Table SI. Significant changes in serpin peptidase inhibitor clade A member 1 expression in transcription level between different types of digestive system cancer and normal tissues

First author, year	Types of cancer vs. normal	Fold-change	P-value	t-test	(Ref.)
Skrzypczak *et al*, 2010	Colorectal adenocarcinoma	3.273	$5.07x10^{-13}$	9.332	(39)
Sabates-Bellver *et al*, 2007	Colon Adenoma	2.592	$4.74x10^{-11}$	8.425	(40)
Kimchi *et al*, 2005	Esophageal adenocarcinoma	23.16	$4.63x10^{-05}$	5.714	(41)
Kim *et al*, 2010	Esophageal adenocarcinoma	6.244	$7.92x10^{-16}$	9.473	(42)
Wang *et al*, 2012	Gastric cancer	3.319	$2.00x10^{-03}$	3.237	(43)
Badea *et al*, 2008	Pancreatic ductal adenocarcinoma	5.122	$2.96x10^{-13}$	8.734	(44)
Logsdon *et al*, 2003	Pancreatic adenocarcinoma	6.752	$4.74x10^{-04}$	5.799	(45)

Table SII. Differentially expressed genes in The Cancer Genome Atlas-stomach adenocarcinoma dataset.

Gene Symbol	Gene ID	Median (Tumor)	Median (Normal)	Log_2(fold-change)	Adjusted P-value
ABCA8	ENSG00000141338.13	1.000	9.730	-2.424	$3.82x10^{-42}$
ABCC8	ENSG00000006071.11	0.230	7.560	-2.799	$5.00x10^{-60}$
ABHD11	ENSG00000106077.18	49.399	10.300	2.157	$1.23x10^{-82}$
ABHD17C	ENSG00000136379.11	47.831	8.840	2.311	$1.52x10^{-63}$
AC005943.2	ENSG00000267059.2	10.595	0.090	3.411	$1.36x10^{-44}$
AC006449.2	ENSG00000279119.1	0.000	18.520	-4.287	$3.26x10^{-92}$
AC007969.5	ENSG00000233762.3	21.560	4.090	2.148	$2.63x10^{-54}$
AC010761.10	ENSG00000265840.1	3.090	0.000	2.032	$1.29x10^{-25}$
AC132217.4	ENSG00000240801.1	0.425	5.450	-2.178	$3.91x10^{-08}$
ACADL	ENSG00000115361.7	0.080	3.980	-2.205	$4.87x10^{-94}$
ACE	ENSG00000159640.14	19.760	3.690	2.146	$3.96x10^{-41}$
ACOT7	ENSG00000097021.19	46.134	10.200	2.073	$9.26x10^{-58}$
ACSL5	ENSG00000197142.10	53.059	10.930	2.180	$4.33x10^{-33}$
ADAM10	ENSG00000137845.14	54.545	10.170	2.314	$2.54x10^{-69}$
ADAM33	ENSG00000149451.17	1.210	16.030	-2.946	$9.01x10^{-52}$
ADAMDEC1	ENSG00000134028.14	5.310	0.520	2.054	$6.67x10^{-39}$
ADGRD1	ENSG00000111452.12	2.090	12.300	-2.106	$2.33x10^{-25}$
ADH1B	ENSG00000196616.12	2.450	49.090	-3.860	$3.33x10^{-50}$
ADHFE1	ENSG00000147576.15	0.890	27.249	-3.902	$1.25x10^{-117}$
AGMAT	ENSG00000116771.5	9.180	0.190	3.097	$7.51x10^{-92}$
AGR2	ENSG00000106541.11	976.854	231.167	2.074	$7.54x10^{-24}$

