD2L1,ZFAS1,IFIT3,ZFYVE26,MAFG,SGK1,DPY19L3,TNFRSF1B,INSIG2,RRAGC,FAI
R1,SLC12A5,TNFRSF21,ACP5,PAQR8,RHOB,APPL1,MMP19,EPS8,NEIL2,RBBP5,DCHS1,KDM2B,SPIN1,HEXB,MAN1C1,HYLS1,FNIP1,GK,R

NPK,SOCS4,ATP8A1,FAM105A,SPAST,SLC5A3,AFF1,ETF1,PTP4A1,USP9X,RCAN3,MOB4,OSBPL9,IRF8,PARP8,DDX6,ZNF148,ABCB10,RAS
12C,PRKACB,ZNF800,PLAU,LARP1B,NDRG3,PPIP5K2,CNNM3,CLOCK,DUSP6,GTF2I,RGS2,SPPL3,MIA3,GUCY1A3,USP25,SDF2,FAM105A,
UNX3,KLRC1,GSE1,SOCS1,C8orf33,NCAM1,GFOD1,ZBTB14,CCT2,NOLC1,NKG7,RHOC,STK39,OSTF1,FKBP11,NT5C,SNU13,MTBP,TMEM
EM214,DEFB1,CHMP2A,SDHC,SNRPD3,KDELR2,ZHX3,SPATS2L,GPR34,SAMSN1,ADORA3,POLDIP3,EDF1,WAPL,FAM98A,ATP5O,AIFM2,
MFHAS1,REEP4,MPHOSPH8,DHX30,ZMYM1,PIGB,BFAR,MFSD6,ZNF587,S1PR4,HAT1,RBM25,CDIPT,FOXRED1,UTP15,ARHGAP30,DIP2A,I

SLC12A8,ECI2,ARHGAP9,YPEL1,PSTPIP1,CUL1,KRT86,MMP25-AS1,CDHR1,OASL,HSH2D,PIP4K2A,CENPF,BZRAP1-AS1,DGKZ,RAC2,SRG

PN,SRGAP2B,CTGF,SORBS3,MTA3,SLC16A5,F8,NHSL2,CCL2,LHFP,ZNF350,MAN2B1,TTLL1,FHL1,LINC00869,CSRP2,RAC3,NFIA,LYRM7,

2,STK17B,YES1,OBFC1,ATM,ATHL1,TADA1,TDP1,C16orf54,CXCR4,RNF19A,KIAA0922,CENPO,NCK2,ERN1,PPP1R2,LPIN2,ISG20,CCDC88(
LILRB3,QKI,CSTA,SERPINA1,ANKRD22,ACSS2,AMPD3,SMCO4,NDST1,CD83,PPP1R15A,DENND5A,LAMTOR2,MYD88,KDM7A,B3GNT5,C
R,FAM8A1,MIOS,AAK1,HES1,TANC1,DUSP14,SPG21,FAT1,CLIP4,MYO10,IKZF5,C10orf107,FUT8,CCPG1,PLPP1,PLEKHH1,IGF1R,SERF1A,

MEM51,HES1,FTH1,CD68,IL17RC,RNF135,FAM198B,TMEM60,AIF1,ADSSL1,SLC37A4,SPRED1,TRIP6,RAB3IL1,PTAFR,TLR2,DRAM1,FRMD
P6V1B2,IRF8,LRRK1,MAP3K14,DAPP1,SEMA6B,RAB9A,SCIMP,UBL3,BATF3,SH2B2,MARCH2,DSC2,CD83,PIKFYVE,FARP2,RELT,LAMP3,
1,PHLDB3,LDHB,EEF1D,SERPINB9,TTC39C,PLEKHA1,TMEM204,SPSB3,NUDT16,LYRM2,PHACTR1,PABPC1,ACP1,TGFBR3,KNOP1,PRR4,I
Y2,TEC,AKAP11,LY86,MTG2,ATP1B1,PECAM1,UGGT2,PLCB2,TMEM37,AP2A2,C2,PRNP,PARG,PDPK1,NEK3,TANGO2,C16orf58,ACAP1,ER
1,ARMCX3,SLC4A2,FAM199X,SERTAD3,SLC38A9,PIK3R3,PIEZO1,AGO3,DCHS1,ZNF219,NARS2,TSEN2,FAM47E,MLF1,RHOV,C17orf80,RA
AGAP,TFRC,UBE2V1,MAPKAPK2,RNF19B,GNAS,BAG3,TLE3,SPTLC2,LPGAT1,STARD13,POLR2A,KCNJ5,SGK1,SLC41A1,PER3,TNFRSF12

2,CHN2,PIGG,ADGRE5,SLC1A5,G3BP1,DUSP10,FAM177A1,TMEM167B,LASP1,SPATA2L,VPS26A,ZKSCAN5,TAF13,OTUD1,TPP2,RAB8B,US

A,UHRF2,GAREM1,PNO1,B3GALNT1,BIK,BRD1,MFHAS1,EZR,CLIP1,EHF,NCOA2,BLZF1,KANSL1L,HBP1,BRMS1L,BAG3,PTPN2,SMAD3,ZI
F14,DUSP6,RAB4B,CCDC71L,MTO1,CR1,USP12,CSNK1A1,ZNF267,AZIN1,NCOA4,VEGFA,LINC01220,SLC25A35,FNIP2,SRA1,BACH1,HPS5

PM7,AKIRIN1,POSTN,TNRC6B,THRA,ACTR3B,RAB5A,SLC8A1,RNASEH1,KLF12,DPP6,ZNF334,ISG20,REV1,ELL2,FYN,TGIF2,TMEM204,S
I2,ENTPD3-AS1,SP3,SLC39A10,VARS2,ZDHHC6,VENTX,PHLDA1,SH3KBP1,RNF40,NIF3L1,CHEK1,CD5,DIP2B,DUSP16,ASPM,ZC3H13,EDR
P1,LRBA,THOC6,CENPC,XRRA1,SEPT6,HDAC3,CWC15,SS18L2,ARFGAP2,NCOR1,PRELID3B,EXOC7,OTULIN,TSN,HIST1H3F,FAM120AOS

UNX3,EPAS1,CCNB1,PTGER2,ZAP70,KIF4A,GPR88,BORA,JAK1,ABHD17B,UBE2C,AKAP5,PYHIN1,SACM1L,EIF3G,RABGAP1L,WIPF1,PT(

ELPLG,ARHGAP4,CCL4,B4GALT7,FLII,TAF1,TALDO1,GATB,EMSY,STARD3,ARL6,TFCP2,PSME3,CDC40,TNFRSF12A,SPATA13,GFM1,CEI

XD3,PSMB8,FUBP1,ANAPC11,LSM8,DTNBP1,SIRT6,FBXW2,NASP,H2AFZ,ARF6,SH3BP5L,YEATS4,PLEKHJ1,HAT1,PRPF3,TMEM238,SPCS
17orf62,CCT2,FAM32A,GTF2H2,SPRYD3,DHX37,STS,C1orf109,SLC43A3,PHF5A,UTP23,LINC00998,RNF121,ANXA11,DISP1,GRPEL2,MDH2,Z

MEN1,FREM2,WWC2,MITF,DRAM2,PRKCA,ANKRD31,ABCC4,MRAS,DPP6,STAT1,KCTD12,MTUS1,OTUD1,TDRD3,TBC1D30,MGAT4A,TI

37A,ABHD13,KCNK1,SERGEF,EYA3,MSMO1,TOLLIP,MSANTD2,MYLPF,THOC7,GPATCH2,NDUFB3,PTPN13,CMPK1,SLC25A13,SOX4,NRI

AB,C19orf81,SLC12A6,CPNE3,CBX5,GRHL2,ALG9,LIMS3,MSX1,LILRA4,USP43,CASC8,KCNK1,IDO1,ACHE,BACE2,SH2D4A,HSD11B1,ARH

,APC,UGCG,STARD7,MAPRE2,MAST3,IBA57,KLF12,C6orf99,CLIP1,YEATS2,ZFX,C3orf58,SMURF1,PERP,APBB1,CREBRF,ICA1,TBC1D2B,I

,HENMT1,ZNF652,USP15,PPP1CA,NELL2,RBAK-RBAKDN,CHRNA1,SLU7,HELZ2,GATAD2B,NBAS,GEMIN5,SNRPA1,C2orf74,MT2A,ZNF91

NXA6,SNRK,JADE2,ADARB1,STRBP,SLC4A4,GOLGA8B,CLDND1,GFI1,ANKRD36,WWC3,BCL11B,USP34,TSPAN5,TNIK,TMEM68,ENPP4,C
,LAS1L,RASSF1,PSMD6,FAM96B,SRSF1,DAZAP1,HN1,DEK,MELK,LSM2,BCS1L,SF3B6,SNRPD2,SH3GLB1,AQR,PSMF1,SOD1,PMF1,PITPN
APBPL,RAP1GDS1,EIF4B,CCDC186,LINC01572,ADD2,SEPT5,RNF146,PPP1CC,MDP1,RPIA,TBC1D24,BSG,ZNF282,ATP5B,CAMK2G,FAM175A

