

Table S1: Primers used in this research (5'-3')

Name	Sequence
MAL forward	5'- GCTGGGTGATGTTCGTGTCTG-3'
MAL reverse	5'- TGAGGCGCTGAGGTAAAAGA-3'
CD274 forward	5'- TTGCTGAACGCCCCATACAA-3'
CD274 reverse	5'-TGTCCCGTTCCAACACTGAG-3'
CTLA4 forward	5'-CAAGTGCCTTCTGTGTGTGC-3'
CTLA4 reverse	5'-GAGCGGTGTTTCAGGTCTTCA-3'
LAG3 forward	5'-AAGAACGCTTTGTGTGGAGC-3'
LAG3 reverse	5'-GTCTTGGTCGCCACTGTCTT-3'
PDCD1LG2 forward	5'-AGAGGGAAGTGAACAGTGCT-3'
PDCD1LG2 reverse	5'-TAGGCTCCAGAGGTGAGTCC-3'
GAPDH forward	5'-AAGGTGAAGGTCGGAGTCAAC-3'
GAPDH reverse	5'-GGGGTCATTGATGGCAACAATA-3'

**Table S2 Results of Univariate Cox hazard analysis of DEGs**

gene	KM	B	SE	HR	HR.95L	HR.95H	p-value
KIAA1324	8.98E-06	-0.01107	0.002698	0.988995	0.983779	0.994239	4.11E-05
EXPH5	7.94E-05	-0.35541	0.105925	0.700888	0.569489	0.862605	0.000793
LINC00313	0.000925	19.82252	5.835188	4.06E+08	4384.194	3.76E+13	0.000681
HPDL	0.000171	0.091282	0.024828	1.095578	1.043541	1.15021	0.000236
LINC01224	3.81E-05	0.131215	0.035993	1.140213	1.062548	1.223556	0.000267
AC026336.3	2.60E-05	-0.05348	0.016003	0.947923	0.918652	0.978126	0.000832
RHBDD3	9.59E-06	-0.07096	0.017466	0.931499	0.900151	0.963938	4.85E-05
PLPP2	0.000147	-0.03022	0.006688	0.970228	0.957593	0.983029	6.20E-06
SIX1	0.000177	0.053282	0.014116	1.054727	1.025946	1.084316	0.00016
RNF2P1	0.000183	1.476066	0.295111	4.375696	2.453851	7.802723	5.68E-07
ASRGL1	0.000519	-0.01203	0.003163	0.988045	0.981939	0.994189	0.000143
AC012354.1	0.000109	0.384212	0.107148	1.468456	1.190301	1.811613	0.000336
AC005381.1	0.000455	0.791278	0.154291	2.206214	1.630477	2.98525	2.92E-07
C11orf72	0.000303	6.595059	1.395421	731.4718	47.46935	11271.51	2.29E-06
C5orf34	0.000534	0.218154	0.049529	1.243779	1.128715	1.370572	1.06E-05
LRRC37A9P	0.00085	4.746554	1.431868	115.1866	6.959754	1906.383	0.000917
B4GALNT3	6.81E-08	-0.0345	0.00949	0.966093	0.94829	0.984231	0.000278
CRELD2	9.20E-06	-0.07908	0.016674	0.923962	0.894255	0.954655	2.10E-06
CIRBP	0.000315	-0.0247	0.007394	0.9756	0.961564	0.989841	0.000835
TRPM4	1.67E-05	-0.04541	0.010766	0.955601	0.935648	0.975979	2.46E-05
P2RX4	5.08E-07	-0.18803	0.03835	0.828591	0.768593	0.893271	9.44E-07
ACACB	7.50E-05	0.455655	0.127216	1.577205	1.229141	2.023834	0.000341
STX18	2.09E-06	-0.017	0.004188	0.983141	0.975104	0.991245	4.92E-05
MACC1	0.000586	0.097776	0.025277	1.102716	1.049416	1.158722	0.00011
AC110491.1	0.000603	3.122436	0.905538	22.70161	3.848232	133.922	0.000564
LSM7	1.66E-05	-0.02089	0.005211	0.979327	0.969375	0.989381	6.11E-05
MSX1	6.27E-06	-0.00241	0.000598	0.997594	0.996426	0.998763	5.56E-05
DGKG	0.000234	0.915455	0.256074	2.497913	1.51219	4.12618	0.00035
TTK	0.000943	0.116523	0.029696	1.123584	1.060055	1.190919	8.71E-05
ACOXL	0.00055	1.004649	0.264698	2.730947	1.625555	4.588017	0.000147
THRB	0.000228	0.210216	0.052755	1.233944	1.112732	1.36836	6.75E-05
SLC8A1	0.000111	0.288394	0.067964	1.334282	1.167876	1.5244	2.20E-05
AC015849.5	0.000538	2.275498	0.533262	9.732762	3.422334	27.67897	1.98E-05
PHACTR3	0.000323	0.790253	0.172652	2.203954	1.571233	3.091466	4.71E-06
MAL	0.000131	0.002553	0.000638	1.002557	1.001304	1.003811	6.26E-05