AGR3	ENSG00000173467.8	75.285	6.700	3.308	$7.26x10^{-29}$
AGT	ENSG00000135744.7	14.485	2.450	2.166	$3.54x10^{-33}$
AHR	ENSG00000106546.12	42.654	8.710	2.169	$3.61x10^{-75}$
AIM1	ENSG00000112297.14	10.080	1.610	2.086	$1.04x10^{-31}$
AIM1L	ENSG00000176092.13	5.325	0.350	2.228	$3.54x10^{-38}$
AKR1B10	ENSG00000198074.9	29.075	186.275	-2.639	$4.68x10^{-08}$
AKR1C1	ENSG00000187134.12	12.820	89.102	-2.705	$7.59x10^{-38}$
AKR1C2	ENSG00000151632.16	6.240	38.239	-2.438	$1.91x10^{-28}$
AL162151.3	ENSG00000234648.1	0.000	152.355	-7.261	$4.57x10^{-75}$
AL442127.1	ENSG00000278371.2	0.000	18.000	-4.248	$3.19x10^{-31}$
ALDH3A1	ENSG00000108602.17	12.570	67.241	-2.330	$6.63x10^{-07}$
AMN	ENSG00000166126.10	27.655	5.710	2.094	$8.37x10^{-27}$
AMY2B	ENSG00000240038.6	2.000	11.150	-2.018	$1.71x10^{-39}$
ANKS4B	ENSG00000175311.6	5.095	0.080	2.497	$3.80x10^{-57}$
ANLN	ENSG00000011426.10	21.940	1.050	3.484	$2.25x10^{-110}$
ANPEP	ENSG00000166825.13	21.739	3.900	2.214	$2.88x10^{-17}$
ANTXR1	ENSG00000169604.19	28.445	6.240	2.024	$2.43x10^{-28}$
ANXA10	ENSG00000109511.10	14.120	116.791	-2.962	$6.25x10^{-05}$
ANXA13	ENSG00000104537.16	7.950	0.260	2.828	$2.02x10^{-32}$
ANXA2	ENSG00000182718.16	839.274	206.814	2.016	$4.50x10^{-45}$
ANXA2P2	ENSG00000231991.4	12.450	2.300	2.027	$1.18x10^{-54}$
ANXA4	ENSG00000196975.14	179.562	43.730	2.013	$1.37x10^{-53}$
AOC1	ENSG00000002726.19	53.934	0.480	5.214	$8.83x10^{-75}$
AP003391.1	ENSG00000281272.1	19.070	0.930	3.378	$4.78x10^{-14}$

AP1S3	ENSG00000152056.16	11.375	1.350	2.397	$1.27x10^{-77}$
APLNR	ENSG00000134817.10	11.770	1.110	2.597	$1.13x10^{-60}$
APLP1	ENSG00000105290.11	3.770	19.770	-2.122	$1.88x10^{-25}$
APOBEC2	ENSG00000124701.5	0.345	5.350	-2.239	$6.40x10^{-51}$
APOBEC3B	ENSG00000179750.15	8.505	0.980	2.263	$4.40x10^{-44}$
APOC1	ENSG00000130208.9	78.083	7.790	3.169	$2.27x10^{-80}$
APOC2	ENSG00000234906.8	6.975	0.130	2.819	$7.45x10^{-61}$
APOC4-APOC2	ENSG00000224916.8	9.964	0.270	3.110	$8.10x10^{-59}$
APOE	ENSG00000130203.9	191.605	22.841	3.014	$3.06x10^{-63}$
APOL6	ENSG00000221963.5	16.670	2.950	2.161	$1.27x10^{-75}$
ARHGAP11A	ENSG00000198826.10	10.200	0.720	2.703	$3.95x10^{-96}$
ARHGDIG	ENSG00000242173.8	0.740	12.510	-2.957	$4.87x10^{-50}$
ARL6IP1	ENSG00000170540.14	145.698	34.139	2.062	$6.83x10^{-84}$
ARSE	ENSG00000157399.14	12.275	1.460	2.432	$3.23x10^{-48}$
ASCL2	ENSG00000183734.4	8.575	0.330	2.848	$3.22x10^{-43}$
ASF1B	ENSG00000105011.8	19.499	0.930	3.409	$7.82x10^{-101}$
ASPM	ENSG00000066279.16	6.590	0.240	2.614	$3.65x10^{-100}$
ASPN	ENSG00000106819.11	18.610	2.560	2.462	$6.01x10^{-27}$
ATOH8	ENSG00000168874.12	1.220	8.760	-2.136	$9.05x10^{-55}$
ATP10B	ENSG00000118322.12	10.505	0.600	2.846	$8.38x10^{-32}$
ATP11A	ENSG00000068650.18	22.965	4.570	2.105	$5.15x10^{-72}$
ATP2C2	ENSG00000064270.12	9.960	1.060	2.412	$8.91x10^{-35}$
ATP4A	ENSG00000105675.8	0.030	385.502	-8.552	$5.94x10^{-73}$
ATP4B	ENSG00000186009.4	0.040	393.685	-8.568	$2.76x10^{-66}$