C1orf21,USP12,ELK3,TBC1D30,RNF220,ICA1,ANKRD12,PPM1L,CUX1,EXOC2,NAP1L1,SPATS2L,PDE4B,FAM107B,IPO9-AS1,TOB1,UBE2E3
,DFFA,LAP3,KLHDC8B,ARRDC2,KCNE3,MMP17,SH3TC1,PICALM,PIP5K1C,PROSC,RAB5A,FKBP5,VMA21,C16orf70,PLXNA1,SLC35B2,VA
C3,CBWD1,TMEM60,SLC25A39,BCKDK,DNPH1,SMUG1,ZNF652,CNP,SARAF,MGST3,ASAH1,CHMP5,SLC7A7,CALHM2,BMI1,MMP24-AS1,

I1,RASGRP2,SSBP2,RBAK-RBAKDN,CNTNAP1,ADAR,TTC13,RWDD2B,CILP,FLAD1,FBXW11,FAM65B,DIP2A,RBM5,HLA-F,IGSF6,HECA,M

,ANKRD12,AFF4,PMAIP1,MYLIP,KIAA0355,PHLDA1,USP32,ESM1,NABP1,TGFA,ELL,DIP2B,MORC2,ZNF891,ARHGEF26,H3F3B,ACAP2,HE
F2,SRSF6,USP36,RNF19A,NRIP1,FOSL2,TOPORS,PSME4,ISCA1,METRNL,NR4A1,MBTPS1,PARP8,IVNS1ABP,NUDT4,ACIN1,MBNL1,POM1

CTP1,FAM107B,PAPSS1,EIF4E,ATF3,KBTBD2,PAXBP1,SAV1,PLAGL1,PAQR3,CHD2,CCNYL1,FOS,UFM1,TP53INP1,RASL11A,KPNA4,BAZ2

OLGB1,HYKK,ZFAND4,FBRS,NPAT,MSI2,C12orf42,PERP,FBLN7,STIM2,CHD3,PHF11,IL18R1,RSRP1,MBD5,PPP1R13L,KMT2A,FAM46C,IKZ
6,SOS1,AKAP9,TMX4,RASSF8,INPP1,PIK3CA,NSMCE3,PPP2R5A,AP1S2,SLC16A7,HABP4,HTATSF1,EP300,ZNF529,UFL1,USPL1,NEMP2,TS
ΓET2,AIG1,USP12,AHR,ANKS1A,ANKRD22,INSIG1,ATF3,SPOPL,ICOSLG,CD300LB,PDE4DIP,LTBR,CXCL3,PFKFB3,PLA1A,PTGS2,NRG1,L
EM,ZC3HAV1,JMJD1C,ATXN1,HS3ST1,MED13L,CSRNP1,PLS3,LRP6,UAP1,IRX3,CCDC85C,OXSR1,KLF5,TPD52L1,NME4,LONRF1,SLC16A9
CL3,ELMO1,FMNL3,RGS2,CD44,LRRK1,PAQR3,TAB3,CEP164,ARL4A,CITED2,ARID4A,PAG1,UBC,TIGAR,NIN,CTNNB1,PAFAH1B2,PAK2,

10,SPTBN1,MAPRE2,GOLIM4,TP53INP1,SLC25A30,TIA1,INO80D,CFL2,SETD7,GSTCD,ZNF704,BAZ2B,YWHAQ,TJP1,CNKSR3,PPP1R2,PPIL4
USP45,PGM5P3-AS1,CFL2,PLCL1,ELK3,FZD6,EVA1C,ABHD13,TBC1D4,RICTOR,RAB3IP,WDTC1,SYNE2,PRKCH,OTUD7B,GIT2,VKORC1L1,
N7,ITGA1,BCL9L,LEF1,USP28,SF3A2,DLEU1,LASP1,PPFIBP1,SEC22A,HOXB2,XCL2,C21orf62,BCL2,FAM120B,CD8B,SP140L,PRSS27,HAPLN

L1,CAAP1,LDLRAD4,DYNC1H1,RNF138,ZNF331,RALGAPA2,TMEM131,ADD1,RNMT,SH2B3,AGO3,C17orf96,ARFGAP3,ZFC3H1,DENND3,A
LGDS,TLE3,CYTH1,SLC43A2,RRM2B,DPYD,DUSP3,OSBPL11,RAP2B,ICAM4,AMDHD2,TJP2,MAP4K4,SLC38A7,AGFG1,STX3,AZIN1,TNFR

8,C2orf48,MBNL3,DAP,MXD1,TNFRSF21,KBTBD8,SNAI2,CORO1B,MBNL2,RASSF2,IFT20,PPARD,PUM3,LILRB4,AHR,ABR,CDK13,CYB561
ZNF638,FAM60A,OTUD4,PSMD14,SCAF4,HNRNPM,TXN,INPP5F,ARHGEF35,RUNX2,WDFY1,ARSG,PON2,RBM17,CBL,FAF2,BZW1,DDX21

BB2A,TSPYL2,TM9SF2,PIK3CG,SIRT1,PDE4A,ZNF592,POFUT2,MECP2,GPR155,NEO1,LDB1,ATP1A3,RASSF3,CYLD,RAB3IP,AHI1,RABGAP

,HOMER3,EGR1,LGALS9,KCNN4,C4orf3,EMP1,KIFC3,IFIT3,DPP7,GEM,ALOX5,IRAK1,CACUL1,FAM129B,ALCAM,IL10RB,GRAMD4,IFIT1,
D10,UBXN2B,CANT1,MFSD5,PRR13,ANKRD11,IQGAP1,TWSG1,PPP4C,CCR5,CNIH4,FLII,ATP5I,BSG,CMTM3,ABI1,HMGA1,PYM1,TADA2
PM2,LBX2-AS1,FZD5,SLCO2B1,VSIG10L,COMMD9,CBR1,HGF,OSBPL1A,ACOX1,CPXM1,SCO2,PTGS2,SDSL,TPI1,BNIP3L,ETS2,WNK1,RE

1L2,CD1A,ELOVL4,APITD1-CORT,SYTL4,CDT1,C10orf111,TSPAN15,CENPI,PHF21A,DPYSL2,THRA,HIVEP3,DCLRE1A,CLIC4,CLOCK,SMC
A,NCAPD2,BUB1,CDKN2D,KIAA0101,PARPBP,C9orf142,NDUFB6,CDK1,SPC24,NFYB,CCNF,KIAA1524,CENPI,CALCOCO2,CDT1,CARHSP1,
16,WWTR1,B9D2,ARFGEF1,MMADHC,DRG1,TXNDC15,FOXC1,PGAM5,EP400NL,SOST,TNFSF9,IL2RB,CD82,PIK3CA,EIF5,SBF1,PURB,CR
PECC1,ANO10,ALPK2,SLC7A1,PELI2,MYO6,C9orf47,PPM1L,PRICKLE4,BIRC2,OPN3,SNN,COX18,BCL2,SIRPA,WDR74,TGIF1,SPRY1,NEK1
RF7,GID8,PGAM1,ARRDC1-AS1,B3GAT3,CYB5D2,FOXN3,TAP2,CHSY1,CCDC157,PPP6R3,ACOT7,PIN1,NUB1,FLAD1,NFKBIB,VPS36,HLA

L1,PAK4,C1GALT1,ABCB10,ABHD13,ULK4,PUM2,RHEB,SNX10,CDS1,RND3,KIAA0355,TUG1,TIMM23,PLXDC2,EDEM3,ADGRG6,RRBP1,S

ML4,ATAD2B,GNE,IRS2,FURIN,LINC00884,HOXB4,FBXL5,ST3GAL6,DEPDC7,KDM5B,PMAIP1,RGS2,USP32,WAC,KIF5B,LPP-AS2,SORCS1
KG1,ATP8B1,LOXL1,HS3ST1,LCA5,LINC00839,FBXL5,ASAP2,NCOA2,PDE8B,IGFBP6,CDC42BPA,SORBS3,PTPRG,KCNJ8,HRC,EPHB6,SYPL

GRMC1,AKAP11,TCEAL4,TREM2,SNX7,COL4A3BP,FCHO2,M6PR,RBMS1,CTSD,RNF141,CCDC88A,MGAT4A,DISP1,COPS7A,MERTK,ZYG1
7A,ASAP1,CCNYL1,GABARAPL1,SLC19A2,FGGY,TNFRSF12A,MAP2K1,POR,MAP3K8,SLC16A10,PIGA,ZFX,MAEA,HNRNPC,PGK1,ATP10

BRI3,BTN2A1,AURKB,ANP32A,GAS6,GBP4,SLCO2B1,FGFR1,KLF9,ADAT1,APOE,ZBTB8OS,ZFP69,OTUD6B-AS1,HMOX2,PTGS1,TMEM245
NMD3,CDK11B,MTHFD1,POLR2K,PTBP1,RIOK1,CCDC86,CNN2,LINC01503,ARHGAP4,YY1,VBP1,KDM5C,COQ6,MARK2,RNPS1,ARL16,BC
3,PUF60,HERC4,ST3GAL1,H1F0,ZNF213,SNX20,GARS,CHMP2A,NSMCE4A,DTD1,GAS7,CD300C,NSA2,PIGC,GTF2F2,CALM3,C20orf24,KIA

