

Table S1. List of 72 genes used for NMF analysis

Gene ID	HR	HR.95L	HR.95H	P-value
<i>SLC2A1</i>	1.337703	1.17351	1.52487	1.33×10 ⁻⁰⁵
<i>TYMS</i>	1.302313	1.133885	1.49576	0.000185
<i>GAPDH</i>	1.690166	1.355751	2.107069	3.08×10 ⁻⁰⁶
<i>TP11</i>	1.624025	1.252982	2.104945	0.000248
<i>PKM</i>	1.699031	1.294987	2.229139	0.00013
<i>CFTR</i>	0.770124	0.660065	0.898534	0.000901
<i>PFKP</i>	1.296363	1.129827	1.487446	0.000216
<i>CDKN3</i>	1.357364	1.17077	1.573695	5.13×10 ⁻⁰⁵
<i>HMGA1</i>	1.327329	1.159703	1.519183	3.94×10 ⁻⁰⁵
<i>GPI</i>	1.505531	1.212517	1.869355	0.000211
<i>RAD51</i>	1.361998	1.145176	1.61987	0.000479
<i>SELENBP1</i>	0.833451	0.749218	0.927153	0.000804
<i>TK1</i>	1.347741	1.164589	1.559697	6.21×10 ⁻⁰⁵
<i>PAICS</i>	1.428041	1.168826	1.744742	0.00049
<i>TFAP2A</i>	1.256636	1.105831	1.428006	0.000461
<i>HMMR</i>	1.407814	1.210083	1.637854	9.45×10 ⁻⁰⁶
<i>CDK1</i>	1.283304	1.123426	1.465935	0.000238
<i>FANCI</i>	1.301766	1.120274	1.512662	0.000576
<i>FEN1</i>	1.42669	1.165886	1.745834	0.00056
<i>ARNTL2</i>	1.374399	1.20538	1.567119	2.03×10 ⁻⁰⁶
<i>RRM2</i>	1.323105	1.165783	1.501657	1.46×10 ⁻⁰⁵
<i>FOXM1</i>	1.243634	1.116179	1.385644	7.74×10 ⁻⁰⁵
<i>BIRC5</i>	1.264114	1.105892	1.444973	0.000592
<i>AURKA</i>	1.276108	1.107286	1.470669	0.000758
<i>CCNA2</i>	1.34128	1.167933	1.540355	3.20×10 ⁻⁰⁵
<i>IGF2BP3</i>	1.185289	1.071358	1.311337	0.000978
<i>CDX2</i>	1.459333	1.206824	1.764675	9.65×10 ⁻⁰⁵
<i>PLK1</i>	1.406757	1.217405	1.62556	3.71×10 ⁻⁰⁶
<i>MKI67</i>	1.36455	1.160958	1.603846	0.000163
<i>KPNA2</i>	1.424799	1.18977	1.706256	0.000119
<i>GGTLC1</i>	0.825819	0.741522	0.9197	0.000495
<i>HMGA2</i>	1.20183	1.08671	1.329145	0.000345
<i>CCT6A</i>	1.485202	1.236351	1.784142	2.36×10 ⁻⁰⁵
<i>PKMYT1</i>	1.395169	1.146681	1.697506	0.000876
<i>CCNB1</i>	1.33684	1.168922	1.528879	2.24×10 ⁻⁰⁵
<i>PTTG1</i>	1.343444	1.143892	1.577807	0.00032
<i>UBE2S</i>	1.270829	1.114907	1.448556	0.000332
<i>CDC25C</i>	1.550146	1.256819	1.911933	4.21×10 ⁻⁰⁵
<i>EIF3B</i>	1.578799	1.20303	2.07194	0.000992
<i>CENPF</i>	1.267328	1.103083	1.456028	0.000822
<i>EXO1</i>	1.407629	1.206433	1.642377	1.39×10 ⁻⁰⁵

<i>SPC25</i>	1.364324	1.162458	1.601244	0.000143
<i>CDC20</i>	1.189893	1.075457	1.316506	0.000752
<i>ASPM</i>	1.227216	1.103134	1.365255	0.000167
<i>LYPD3</i>	1.236474	1.131892	1.35072	2.51×10 ⁻⁰⁶
<i>FKBP4</i>	1.545077	1.278105	1.867814	6.95×10 ⁻⁰⁶
<i>PKP2</i>	1.389498	1.223867	1.577544	3.79×10 ⁻⁰⁷
<i>BCAN</i>	1.516268	1.200843	1.914547	0.000469
<i>NEIL3</i>	1.284988	1.118872	1.475767	0.000385
<i>CKS1B</i>	1.338641	1.13781	1.574919	0.000437
<i>ABCA3</i>	0.84763	0.772775	0.929737	0.000458
<i>LDHA</i>	1.990925	1.53424	2.583547	2.22×10 ⁻⁰⁷
<i>F2</i>	1.209459	1.082727	1.351025	0.000759
<i>ALDOA</i>	1.535959	1.209518	1.950505	0.000431
<i>ANGPTL4</i>	1.197642	1.091004	1.314703	0.00015
<i>ABCC2</i>	1.159944	1.084812	1.240279	1.41×10 ⁻⁰⁵
<i>CYP4B1</i>	0.867625	0.81192	0.927151	2.74×10 ⁻⁰⁵
<i>SFTPD</i>	0.908937	0.858744	0.962063	0.000986
<i>NPAS2</i>	1.490016	1.225973	1.810929	6.15×10 ⁻⁰⁵
<i>CACNA2D2</i>	0.847798	0.775074	0.927346	0.000308
<i>KRT8</i>	1.513487	1.25215	1.829368	1.83×10 ⁻⁰⁵
<i>KRT18</i>	1.511776	1.251879	1.82563	1.75×10 ⁻⁰⁵
<i>SMOX</i>	1.353578	1.16089	1.578248	0.000112
<i>CKAP4</i>	1.497898	1.187785	1.888978	0.00064
<i>ARRB1</i>	0.706487	0.581606	0.858183	0.000463
<i>PRSS3</i>	1.20465	1.085005	1.337489	0.000486
<i>CRTAC1</i>	0.80888	0.715563	0.914366	0.000695
<i>GRIA1</i>	0.520238	0.358448	0.755053	0.000585
<i>B4GALT4</i>	1.426044	1.167697	1.741549	0.000501
<i>KRT6A</i>	1.164779	1.09872	1.23481	3.05×10 ⁻⁰⁷
<i>LIFR</i>	0.747381	0.637647	0.876001	0.000326
<i>DPYSL2</i>	0.731915	0.623681	0.858932	0.000132