AURKA	ENSG00000087586.17	22.185	1.820	3.039	$3.63x10^{-90}$
AURKB	ENSG00000178999.12	22.635	1.480	3.252	$3.36x10^{-81}$
AZGP1	ENSG00000160862.12	21.491	120.709	-2.436	$6.68x10^{-09}$
B3GAT1	ENSG00000109956.12	0.220	11.740	-3.384	$1.24x10^{-58}$
B3GNT5	ENSG00000176597.11	15.375	2.970	2.044	$9.34x10^{-44}$
BAIAP2L2	ENSG00000128298.16	27.060	2.610	2.958	$5.54x10^{-67}$
BCL2A1	ENSG00000140379.7	7.385	0.830	2.196	$8.64x10^{-47}$
BEX2	ENSG00000133134.11	1.010	9.030	-2.319	$2.19x10^{-24}$
BGN	ENSG00000182492.15	202.579	19.870	3.286	$9.70x10^{-74}$
BHLHA15	ENSG00000180535.3	2.140	12.840	-2.140	$1.43x10^{-12}$
BID	ENSG00000015475.18	38.795	6.780	2.355	$2.40x10^{-94}$
BIRC5	ENSG00000089685.14	16.330	0.860	3.220	$3.19x10^{-75}$
BRI3BP	ENSG00000184992.10	15.280	2.440	2.243	$3.27x10^{-87}$
BST2	ENSG00000130303.12	133.111	31.930	2.026	$2.58x10^{-23}$
BUB1	ENSG00000169679.14	13.945	0.440	3.376	$1.60x10^{-110}$
BUB1B	ENSG00000156970.12	9.455	0.610	2.699	$1.96x10^{-92}$
BZRAP1	ENSG00000005379.15	2.340	18.610	-2.554	$9.48x10^{-55}$
C15orf48	ENSG00000166920.10	69.237	12.110	2.422	$2.63x10^{-26}$
C16orf89	ENSG00000153446.15	1.685	44.860	-4.094	$7.61x10^{-78}$
C1orf106	ENSG00000163362.10	54.294	9.000	2.467	$5.81x10^{-54}$
C2	ENSG00000166278.14	33.794	4.090	2.773	$5.38x10^{-68}$
C2orf40	ENSG00000119147.9	1.590	23.511	-3.242	$3.85x10^{-33}$
C5orf38	ENSG00000186493.11	1.280	13.810	-2.699	$2.60x10^{-14}$
C7	ENSG00000112936.18	3.525	30.860	-2.816	$1.90x10^{-20}$

CA4	ENSG00000167434.9	0.320	4.370	-2.024	3.20×10^{-19}
CA9	ENSG00000107159.12	10.760	215.926	-4.205	5.13×10^{-15}
CALML4	ENSG00000129007.14	50.611	6.800	2.726	7.99×10^{-57}
CAMK2N1	ENSG00000162545.5	62.089	7.560	2.882	6.65×10^{-39}
CAPN13	ENSG00000162949.16	2.460	18.371	-2.485	1.33×10^{-17}
CAPN9	ENSG00000135773.12	1.015	9.560	-2.390	8.81×10^{-16}
CASC5	ENSG00000137812.19	6.345	0.290	2.509	3.18×10^{-88}
CASC9	ENSG00000249395.2	3.630	0.070	2.113	1.95×10^{-41}
CCDC34	ENSG00000109881.16	14.805	2.450	2.196	9.72×10^{-93}
CCKAR	ENSG00000163394.5	0.030	4.140	-2.319	1.00×10^{-43}
CCKBR	ENSG00000110148.9	0.120	17.170	-4.020	2.58×10^{-78}
CCL14	ENSG00000276409.4	2.260	26.080	-3.054	1.86×10^{-40}
CCL15	ENSG00000275718.1	7.695	0.050	3.050	9.60×10^{-54}
CCL15-CCL14	ENSG00000275688.4	10.205	0.460	2.940	4.27×10^{-46}
CCL18	ENSG00000275385.1	22.895	0.270	4.234	1.30×10^{-59}
CCL20	ENSG00000115009.11	36.121	0.480	4.649	2.80×10^{-47}
CCL4L2	ENSG00000276070.4	9.410	0.730	2.589	5.44×10^{-52}
CCNA2	ENSG00000145386.9	18.455	1.400	3.019	7.17×10^{-95}
CCNB1	ENSG00000134057.14	41.844	3.240	3.337	1.08×10^{-87}
CCNB2	ENSG00000157456.7	27.139	0.960	3.844	3.61×10^{-107}
CCND1	ENSG00000110092.3	77.366	13.280	2.456	2.39×10^{-59}
CCNF	ENSG00000162063.12	7.385	0.700	2.302	1.46×10^{-92}
CD44	ENSG00000026508.16	177.336	34.501	2.329	9.93×10^{-37}
CD52	ENSG00000169442.8	50.927	10.970	2.117	1.81×10^{-38}