AA35,KDM4C,DIS3L,RNF138,CA2,JMJD1C,GKAP1,TPT1,MARCH1,TMEM5,TXNDC16,SEC62,GALNT10,MLLT3,RANBP9,ATP11B,RUNX1,XK

1,FBLN7,PAPPA,AOC3,PRR16,BRINP1,TCEAL8,ZNF84,CHODL,ADGRL3,C3orf58,CXorf40B,CACNA1G,CARS2,GPM6B,PLA2G4A,MICAL3,T
M47,APBB2,FAM162B,RCAN2,GPR173,DLC1,LINGO1,ST5,ROCK2,HOXD8,TSC22D1,TSHZ2,OSMR,COX4I2,PDGFRA,PDGFRB,CD248,NR2F2
AS1,CDK12,ATF7IP,GPR155,CREBRF,DOCK9,SH3GLB1,GAPVD1,CDC42SE2,LUZP1,ARHGEF26,ZCCHC14,CAST,NXN,TMEM50B,PKP4,STY

:2A,UTP18,COL4A3BP,FAM58A,GTPBP1,PIK3R1,TMEM170A,HLA-DRA,GMEB1,VEZT,PHTF1,TRIM69,MDM2,FAM179B,MARCH7,ZBED4,R

:P,MED13,SEPT2,RUFY3,FKBP5,SAMD4A,KLF4,PHLDB1,TMTC1,PDLIM5,FGFR1,ZNF891,PLAGL1,HOMER1,ZNF532,GDI1,ADNP,OXR1,TRI

3H18,ARL3,UBE4B,VEGFB,ASPSCR1,BHLHE40,JAML,RIN1,C1orf43,RMND1,DIP2B,AGAP3,CBR1,PNPO,PMVK,UBE2Q2,HOXD10,RASA4B,

MEM126A,PI4KB,SIRT7,TP53I13,TBC1D12,PRPF6,ACO2,RNF138,PMPCB,HOXA7,ZNF140,YWHAB,ZNF677,YWHAQ,PSMA1,TOB2,LINC-PIN

RARRES2,FBLN1,LMOD1,SMIM6,SMAD1,COL1A2,CDC7,MAOB,ECM2,ATP2B4,SMARCA1,TMEM132A,SGCE,ARID5B,CNN3,TP53I3,TCEAI

MYO6,PITPNC1,BCDIN3D-AS1,KANTR,KDSR,ATAD2B,SGCE,C21orf91,RNF144A,ELMO1,SHC2,TOB1,MAN1A1,MICU3,TNS3,ABRACL,ISO

,PPP2R5A,JARID2,CLDND1,GTPBP1,C9orf78,NCAM1,RNF115,KCNQ5,XCL1,NCALD,HERPUD2,TOPBP1,CTPS1,ITGA1,CDKN2A,PPIE,EIF3G
92A,RCAN1,CD164,GNPTG,RAB3IL1,BSG,ATP6V0D1,EHMT2,FAM134A,TMEM42,THNSL1,C5orf51,LINC00654,SNX2,SP100,MAPK3,M6PR,
7ND11,NFE2L2,RLN1,SPINK2,REXO1,B3GLCT,POLR2A,SH2D3C,TEAD1,ZSCAN12,PCAT6,PPP1R2,TTYH1,PEX26,SETD5,CMIP,C8orf44,MPI

RF4,NAP1L1,MYLIP,PRKCE,CPEB2,ANO10,CACHD1,PHF10,SGIP1,MKKS,TOP2B,MEGF9,TRAF3,STXBP6,DIAPH2,TRA2A,COG5,PYM1,CLI

1,ZNF518B,KIAA0232,ZFR,PLEKHA7,ROCK1,CNEP1R1,MAN2A1,SRPRB,DNM1L,AMFR,TRIO,ERO1B,FBXO34,DHX32,C5orf24,THRB,GLU

5,ZCCHC7,FASTKD5,TMEM231,C21orf59,CDC123,DBNL,SLF1,CBX3,TGFBR3,CDC34,USE1,USPL1,TBK1,SLC9B2,PLCL2,UFC1,C16orf91,MC

LI2,RPRD1A,FAM13B,NME5,GTF2B,DHX9,NFKBIZ,PDS5A,KCMF1,ZC3H4,ADAMTS9,C3orf14,HNRNPH1,AZIN1,G3BP1,OPN3,CD44,TRPC1,
SUPT3H,CMPK1,ASCC3,AIM1,UXS1,PHF10,EPB41,EML4,SPRY2,RASGRF2,ATXN7,TNFRSF9,LARP1B,NPNT,FAM160B1,EEF1A1,ANKRD36,
PP1,SNX8,LAP3,CREB5,CXorf21,NINJ1,ENTPD1,DAPK1,SLC43A2,TMEM51,LRRK1,ADORA3,KCNC3,IGSF6,TGFBI,MILR1,PGD,SCPEP1,SN

LMP,GAL3ST4,SORL1,SOCS6,SLC27A1,ABCC3,SPATS2L,ADAP2,MYO5A,SNX9,KCNJ5,CECR1,ELL2,RNF13,MFSD7,OSBPL1A,LHFPL2,RHI
SETD2,RANBP9,SMG1,PTP4A2,ETS1,POGK,OSBPL9,DYNC2LI1,ARFGAP1,CMTR1,WDR33,AHCYL1,PDS5A,RHOG,TRABD,GINS1,SLC12A2
.3,GALK2,EEF1A1,CD48,RALA,KCNE1,ICAM4,PLPP3,RNF13,DDX58,RMDN3,FLNA,SAMD9L,SBF2-AS1,ALOX5,PRKCD,PARP14,CTDNEP1,.
,LINC01010,FCHO2,GPX4,SAMD9L,TMUB2,BCAP31,LBX2-AS1,KLF7,CXCL12,ATP6V1C1,RAB31,DOPEY2,SHANK3,RRNAD1,TREM2,C7or

6,HSD17B7,LAPTM4A,SRPRA,LRRC8B,ZNF549,TMEM216,AGBL3,CDK20,UTP14A,IGBP1,PRKRA,PNISR,IL17RD,FANCF,UNC45A,ST6GAL

3,TXNRD3,GATA2-AS1,UBN1,ILVBL,MROH1,SEL1L,DOK5,FLCN,MME,ARHGAP20,ZEB1,TRAF6,CYB5R1,DCUN1D3,PAGE4,CEPT1,FAM12
L1,KLHL36,GOLGA1,PNISR,CREB1,TCF3,MRI1,LYPLA2,SENP3,DFFB,DBT,PDZRN3,ARFGEF1,KLHL18,UGGT2,PANK2,CWF19L2,CARM1,
14,UBE2W,ST6GAL1,LACE1,CMKLR1,IST1,LRRK1,ZNF618,HMBOX1,ABCC5,AXL,ANKRD29,ANKH,IL1RAP,LAMP2,CHD7,ABLIM3,TRIM8

HGAP21,C11orf74,GPBAR1,MLXIP,ECE2,PALLD,FAM124A,IL6ST,KDM3A,MIR210HG,ZFAND3,TRIQK,CAST,LONRF3,SLC22A15,MAP4K3,.

F3J,CHMP2B,SNRNP200,FLOT2,MYO19,HNRNPUL1,IKBKG,NOL10,APOBEC3F,PA2G4,HCCS,GINS3,PRPF38A,GPS1,KIAA1143,SFXN5,SEC6
HOSPH9,RAP1GDS1,WDSUB1,CNNM2,CDK17,SYCP2,HNRNPLL,DCAF4,FAM214A,ATP8A1,OXR1,RLN1,SRSF11,RASA2,FSIP1,STAG1,ADD
ABHD5,PDK4,SUSD3,XPOT,DIAPH2,NEIL2,HTRA1,FLCN,TTC7A,USP8,CASC15,ARHGAP26,SUCNR1,CDK4,ZNF354C,MAP1S,OTUD1,PHC2
V1,MTHFD2,SH3GLB1,BICD1,RNH1,ADIPOR1,ODF3B,PTPN2,ISCU,VPS18,SLC30A9,TNFRSF12A,FNIP1,TMEM51,TNFAIP8L2,SCARB2,CPVI
4,MAFB,PLEC,MAFG,SNN,SAV1,PEA15,VPS18,PHACTR1,RAB7A,PRR14L,BNIP3L,STX4,NUAK1,HBEGF,MFSD1,SNX8,CCDC88A,HIVEP3,T
LIRP,ABRACL,ACP6,TIPARP,CFL1,PPP2CB,LEMD2,MICU3,CTNNA1,PARK7,ATP5D,RARS2,TMED3,CHCHD7,SMIM20,COX6B1,NIF3L1,FIE
R2,NPB,MMRN2,HAND2-AS1,SPON2,ADAMTS5,C1QTNF6,NFIB,THSD4,DIXDC1,ESAM,MOB2,PCOLCE,AKAP13,RASA3,WT1-AS,RAMP2,IL