CD55	ENSG00000196352.13	128.483	19.840	2.635	3.04×10^{-44}
CD68	ENSG00000129226.13	118.796	23.650	2.281	4.77×10^{-41}
CD74	ENSG00000019582.14	2049.916	353.189	2.534	3.40×10^{-45}
CD79A	ENSG00000105369.9	13.970	2.590	2.060	1.95×10^{-12}
CDC20	ENSG00000117399.13	39.454	1.610	3.954	7.39×10^{-91}
CDC25C	ENSG00000158402.18	4.115	0.220	2.068	1.77×10^{-82}
CDC42EP5	ENSG00000167617.2	66.525	12.610	2.311	5.12×10^{-27}
CDC45	ENSG00000093009.9	9.200	0.620	2.654	1.02×10^{-83}
CDC6	ENSG00000094804.9	10.390	0.540	2.887	1.02×10^{-74}
CDCA2	ENSG00000184661.13	4.710	0.180	2.275	7.28×10^{-87}
CDCA3	ENSG00000111665.11	23.410	2.670	2.734	3.13×10^{-77}
CDCA5	ENSG00000146670.9	13.550	0.830	2.991	1.39×10^{-88}
CDCA7	ENSG00000144354.13	27.241	1.330	3.599	8.37×10^{-95}
CDCA8	ENSG00000134690.10	15.045	1.180	2.880	3.71×10^{-89}
CDCP1	ENSG00000163814.7	21.685	4.370	2.079	1.43×10^{-45}
CDH11	ENSG00000140937.13	25.350	4.420	2.281	1.96×10^{-42}
CDH17	ENSG00000079112.9	32.316	0.110	4.908	1.03×10^{-46}
CDH3	ENSG00000062038.13	15.365	0.860	3.137	6.07×10^{-67}
CDHR5	ENSG00000099834.18	31.554	1.790	3.544	1.21×10^{-40}
CDK1	ENSG00000170312.15	30.709	1.670	3.570	1.67×10^{-101}
CDKN2A	ENSG00000147889.16	10.775	1.410	2.289	3.05×10^{-32}
CDKN3	ENSG00000100526.19	25.480	1.840	3.221	2.38×10^{-106}
CDT1	ENSG00000167513.8	18.644	0.740	3.497	5.71×10^{-96}
CDX1	ENSG00000113722.16	7.825	0.040	3.085	1.13×10^{-24}

CDX2	ENSG00000165556.9	12.000	0.010	3.686	$2.47x10^{-48}$
CEACAM1	ENSG00000079385.21	34.005	3.610	2.925	$8.67x10^{-48}$
CEACAM5	ENSG00000105388.14	198.293	0.720	6.856	$1.73x10^{-40}$
CEACAM6	ENSG00000086548.8	137.300	0.320	6.711	$3.38x10^{-60}$
CEACAM7	ENSG00000007306.14	3.530	0.070	2.082	$4.60x10^{-19}$
CELA3A	ENSG00000142789.19	0.100	7.650	-2.975	$5.14x10^{-48}$
CELA3B	ENSG00000219073.7	0.090	3.490	-2.042	$2.31x10^{-40}$
CEMIP	ENSG00000103888.15	6.230	0.430	2.338	$3.31x10^{-50}$
CENPA	ENSG00000115163.14	8.695	0.350	2.844	$7.53x10^{-94}$
CENPF	ENSG00000117724.12	23.275	1.030	3.580	$1.81x10^{-95}$
CENPK	ENSG00000123219.12	7.650	0.850	2.225	$4.68x10^{-90}$
CENPM	ENSG00000100162.14	15.120	1.370	2.766	$9.91x10^{-73}$
CENPN	ENSG00000166451.13	18.245	2.870	2.314	$5.78x10^{-92}$
CENPU	ENSG00000151725.11	12.555	1.420	2.486	$3.35x10^{-83}$
CEP55	ENSG00000138180.15	14.885	0.530	3.376	$3.46x10^{-116}$
CFD	ENSG00000197766.7	18.905	100.858	-2.355	$2.67x10^{-41}$
CFTR	ENSG00000001626.14	6.885	0.420	2.473	$7.35x10^{-35}$
CH507-513H4.3	ENSG00000281181.1	5577.681	382.283	3.863	$4.84x10^{-41}$
CH507-513H4.4	ENSG00000280614.1	5577.681	382.283	3.863	$4.84x10^{-41}$
CH507-513H4.5	ENSG00000281383.1	9.810	0.390	2.959	$1.65x10^{-46}$
CH507-513H4.6	ENSG00000280800.1	5577.681	382.283	3.863	$4.86x10^{-41}$
CHEK1	ENSG00000149554.12	12.020	1.480	2.392	$1.46x10^{-107}$
CHGA	ENSG00000100604.12	0.825	99.580	-5.784	$2.22x10^{-42}$
CHI3L1	ENSG00000133048.12	18.595	1.870	2.771	$1.30x10^{-33}$