,RAB31,TSPAN4,CH25H,ITGB2,SLC31A1,P2RX7,NPC2,OLR1,EMP3,ABHD12,CD14,RAB20,ATOX1,MPP1,SNX5,ATP13A1,CBR1,DENND3,MI

DC3B,COL15A1,PARP2,PRLR,PGRMC1,EGFR,TCTN1,COL6A1,PLEKHH2,ISLR,MEST,PTK7,BCAT1,HECTD2,COL4A5,NXPH3,TWIST2,PARI

'1,SFPQ,SF3B1,REST,STARD7,NSMCE3,PPP2R5A,FBXO11,KDM6A,CBLL1,SLC35A3,PUM2,FMR1,NAB2,CALM1,NDUFAF2,CUL5,DERL1,CI

'S6,BMPR1B,KBTBD2,AMMECR1L,BOD1L1,ARID1A,AKAP13,SENP1,NSMAF,TNRC6B,TARSL2,SPTY2D1,FAM92A1,TAF4B,PHF14,GOLGA
)9,TRAPPC8,DPH6,SUPT16H,FIGNL1,SNRPN,TTC21B,NEK2,RPAP3,ZBTB25,MARCH8,ARCN1,SRGAP1,LINC00680,BUB1B,MSANTD4,MBN

1,DOCK7,HMGN3,YPEL5,ING1,PDE4B,FUT4,RBMXL1,MYADM,GNAS,RNF111,MPP5,THNSL1,CLK1,MAEA,FNIP1,KLF6,SAFB2,ITGA6,CCI
:A,IFI27L2,RPP25L,ANP32B,MASTL,INTS8,RHPN1,CAP1,ANKRD44,RAD18,PGM1,PHF11,NXPE3,KLHL7,HEXDC,ELAC2,SYTL1,CCDC159,C

ΓET3,HEY1,NEK1,MAPK9,NUDT4,FSD1L,MBNL1-AS1,AGO2,DSE,SEC31A,RANBP2,NFKBIZ,PTPN4,STAG2,PPP4R3A,SRPRB,MAP4K3,RAP

YROXD1,TTC17,AKAP11,STIM1,ADO,FAM46C,ZNF441,AGTRAP,EP300,METTL25,ARHGAP30,MOK,STX2,PTBP1,SRPRA,ABCB8,ZNF83,HN

)18,ARAF,EEA1,ZFR,AP3D1,PTPRM,OGT,LDHA,PLCH2,CMTM6,CFLAR,COMMD10,MAEA,MORC3,RP2,ATP6V1G1,SSR3,DDA1,PDXDC1,M

'1,HYLS1,DDX52,STK32C,MAPK1IP1L,TRMT12,TRAF1,HS3ST1,VPS37C,CALCOCO2,KCNN4,UQCC1,SETD9,CSGALNACT2,FLT1,SAP30BP

SL2,ACOT11,COQ6,KDM4A,SMYD4,PWP2,JHDM1D-AS1,COPE,HIVEP3,SSBP1,LDHA,RAB21,CHST9,CFAP97,DBNL,TMEM102,CASP7,ANX

BX3,OSBPL11,RRAGD,ZFX,ZFAND3,ZFAND5,VAMP3,KIAA0100,CAMTA1,OSER1,RAB5A,RASSF3,KIF1B,STXBP5-AS1,TMEM50B,ATP1B3

A,IGLON5,NUP85,SREK1,PBX2,HIST2H2AA3,PRNCR1,TLE6,XPO1,LINC00665,FBXO7,RHOU,HIST2H2BF,ANKRD11,CUX1,COX8A,HNRNP/

'681,AMD1,AGL,KBTBD4,PIK3C3,CEP70,ZNF280C,MAT2B,SPATA33,HEATR6,IKZF2,ZRANB2,ZNF264,GTF2H2C,SETBP1,TBC1D10A
,C6orf47,PTCH1,SMIM7,SLFN12L,POLR1E,SNX16,TAF1D,CDK13,SMAP2,TOPBP1,BCAS3,SNIP1,ZNF132,XKR6,NCBP2-AS2,GTF3A,RABEPI

CD4,REL,PNPLA8,AGTPBP1,CRIM1,ARHGEF3,AUTS2,SMURF2,RANBP2,ARMCX4,KAT6A,ZCCHC2,RBM14,BIRC6,LDLRAD4,PDGFD,CNO
SEC23IP,PRPS1,RAB10,SMC5,LSM4,CMC1,HMGN1,ID2,DDIAS,FAM84B,ASB1,HIST1H4E,CCT2,KIF20B,CEP164,MASTL,HIST1H4J,KHDRBS

E2F3,MED28,FARSB,RWDD2B,TRIO,UFL1,LEMD3,CLTB,SFRP1,TMEM168,INPP5K,GOPC,DZIP1L,TMEM189,HMGN5,AP1G2,VMP1,SPATA

I,ATP1B3,CAMSAP2,EGFR,KCNIP4,PRKCA,SPDYA,ZNF827,TRIM13,TGFBR3,UBTD2,EPB41L2,SYNE2,USP53,GNG11,F3,BRWD1,FKBP5,AF

DX60,RABEP1,FAM91A1,GAB2,SPTSSB,ANKRD26,NR2C1,CTDSPL2,IDNK,UPF2,SECISBP2,CERS5,ZNF398,PRKAR2B,CDC37L1,ATXN7,C2

ANKRD36B,ZNF224,DGKH,SFXN1,CYHR1,SDHA,PLCL2,SLC6A16,GPR88,GOSR1,FEN1,EXOC3,TSC22D4,ZNF420,RNF213,FAM50B,LPIN2,S

)14,DYRK3,SEMA4B,TMEM255B,NDE1,PLEC,IRS2,SIAH1,CAPN7,ARID3A,PTPRJ,CAHM,HEY1,DDI2,ACSL1,LRRC4,PITPNA,SAMD4A,DOC

4,ZNF808,SNHG21,LMAN2,MINPP1,FKBP15,NME1,VTI1A,WRNIP1,CBX3,CHST9,KCTD12,KCNC3,YWHAB,B3GAT3,SCNM1,REV1,TES,TRA

,ORAI3,ST6GAL1,CSF1R,IRF7,CD163L1,IFIT2,FILIP1L,CBX1,APP,PBX3,BTN2A2,MANBAL,MAFF,HOOK2,GEM,IGSF21,ZNF703,KRT8,RBM2
:A4,NCOR1,PHLDA1,OSTC,NR1H2,CHD4,PHF14,ZNF721,CHD1L,PNO1,PNRC2,LACE1,TMEM70,DUS1L,AP1G1,RAB3GAP1,KIAA0141,CENP
IL1,KIF16B,RNF181,LAMTOR1,PARVB,C1orf43,MCCC1,RING1,TOM1,MTHFR,BMP2K,TTLL4,SSR1,ATP9B,NECAP2,GNPTG,HYAL2,SCML1

E4B,IRAK3,FAM65C,USP9X,CDK14,CHST7,CFLAR,SIGLEC10,FBXW7,RNF138,ATP6V0D1,CDH23,GAB2,ARHGAP21,LMNA,FAM102B,ZBTI

.,TRIB2,AMOT,JADE2,BEX5,ORMDL3,CLIC5,NUP50,WNT10A,RTKN2,TRIM32,KCNIP2,ATXN7,ATG16L1,GPR55,AKTIP,FYN,CXCR4,POLB,

AFK,PSMC1,PPP2R2A,SPEN,ACIN1,UBE2Q1,EIF4H,B3GNT5,CREB1,FBXO28,EIF5,ARID4A,TPM3,WDR3,PRPF40A,NOP58,PMPCA,FUS,RAB

1,TOM1,VSIG4,APOE,CCDC88A,NPC2,KCNN4,PPM1M,ACE,MRC2,DFNA5,FGD4,ACER3,PLA2G15,ABCG1,GSN,PLXDC2,COLEC12,PLEKHM

IG,RECQL,CCT2,CKAP2L,POLA1,SPATA5,NEMP2,CHAF1B,NUP50,DUT,SCOC,SNRPB2,FIGNL1,DDX39B,E2F8,MANEAL,MAD2L2,TMEM2
ALDH3B1,USP6NL,ANKS1A,NCOA4,JAK2,KIAA0930,CLIC2,MRC1,LAP3,NCLN,CLCN6,P2RY13,TLR1,TPP1,MARCH2,MITF,ATP13A1,RNAS
M170B,ADAM17,RRP12,AIF1,RNASEK,LTBR,FAM214B,VENTX,PDE4DIP,FNDC3A,BNIP3L,PFKFB4,RNF130,PICALM,RASGRP4,HGF,PLAU
TSD,MOB3C,TUG1,GAA,DNMBP,APBA3,WWC2,ARHGAP25,CCRL2,SEMA4A,WBP2,IFI30,WFS1,GZF1,PPP1R9B,HGSNAT,MIOS,RAB9A,GP
MT2C,FOXO1,HIPK1,NUDT4,SH3KBP1,SETD2,FAM13B,EDEM1,UPB1,ARHGAP10,PAN3,NFE2L3,SBDS,EZR,TMEM243,CCNG2,NRIP1,SLC38
NC1I2,MTA2,EIF2A,SLIRP,RNF139,WDR6,ZNF140,COX14,HIVEP3,MAP3K13,GSDMD,SPRY2,TRIP12,CAMK2G,HIF1AN,ME2,AAMDC,PCYT

)SIP,C2orf76,EIF5A,ACAA2,NDUFC2,ZNF33B,TCF7,TCEAL8,TAF1,C20orf24,L3MBTL2,NOP10,CHSY1,C2orf69,ORAI1,NOL7,YKT6,KIAA1468

)1,NINJ1,KIAA0232,ANKRD66,DDX24,KRAS,CEP85L,PRCP,FYN,LAPTM4A,SMARCAD1,JOSD1,PELI1,FBXO11,TP53BP2,NFXL1,TXLNG,KI

XANK,MVK,GPANK1,METTL13,CDC25A,DDX11,CNOT11,LINC00176,HENMT1,DCLRE1A,RBFOX2,KNTC1,RRP1,CHAF1B,AREL1,GEMIN4
,SLFN12L,C18orf25,C9orf40,TNIK,TRMT13,LSM6,RBBP6,TNF,CHMP1A,NSMCE4A,AKAP1,PIGK,SEPT7,FAM20B,DSCC1,WDR1,PDCD11,GA
AP4,PDCD11,STAT6,BLM,CCDC86,ZFP1,TGFBRAP1,E2F2,MON2,GLB1,AAMP,EEF2KMT,EED,BRIP1,TMEM106B,PKD2,CBX6,FKBP5,ESF1,I

OPEY2,MARCH7,FAM199X,TMEM135,STXBP3,STK24,ALG6,MAEA,LANCL2,YY2,PTBP3,MICAL1,DDX6,MSL3,DNM3,PARP8,RPRD1A,GC
3,POLE,LFNG,NUP93,RASD1,MAP2K1,SERINC2,SLPI,KIF24,CDKN3,SYNE2,HNRNPUL1,FRYL,NEMP1,GTPBP8,RNF19B,GPRC5A,C9orf43,A
,CCNF,ASF1A,RAB27A,MTFR2,HNRNPA0,PKMYT1,C1orf112,PRIM2,DCAF15,CDKN2C,SFI1,C15orf53,SMPD4,CBX5,HCFC1,SLF2,FAM122B,

MBOX1,TMEM196,KIRREL,CACNA1D,RARB,ATP2B4,MYO1B,PLAGL1,CEP112,CHN1,CACNA1G,LGALSL,ABI3BP,ARHGAP28,NFATC1,A

M13A,ANKRD50,FAM21C,HPS5,FGL2,AMDHD2,TNK2,RTN4,VEGFB,KLF6,RSPRY1,FAM134A,GPR155,ACOX1,GBA,ATP6V0D1,SIRT1,PDK
UBCN,PPM1L,LAMB2,ZNF354C,LBX2-AS1,GCLC,TMCC2,BCL2L1,HGF,ZMYM3,PTPRO,CHN2,TAZ,FAM216A,SLC25A13,ANKRD37,LINC0

A2,HNRNPA0,STK17A,JMY,FOXJ3,AFTPH,DOCK7,ZCCHC11,DENND4C,FBXO28,TACC1,ARHGAP26,NAMPT,NRP1,MIER3,ANKRD28,DUS
MGEA5,SEPT11,AGL,TMEM67,AP2A1,MARK2,PAPOLA,ZNF655,KIAA2026,MBNL1,CCDC152,ST8SIA4,E2F4,INTS4,NUMA1,PRMT9,NCK1,S
177,SLC25A38,AKT2,POLR2H,MCAT,NUP54,TSPAN5,RBM26-AS1,ZNF787,CRBN,GZMM,CLEC10A,CDC73,TUBGCP4,G6PD,MTF2,GP6,PSM
,C7orf49,KDM3B,UBL5,GLG1,LINC00884,USB1,GPR155,NDUFB5,EIF2S3,DNTTIP2,MPP5,PPP2R1A,ACVR2B,FBXO27,TTI2,SEC24C,LINC008
PLD3,IER5L,IGF2R,SH2B3,CTDP1,CHD8,METAP1,RFXAP,VPS39,FMNL1,TAF1,EPC1,MAFF,DGKZ,COX18,SKAP1,RBM26-AS1,SUCO,TRIM5

AP3,PRSS57,MYBL1,RASGRP1,ARAP2,GTPBP8,CCNDBP1,GCNT1,KIF14,ACY3,GSE1,STYK1,SACM1L,NUCB2,KCNQ5,GLIPR2,IGHV1OR15

ATE1,AMPH,EFEMP1,KANK1,RFTN2,BCAN,ARL15,PLOD2,RBP5,CDC42EP5,TIMP3,TIPARP-AS1,SLC27A3,LIFR,GLYATL2,CCDC68,THRB,

C,MAP9,KLRG1,LINC00869,JADE1,GFI1,FBRSL1,TAGAP,CDC14A,KMT2A,DMTN,ZBTB16,AIM1,SUPT3H,TXK,ERBB3,DOCK9,DGKD,SH3K
Xorf21,ATG3,LILRA1,GRASP,BEST1,TCF7L2,USP12,PKIB,ACP5,PLEKHO1,LINC00346,CCRL2,ADM,ATF3,HNMT,ODF3B,ASGR1,LST1,STX

04B,IGSF6,SSR1,HEXA,EI24,TGFA,NINJ2,FGD2,MAF,FCGR1B,AXL,C10orf11,SEMA4A,MPP1,CAMSAP2,ZNF629,HLA-DMB,PSAP,SLC38A7,S
GABARAP,ZNF710,GNA15,EBI3,RIT1,ICAM1,MOB1A,WDFY4,ATP2C1,PIM3,ARHGAP31,PQLC1,HCLS1,CTNNA1,GADD45B,SCARF1,STK40
PPIL2,GLI4,MAP3K14,NARFL,VMO1,CHAF1A,DNASE1L3,ACOT7,ATXN7L1,BIN1,SH3KBP1,LINC00176,AAAS,PMAIP1,HEMK1,ADAM23,C
CC5,PPP1R15B,SBF2,HEG1,CD163L1,GPR108,ZNF33A,CSE1L,ZMAT1,TSPAN3,SUSD1,NHLRC3,SCIMP,ELF2,FAM222B,PUM2,VSIG4,EIF2A
B12,C1orf159,LINC00894,ATG14,IGF1R,DIP2C,FOS,LINC00339,STRADA,STK11IP,PSPN,DOC2B,ASTE1,CYP51A1,ARF4-AS1
A,TSPAN4,PDE4B,MYCBP2,ELK3,CDKN1A,ATF7IP2,CXCL2,SPECC1,PCDH9,IGF1,IFT81,LPXN,PNPLA2,HECTD2,HIPK3,FOXRED2,FAM10

SP36,IQGAP2,RNMT,SLC25A32,PIK3CG,MYO1E,GPR75,ECD,PTBP2,CHMP1B,MCL1,ZNF131,ANKMY1,SUCO,AGAP9,KIAA0907,SOCS4,DPF

NF532,SENP7,ODF2L,PABPC1,FLJ35934,HERC5,PRKAG2,PRICKLE4,DSP,JMJD1C,GOLGA8A,CNNM3,LCOR,LRRC3B,SSBP2,G3BP2,GADD4
,PICALM,JHDM1D-AS1,TMCC1,RBM47,PLIN2,APLP2,DHTKD1,TJP2,NCF1,TET3,GZF1,RETSAT,STX2,PRNP,NFE2L2,PTGER4,DYNC2H1,CI

MAGP,SORD,FLJ35934,SLC44A3,S1PR2,LINC00623,SLC44A2,TBC1D2B,NIFK-AS1,ANKRD31,EXTL2,LINC00869,CLUAP1,ABLIM2,PNMA1,
F1,GFM1,ANP32E,DUSP6,BIRC5,CDKN3,GNAI3,PKHD1L1,AFF3,MSRA,VAPB,SNRNP200,FEM1C,CLDN7,ATG16L2,DCTD,RFC3,KMT2E,SL
,EMB,ADGRE5,DESI2,PDRG1,ARHGAP9,FAM179A,ERCC5,ERI2,GGH,CCDC107,CLASRP,MDH1,TLN1,CEP192,U2AF1,SNRPA1,CDYL,SNW

GDR,PARP8,SUN2,EMB,TMEM238,CCDC69,PLEKHF1,DZIP3,SCML4,SIRT7,CASP3,S100PBP,KIF14,HENMT1,CCDC88C,ARHGEF1,BBS4,RAS

NPB,SIPA1,DMAP1,RSF1,CD247,MARCH6,GAS7,ATE1,MARS,STAT1,RNF121,VPS39,C1orf109,ATP13A1,ZYG11B,MPHOSPH8,DYRK4,PREB,

3,SNRNP200,E2F3,FOXJ3,TIPRL,PSMA6,STARD7,SAE1,FAM199X,IFI27L1,NME2,NUPL2,TMED8,ARFGAP1,VPS51,SFPQ,TMF1,TIMM44,SIV
ZNF431,PSMD7,THYN1,GINS4,AAGAB,ATP5H,HNRNPF,SLC44A1,NDUFA13,SLC25A24,LIMA1,CMAS,MEGF8,ENY2,MAPK8,NTMT1,FRMD