CHIA	ENSG00000134216.18	0.000	33.330	-5.101	$2.00x10^{-58}$
CHURC1-FNTB	ENSG00000125954.12	5.755	0.260	2.423	$1.37x10^{-27}$
CKAP2	ENSG00000136108.14	17.780	1.790	2.751	$1.16x10^{-110}$
CKAP2L	ENSG00000169607.12	4.635	0.190	2.243	$5.32x10^{-96}$
CKB	ENSG00000166165.12	68.426	660.813	-3.253	$1.40x10^{-48}$
CKLF	ENSG00000217555.12	54.560	12.340	2.058	$2.52x10^{-84}$
CKM	ENSG00000104879.4	0.110	7.440	-2.927	$3.12x10^{-75}$
CKMT2	ENSG00000131730.15	0.560	10.040	-2.823	$2.51x10^{-92}$
CKS1B	ENSG00000173207.12	90.005	21.470	2.018	$1.03x10^{-82}$
CKS2	ENSG00000123975.4	109.004	7.330	3.723	$1.07x10^{-113}$
CLDN1	ENSG00000163347.5	25.630	0.490	4.160	$8.44x10^{-99}$
CLDN2	ENSG00000165376.10	9.410	0.170	3.153	$1.07x10^{-37}$
CLDN3	ENSG00000165215.6	110.094	0.360	6.352	$3.92x10^{-75}$
CLDN4	ENSG00000189143.9	250.618	3.980	5.659	$4.83x10^{-108}$
CLDN7	ENSG00000181885.18	158.429	2.600	5.469	$2.09x10^{-125}$
CLIC6	ENSG00000159212.12	2.695	49.969	-3.786	$1.41x10^{-23}$
CLPS	ENSG00000137392.9	0.050	4.670	-2.433	$2.27x10^{-37}$
CLRN3	ENSG00000180745.4	17.485	0.080	4.097	$2.87x10^{-62}$
CLSPN	ENSG00000092853.13	4.900	0.180	2.322	$1.28x10^{-106}$
CNOT7	ENSG00000198791.11	67.538	13.440	2.247	$9.42x10^{-101}$
COL10A1	ENSG00000123500.9	13.645	0.050	3.802	$7.41x10^{-69}$
COL12A1	ENSG00000111799.20	36.309	6.020	2.410	$7.29x10^{-38}$
COL1A1	ENSG00000108821.13	521.364	61.002	3.075	$1.16x10^{-59}$
COL1A2	ENSG00000164692.17	406.172	61.742	2.698	$9.63x10^{-47}$