RERF1,SYT1,TMEM117,CHPT1,MAP1LC3B,NBEA,GCA,NR2F2-AS1,HEY1,ERC2,PRNP,ZNF516,KIAA1549,POMC,OVCH1-AS1,DUSP14,PPFIA

P2,PHF6,ELOVL6,KCTD3,FUT8,USP15,CEP104,CDKN1B,IKBIP,ZSWIM6,NRBF2,CYP20A1,ZBTB11,CGGBP1,MTX2,LIMK1,PTPN12,NUCKS1,

PIN4,MRC2,BCL11B,HOXB-AS3,NUP50,PTTG1IP,RHOG,MYEF2,ASXL1,ZNF724P,C10orf111,CSGALNACT1,AGL,TELO2,ANO10,APPL1,SCAI

,DGKZ,EEF1B2,NRDC,LENG8,EIF2B1,LFNG,KMT2A,MAU2,UXT,FAM102A,PPP3CC,SEPT9,HLA-A,CASP2,CCDC97,CLK4,PNISR,ASCC2,CL

CL28,ST6GALNAC6,GPRASP1,CHST12,SYNGR1,YPEL1,HCG18,ZDHHC13,PRKCQ,SH3KBP1,RSRP1,MYNN,ZDBF2,ELOVL7,ZBTB16,ESCO
A-AS1,BUB3,ENSA,SNX4,CCDC167,CENPQ,CENPO,UFC1,CDK5RAP2,FAM111A,HNRNPAB,SNRPA,CENPF,RUVBL1,NASP,NEK2,LMNB1,S
A,AAED1,ROCK2,C1GALT1,KHDRBS1,UBXN1,RNPS1,NUDT2,STAMBP,KIF21B,TRIM56,HBEGF,GTF2H1,RBM11,ITGB1,TMEM223,ZFPM1,

,ATXN7,CXCR4,BAZ2B,PLS3,RALA,BACH1,HMGB2,SLC16A1,ZNF462,APP,SMG1,NCOA2,SMARCE1,NCOA7,PRKAA2,OTUD4,CDK17,EHI
C14,C4orf36,ZNF185,DEPDC1,CECR1,SLC29A1,CLIP1,PLEKHF2,RIC1,SEC23IP,APOC2,GPR146,MTHFR,ERP29,MTM1,FAM21C,ASB13,RGS1
,UPP1,ZNF200,MYO1F,B2M,PRKAG1,ZNF583,EIF3H,GNB2,PTPRO,MLXIPL,VPS72,RNF41,COX7A2L,LGALS3BP,NFATC2,TMEM9B,AP2S1,I

MAPKAPK5,SELL,TESPA1,ZFP62,FBXO41,GTPBP2,STXBP5,PYCR2,TECPR1,MED7,ZC3H14,MAPK10,IL17RA,FERMT1,FANCF,ANKRD49,FA

ES1,CCDC92,HECTD2,TNRC18,IBTK,METTL21A,WTAP,SLC22A23,CMKLR1,PPP2R2B,ACYP2,TSC1,HSDL2,CDC14A,ITSN1,NUFIP2,RTN4,D
21C,CDKN2AIP,OXR1,NR4A2,FAM133B,PHLPP1,GPS2,ZBTB11,NEU1,IHH,PIK3R1,UBE2M,ANKRD11,XRN1,SDE2,ASXL1,ADGRE5,SATB1,

EB,CD24,RAB21,TGFBR2,SMIM14,SPEN,MAPKAPK2,PALD1,ZNF804A,ATP1B1,LRRC75A,PPP3R1,PLK2,UBE2D3,SCML1,IRS2,BIRC2,PIK3R

ZF1,ANXA2R,FAF2,POGK,TCP11L2,CUL9,SLC16A7,MIB2,PLAG1,CNST,MFHAS1,FAM208A,TPH1,TOM1L2,ARIH2OS,KIAA0355,PPTC7,G3B
PAN5,DDX46,CDC42SE2,YAF2,KCMF1,DMTF1,FAM60A,KANSL1,RSRP1,WDR20,RNF138,DLG1,SHB,CCDC88C,RICTOR,GSTCD,SEC14L1,I
MO2,MID1IP1,DUSP1,PHLDA2,KBTBD11,NEU4,HIST2H2AA4,RAB32,HLA-DRA,AKT1S1,CCDC71L,PAPSS1,DNAH17,PLBD1,EMILIN2,TSC2
9,TOB2,GPCPD1,GOLT1B,ARSB,PTPN14,BAG3,ETV6,WNT7A,WWTR1,TOB1,HYKK,DLGAP3,DCAF6,PRC1,TACC2,ZNF704,WLS,DUSP4,PPI
PTP4A2,SNX9,ST8SIA4,IBTK,FBXO28,PTOV1,BIN1,ZNF358,ZNF124,KTN1,RUNX1,PTP4A1,PAPD4,INO80,MAPKAPK2,DYNC1H1,GGT7,MA

4,VGLL4,KLF10,ZBTB34,ANKRD42,NXN,MYC,SMIM3,TSTD2,KLF9,MET,PHKB,EIF4A2,CRK,SMIM8,TMPO,MKRN1,PITPNC1,PGF,NCOA2,
,ZFP36L2,PAN3,PIK3CA,PAFAH1B1,PSMD14,PPP4R1,SGPP2,RSF1,TMEM68,VPS13A,SMCO4,KDM6A,KBTBD2,RBM26,TCEAL3,NCOA3,DZI
N3,AHI1,ATL2,ZNF41,XPO6,ARSJ,BRMS1L,EMSY,DAPK2,RAB28,OPTN,ZNF800,CA5B,JRK,CHIC2,NLGN3,GLTSCR1L,RAB8B,RNF38,XRN1

AED1,RBBP6,RGS16,R3HCC1L,RASGEF1B,SYTL3,CNOT2,SUPV3L1,SNHG12,CFLAR,RUFY3,ETV3,RANBP2,DTNBP1,FOS,GYPC,SLC25A1
SF10B,SRGAP2B,RASSF3,PIP5K1C,DCTN4,SETDB2,EIF4G1,ASAP1,CLEC5A,ACTN1,SERPINB8,SULF2,SLC16A5,TMEM55B,EREG,KLF16,SI

I,JAZF1,NATD1,FAM102A,FTCDNL1,PPCDC,PPP2R2D,DYNC1H1,CYHR1,CCDC61,PKP4,NRP2,SLC2A6,RLF,MCOLN1,CNOT7,MAP1LC3A,T
,SP3,OSBP,SMG1,HMGN3,PTPN2,VAPA,SON,MIR155HG,PPP2CA,RAB13,GALNT7,STK38L,PTPN11,HACD2,MBTD1,GSTO1,TBC1D16,KLHI

P1L,KIF13B,CCDC6,GCH1,CHD1,B3GAT2,RBM33,LRIG1,GDI1,SAMD8,ZBTB24,ZDHHC2,CBX5,PPP1CC,UBE3A,TBL1XR1,PDCD1,STT3B,MI

,FAM198B,BCKDK,GPNMB,ICAM4,GK,MPP1,NCF2,TNF,SOAT1,NCEH1,FLNA,GLMP,RNF13,AMFR,SCPEP1,SLC29A1,GAA,MCOLN1,LGMN
A,NRBF2,SLC35A5,C19orf70,ATE1,COX6A1,CSGALNACT2,VDAC1,ZNF292,B3GAT3,EMP3,APEX1,TXN2,THOC2,CCL18,BCL2L13,USP32,GS
ENBP,ADSSL1,FERMT3,SUMO3,PRADC1,LINC01503,RGS12,SAMD4A,SIGLEC5,RNF135,AGAP6,IQSEC2,CTSD,KMO,EBI3,LAP3,DISC1,EIF1

5,MCOLN3,CEP44,RNPC3,EXT1,B4GAT1,CCND2,TBC1D30,B3GLCT,LYNX1,NNT,RAB3IP,ZGRF1,EXD2,TSKU,ZFYVE9,ARL8A,USP46,RXF
LBR,ACAT2,POC1A,TRAIP,KIF2A,KATNA1,MAD2L1,CIT,ZWILCH,FAM192A,RANBP1,CTBP1,GMNN,HIST1H4A,PSIP1,C16orf59,SAE1,NON
TC2,MCM10,PRR5,ZNF101,CDKN2AIPNL,ARHGAP12,ICAM3,KAZN,TECPR1,BRD3,PTBP2,SMARCC2,CDKN2AIP,DGKZ,CFL2,CRADD,ZNF
,CCR7,ABCB4,PACERR,GJB2,ATF7IP2,BRD1,ICA1,CITED2,VIM-AS1,CCNYL1,MDFIC,IDO1,BID,MTHFD2,TRAF3,PLAGL1,SNX11,MYOF,HI
-DMA,DTNB,WBP1L,CASC4,DDX58,LMNA,PSMD5-AS1,C19orf25,CMPK2,PAAF1,VPS51,DCP1B,C1orf123,TTI2,RAB35,CCDC144A,MESDC1

SLC17A5,PTCH1,PLXNA2,NT5E,COX10,RHOA,SVIL-AS1,BTBD3,PPM1D,PPARA,GMNN,TUSC1,CREBRF,LINC00863,TMEM50B,ZFAND5,EP

l,MAP7,BEX2,ZNF546,EFNB2,PIGN,EVA1C,PKP2,CYTH3,SCARNA2,UGT8,TANC1,LDLRAD3,EXT1,NOTCH2NL,C15orf61,HUNK,HEY1,NTM
L1,COL21A1,SEMA6A,RERG,STXBP1,SMTNL2,TMEM47,FARP1,EFNA5,TANC1,AR,GUCY1B3,KIAA1217,CNRIP1,SLC7A2,IDH1,MATN2,ER

1B,EPB41L3,PGBD5,CTSL,PHIP,ARRDC3,MITF,WASL,KCNMA1,CPT2,FAM234A,CLIP1,DRAM2,CTNNB1,SGPP1,ASAP1,RHOBTB1,DICER1
D,RAB13,NCF1,PDK1,IFIH1,SLC30A1,TNF,FN1,MNDA,HSD17B12,OTUD5,SLC25A13,SAMD4A,ZNF618,SLC12A6,ZMIZ1,PLXNC1,MARCH2,

,SMC5,WBP2NL,ZBTB2,PRRC2A,TPTEP1,BIN3,SLC30A5,USP25,PTGER4,PSMB8,GRASP,SNRPD1,KDM6B,INCENP,EMP3,ABCD4,CCDC34,
S1L,PHTF1,PTPN7,LONRF3,UHRF1,ZBTB6,CCNL2,ZNF208,ZNF789,CCDC90B,SRSF2,HINT1,ITGB1,KMT2A,TMEM237,PSMB10,KDELC2,SL
A0141,SPAG1,CTSD,LAT2,NDUFA13,RRNAD1,LCMT1,RTFDC1,TMEM200A,BCLAF1,H2AFY2,NIPSNAP3A,GSE1,SLC39A8,PSMB7,TBCE,CC

ζ,TP53INP1,PXDC1,RASSF8-AS1,SIAH1,MAGI3,ANKRD50,CMPK1,CDK8,MAP3K3,PPP2R2C,FAM84B,HDAC9,RASEF,EML4,FAM110B,PRK

THBS2,CLIP3,NPDC1,ABI3BP,B9D1,OGFOD3,NOVA1,ASPHD1,ZNF516,TBCEL,KCNMA1,TMEM117,SRCAP,ZNF589,ANKRD29,MEIS3,JCHAI
2-AS1,EPHB6,ACTA2,PDE8B,FGF13,FNDC1,SDC2,LTBP4,GNG11,SHISA4,AOC3,MRGPRF,LINC01197,HOXD11,HOXA11-AS,RARB,NFIB,JAC
X,PKNOX1,B3GNT2,ARL5B,ANKRD11,PHYH,MBTPS1,SAMD4A,MAP2,SPATA6,NEFM,ZNF706,BCL6,ZNF664,FOXD1,MAPRE2,RUNX2,ZDH

:BM4,ITGAX,CHD9,ATP11B,NUB1,PSD4,PPIG,TRPV2,BOD1L1,TTC37,IARS,PEX16,CHORDC1,DPF2,GABPB1,AIFM2,VPS26A,CLPTM1,C1or

[P12,ANP32A,SORBS3,HECTD2,TCEAL3,ITGAV,PLS3,CDKN1A,PPA2,AP1S2,GSTCD,KANSL1L,ELK3,ELOVL5,NLK,ERRFI1,HDGF,AAMDC

HIF1A,UQCR11,CRYL1,DMD,WBP2,VAV2,SLC3A2,SLC26A2,RASA3,CITED2,ITPRIP,TCF12,ZNF124,POLR1D,UPP1,SIGLEC14,TUBB,SMYD

NT,SATB1,ZNF681,CFL1,ZKSCAN1,E2F3,PRR5,PRRC2C,ZNF398,PSMB2,CDK13,CHURC1,PNKD,LYSMD3,ZCCHC2,AMMECR1,CTNNBL1,ZN

L3,PLEKHG3,IGFBP4,PTPRS,MRGPRF,LRRC10B,PPIC,TEAD4,ESR1,TGFB1I1,ACTA2,ID3,IGF2,WWTR1,ATP1A2,PSRC1,IGFBP5,CTDSPL,CY

C1,KCNA3,B4GALT6,BAMBI,LPGAT1,TANC1,ZNF652,DACT1,PHC1,ZNRF1,RAPGEF6,TMEM177,DYNLL2,RNF152,CSNK1G1,CLDN11,CHD

;,POC1B,VCPKMT,PSTPIP1,SH3BP1,PTGIS,DUSP4,PELO,NOLC1,EPC1,DDX49,CCDC88B,ZNF721,BZRAP1-AS1,SAMM50,STK39,KIR2DL1,X
CAHM,DLX2,TCEAL4,AGTRAP,C14orf93,HNRNPH2,PDCD6IP,COMMD3,COPS7A,SLC12A7,MYO9A,HDAC5,ATP6V1G1,APC,VPS50,SOCS5,
LKIP,HINFP,ESRRA,PDE4A,ZNF197,CHD7,ZSCAN18,GMDS,KCNE3,UBE2H,DLEU2,BCAR3,LARP6,MAP3K4,PDS5B,FAM76A,ZNF672,BUB1

DN11,PPP1CB,FRAS1,KMT2A,GAB2,PDZD2,KIF13A,SUZ12,TMED8,KDSR,NPNT,EML4,EIF4E3,FAM200B,LRRC3B,AGTPBP1,FAM46A,ITGA

L,STXBP5,HIVEP3,SMURF2,MIR4458HG,PLCL1,KLHL5,SULT1A1,WWP1,SNX19,ROBO1,ZYG11B,CHMP2B,HCG18,LRRK2,EI24,HOOK3,DO

)B4,CD69,UBN2,IPPK,UBXN1,LINC00176,SMARCA2,MTHFD1,LSG1,LRIF1,POLE4,POLR2K,GSKIP,TAF7,MPZL3,NOS3,NR2C2AP,EIF2A,CSI

TARS,APTR,DOCK10,SPOCK1,TXN,KTN1,LYST,PDP1,PHYH,C17orf58,LRR1,MSL2,DHRS4,C2CD2,UBAP2,SENP7,GNAQ,ZFYVE28,THRAP3
,PPM1K,DOCK3,ZHX1-C8orf76,UBXN2B,NR2C2,NCOA2,EPT1,TNRC6A,ATIC,UBE2E3,TRIB2,IKZF2,KIAA0895,HACL1,ZNF292,MPPE1,DENI
X7,OGFRL1,PICALM,LYN,KCNK13,STAC3,SLC8A1,P2RY6,KCNQ1,ATP6V0B,USP32,AIG1,RGS18,EPSTI1,FAM162A,PLEK2,CLEC5A,CNPY3

BDF2,ATP6V1C1,FAM21C,LPP,NR2C1,LPAR5,CHST15,SCARB2,FLCN,CAMSAP2,FURIN,HRH1,ARHGAP18,ZFYVE26,SNX2,C20orf194,CR1,I
:,DEK,LRP12,CYBRD1,MTPN,PHC3,IRF4,C21orf59,CDC42,LRSAM1,ACOT8,CCDC9,NUTM2B-AS1,TRAF6,PLEKHA5,STBD1,INTU,LGR4,ALS
AAED1,KBTBD7,RASSF3,SLAMF9,USP10,CORO1C,SEMA3C,BCAT1,TMBIM6,TGM2,KHNYN,GIMAP1,GDI1,ZNFX1,HTATIP2,ABR,CCL18,(
f43,AP2S1,HLA-B,HEXA,ZMYM6,LGMN,EMP1,FASTKD5,P4HA2,RCAN1,MTSS1,CFAP44,CNIH4,MFSD1,TMBIM1,NDRG1,KLHL6,BTK,MIR

NAC3,ORAOV1,C12orf57,TMEM65,BRWD1,PACERR,UBXN2B,MEF2A,MTR,GTF2H2,TAB2,SPICE1,CHCHD3,GCH1,ZNF292,CTNNB1,GCFC2

26A,TMED7,WWP1,APAF1,AMFR,PSD4,CDKN1C,PIP4K2B,CABLES1,MYO1C,TCF12,ELF2,FHL2,ASPH,TNKS1BP1,RNF130,DFFA,ANKS6,PA
ZNF268,PRPS2,CNOT10,ANXA2R,SFI1,ADNP2,HMGB3,ZNF85,PFAS,ORMDL3,SET,BRD3,NLRX1,ATP5L,NR6A1,DCUN1D2,SACS,EIF2AK4,(
8,GNS,CCNYL1,TUBA1A,RUNX1,RTN2,ZSWIM6,RERE,ADGRG6,WNT5B,ST13,DAB2,PGM5,SMPDL3A,WDFY3,MAN2B1,RBM47,DTX2,SPA

ANKS1A,CADM1,DYNC1I2,ODF3B,SGK3,CTBS,SLC30A9,KIAA1210,FCGR3A,KIF13A,NEDD4L,UBE3A,UACA,GSTT2B,WLS,ITSN1,SMS,VM

61A2,PPCDC,GMNN,PRKDC,ZMAT2,CDCA7,C1orf53,TMEM126A,DNM2,EPT1,EZH2,SUCLG1,SLC35B4,SEC14L1,ZBTB8OS,SMPD3,KMT2D,I
01,RNF180,MDN1,ZKSCAN8,TES,MED13L,GALNT3,SNRPN,MEX3C,RAB18,THOC2,FIP1L1,ELMOD2,INSIG2,MYO10,BIVM,HMGCR,ZFP69B
,SECISBP2L,CYP27A1,TMCC1,SMAD5,TMEM236,TFE3,FAM45A,RNF185,KCNE1,CEP68,TUBA1A,LRP1,HIVEP3,KCNN4,TMEM117,HDAC5,
L,MLPH,SH3TC1,LYPLAL1,GGA2,CD9,DDI2,PPARD,ALDOA,FBXO8,AKR1B1,ZFAND6,MTIF2,SNX8,SOGA1,ACOT9,NBPF12,ABHD11,CDCI
TCF7L2,MNDA,MYOF,C15orf48,RAPH1,SNX30,SMIM14,RASGEF1B,RASSF2,PTGS2,MARCH1,FCGR1A,MX2,SLC31A2,S100A11,SOCS3,AGA
3P,RTN4,PDZRN3,LINC00324,UQCRH,SNAP47,PRKAB1,LMAN2,LGALS3BP,RLF,PDRG1,RNASET2,ANKRD39,ABCB7,TRAPPC4,RORC,CSN
LF3-AS1,PLVAP,CDH11,RHOBTB3,CLEC14A,SNX32,ACTG2,INAFM1,ADCY4,COL6A2,AR,MIDN,PLA2G2A,JAM2,VWF,PTGDS,KLHL13,TXI

TF,GPNMB,TUBGCP2,NADK,ADAM8,PGBD5,TGM2,DLEU7,CD276,CORO1B,PRKCD,CADM1,TMEM140,UCP2,NRBF2,RHOG,FHAD1,TGFB

M1,REEP1,MIR4458HG,PHLDB1,TRIM27,RARRES2,NOS1AP,PLPPR4,SCN2A,LSAMP,COX7A1,COL3A1,DTX4,CYBRD1,WNT2,AADAT,FKBI

EP85L,RANBP9,FAM114A2,SYNJ1,ING2,ATF7IP,TCP1,TSPYL2,KHDRBS1,WAC-AS1,RAF1,BRWD3,HNRNPU,SNRNP70,LCOR,POLR2A,TMF

.4,PLK2,UBXN7,MAPK9,AGTPBP1,CLINT1,HEY1,EIF4E,ANO6,ARHGAP26,ZFAND5,KIR3DL1,CAMSAP2,SSBP2,ZNF292,RBM33,UBE2D1,RI
L1,ANKRD12,RNF141,EBAG9,SETD5,TOMM40,RNF43,CCDC125,KPNA4,GXYLT1,ADGRB3,PGGT1B,RAD54B,HYLS1,RNF146,PIGK,L3MBT

)C141,HIPK3,ETF1,UBE2H,USO1,MAGI3,SLC29A3,ERCC6L2,HMGCS1,C15orf61,CCDC6,MAN1A1,TGFBR2,TIGD6,PSMD10,PRDM2,PPM1D,Z
YP20A1,FAM111A,APOL2,TNRC6A,SIVA1,RIN2,RUNX2,PRPF31,ANKRD12,SP110,NELL2,GIT2,SAE1,CDC42BPB,THRA,SRSF3,STX16,LINC

2C,POLR3E,RAB7A,CAMKK2,BACH1,B3GNT2,FAM210A,AFF4,SH3BP4,USP38,RALGAPA2,USP46-AS1,SERTAD2,MED13,MIR4458HG,TRA

MHA1,ACTR6,PPP1R12C,FLAD1,ZCCHC6,MUT,LPCAT4,FAM193B,METTL9,KIAA0196,JOSD1,RC3H2,HYPK,TRIM4,ZNF543,CARS2,NSD1,M

IED8,TSG101,STX11,PKIB,TMUB2,GPD2,PLEKHF2,AMN1,SMG1,SNX14,GATAD1,SERPINB1,NELFCD,DOPEY2,LONP1,MED25,DYNC1I2,SS

,SREK1,PRPSAP1,TRA2A,CAST,SLC38A1,MIR181A1HG,SMC4,UTP14A,COA1,MTHFD1,SLC39A7,GPATCH8,UBE2E3,BIRC5,ZFPM1,FAM20

A11,COQ10B,SNU13,LINC00493,PCBP1,SPPL2B,RBM8A,TMEM120A,SCML1,MORC2-AS1,LARP4B,TMEM248,SNX19,GDI2,DDX19B,FAM49

,CLN8,ABI1,PCF11,SGK1,NAA50,AKIRIN2,WSB1,AZIN1,PHC2,SGK3,C9orf72,FADS1,MLLT4,TRAM1,RUFY3,FARP2,PDCD10,SMAP2,DLGA

A2B1,ABCA3,EGLN2,SEL1L3,ZNF248,ZADH2,ENPEP,PARN,MOB1A,GPAM,FAM114A1,BPTF,TOPBP1,PDIA6,ZNF684,RNU11,ELP6,LMNB2,

K,FKBP14,KDM1A,SREK1,ESYT2,RORC,SRSF4,ADAT1,ZNF92,POPDC2,AGL,PREPL,EML2,PSMC5,TASP1,ZNF195,PDZD11,NUP50,TMSB10,

T1,ZMIZ1,ATP11B,F3,SATB1,UCK2,ARAP2,PIK3CA,DAAM1,PAIP1,PDE4D,DACT1,SNRK,MMP17,PACS1,WDR48,ZDHHC21,SEMA6A,G3BP2
51,DSCC1,DCK,SUSD1,GART,PPP3CC,CPSF7,DNTTIP1,GEMIN8,SF3B6,RNF31,VPS72,XRCC4,ZNF580,SF3B5,KEAP1,OXCT1,JAG1,PIGBOS1,

24,ZNF16,PKIG,ZMYND11,ENOPH1,MVB12A,TOB2,MSX1,PDXDC1,ZNF347,NAA60,NIFK,MGMT,ARPC1A,TMEM69,LCAT,CREB1,LUC7L,P

orf49,NAPB,CCDC186,UTRN,CCSER2,ASPH,ZNF16,RNASEH2B-AS1,MYEF2,KIAA0922,LRRC16A,CARNMT1,MMAA,CDC42BPB,RB1CC1,C

F3B3,CHD6,AHI1,EBLN3,ATF6B,ANKRD44,TP53RK,BRF1,ABCD3,ALKBH3,AP2A1,BCDIN3D,CA5B,ESCO1,MAFK,LRIG3,SYNE2,AP1S3,CC

37,N4BP2,COX10,CCDC28B,BRIP1,CDT1,DNMT3B,ANLN,GTF3C5,STAMBP,KIAA1586,EXTL2,C

PNMB,ALS2CL,ZNF106,SPECC1,DST,TRMT1,FAM213A,GIMAP5,ZFHX3,PTGR1,SH3PXD2A,Z
3A2,KPNA4,WDR47,GRAMD3,RLIM,PRDM2,PSPC1,TPBG,ABHD5,STXBP5-AS1,BPTF,LUZP1
'1A,RUNX2,SETD9,ZNF585A,GLG1,CHURC1,NECAP2,PPM1K,ANXA2R,PYCR2,ZNF626,ZNF528

5-1,MIB2,PSD4,AKAP5,CORO1A,CHMP6,KIR2DL1,TBC1D10C,RNF125,SPAG5,AKNA,HENMT

,TMEM192,HTATSF1,FAM120B,CFD,SLC2A13,USP46,LTBP3,CNOT2,EML1,NR2C2,STK26,ZNF4

L15,SMIM15,U2AF1L5,LINC01588,WAC,CHMP2B,EID2,MINA,RTN3,SESTD1,ATF7,FBXW11,NEDD4

,ATP6AP1,LAMP2,GAA,ADSSL1,TSPAN3,VPS53,TAB3,GBA,SLC38A7,GNPDA1,XIAP,TWSG1

ɜ1,CHN1,NREP,ADRA2A,MTUS1,LAMC1,TINAGL1,ADGRF5,SALL2,ANGPT2,NOVA1,ARHG

)PEY2,ZNF442,UNC5B,TFRC,ATG10,PDGFC,RHOBTB3,TUG1,PRR14,ARHGEF11,AFF3,LCOR,HE

3,MAPKAPK2,UBAP2L,L3MBTL2,PHACTR4,COMMD3,DDX46,KRAS,UPF3B,EIF3A,GAPVD1,SR

AQR8,NDN,CYB5R2,HMGB3,DEXI,ENOSF1,CRTAP,SMAD5,CD24,FAM168A,TCAF1,RCBTB2,

ATS2L,CD40,PMEPA1,RYR1,PDGFB,RABGAP1,PRNP,GPR161,INSR,ARSB,KCNJ2,PLAGL1,RCBTB

NIP,ZNF385D,PTCH1,AQP1,LANCL2,SLC37A3,GDF15,FGF13,PLAG1,ASGR1,PTRF,MAATS1,RTKN,TLE2,G

P10,RBM17,DIXDC1,P2RY14,SPCS1,MARVELD1,SLC6A12,TMEM100,ARHGEF11,WFS1,MMP2,PAR

IECP2,PYM1,HLA-G,TNKS,FHL2,EXOC1,ZNF766,CC2D1B,WDR46,ELMOD3,TPST2,RNF125,R