COL3A1	ENSG00000168542.12	344.174	64.690	2.394	$4.18x10^{-41}$
COL4A1	ENSG00000187498.14	89.068	17.890	2.253	$2.83x10^{-42}$
COL6A3	ENSG00000163359.15	77.412	18.360	2.018	$9.26x10^{-19}$
COL8A1	ENSG00000144810.15	13.424	1.480	2.540	$4.93x10^{-36}$
CORO2A	ENSG00000106789.12	12.685	2.130	2.128	$5.30x10^{-46}$
CORO6	ENSG00000167549.18	0.445	6.170	-2.311	$5.41x10^{-58}$
CPA2	ENSG00000158516.11	0.100	44.479	-5.370	$2.17x10^{-54}$
CPVL	ENSG00000106066.13	26.885	5.810	2.034	$1.76x10^{-35}$
CRIP1	ENSG00000213145.9	244.086	39.450	2.599	$1.47x10^{-48}$
CST1	ENSG00000170373.8	77.355	0.000	6.292	$1.09x10^{-94}$
CTB-31O20.6	ENSG00000267125.2	0.000	3.870	-2.284	$1.64x10^{-98}$
CTB-50L17.14	ENSG00000267385.1	0.070	4.300	-2.308	$2.52x10^{-92}$
CTC-251I16.1	ENSG00000279496.1	1.415	11.560	-2.379	$1.28x10^{-70}$
CTC-510F12.6	ENSG00000267576.1	2.875	14.510	-2.001	$2.52x10^{-20}$
CTD-2331C18.5	ENSG00000256220.1	0.000	8.360	-3.227	$7.99x10^{-44}$
CTD-2510F5.4	ENSG00000265415.1	4.760	0.080	2.415	$1.07x10^{-93}$
CTD-2540B15.11	ENSG00000267580.1	0.070	4.110	-2.256	$5.70x10^{-09}$
CTHRC1	ENSG00000164932.12	29.580	1.770	3.465	$2.80x10^{-91}$
CTSC	ENSG00000109861.15	127.773	21.840	2.495	$5.78x10^{-87}$
CTSS	ENSG00000163131.10	111.021	18.390	2.530	$1.48x10^{-47}$
CXCL1	ENSG00000163739.4	50.086	2.090	4.047	$2.90x10^{-54}$
CXCL10	ENSG00000169245.5	15.930	0.510	3.487	$4.01x10^{-58}$
CXCL11	ENSG00000169248.12	4.275	0.120	2.236	$4.02x10^{-47}$
CXCL13	ENSG00000156234.7	13.885	1.010	2.889	$9.44x10^{-35}$

CXCL16	ENSG00000161921.14	107.903	17.030	2.595	$4.58x10^{-93}$
CXCL17	ENSG00000189377.8	10.055	181.659	-4.046	$6.69x10^{-09}$
CXCL3	ENSG00000163734.4	26.369	3.440	2.624	$2.81x10^{-29}$
CXCL5	ENSG00000163735.6	12.475	0.210	3.477	$1.17x10^{-23}$
CXCL8	ENSG00000169429.10	30.630	1.130	3.892	$1.77x10^{-44}$
CXCL9	ENSG00000138755.5	19.699	0.320	3.971	$3.13x10^{-65}$
CYBA	ENSG00000051523.10	324.865	59.821	2.422	$1.36x10^{-72}$
DBF4	ENSG00000006634.7	14.735	2.640	2.112	$1.29x10^{-98}$
DDC	ENSG00000132437.17	14.940	0.680	3.246	$1.44x10^{-39}$
DEPDC1	ENSG00000024526.16	4.710	0.160	2.299	$1.12x10^{-83}$
DEPDC1B	ENSG00000035499.12	8.420	0.380	2.771	$1.45x10^{-100}$
DES	ENSG00000175084.11	33.940	207.504	-2.577	$1.12x10^{-14}$
DGKD	ENSG00000077044.9	12.480	57.170	-2.109	$7.12x10^{-39}$
DHFR	ENSG00000228716.6	19.810	3.480	2.216	$6.88x10^{-92}$
DHFRP1	ENSG00000188985.6	8.355	0.720	2.443	$1.77x10^{-52}$
DIO2	ENSG00000211448.11	12.225	1.260	2.549	$2.75x10^{-73}$
DIO3OS	ENSG00000258498.6	0.915	9.350	-2.434	$1.92x10^{-47}$
DLGAP5	ENSG00000126787.12	9.265	0.260	3.026	$6.06x10^{-102}$
DMBT1	ENSG00000187908.15	29.640	0.080	4.826	$2.80x10^{-31}$
DNER	ENSG00000187957.7	0.140	4.230	-2.198	$7.79x10^{-59}$
DPCR1	ENSG00000168631.11	3.445	28.019	-2.707	$6.44x10^{-05}$
DPP4	ENSG00000197635.9	8.195	0.870	2.298	$8.13x10^{-30}$
DPT	ENSG00000143196.4	2.205	23.180	-2.915	$6.26x10^{-56}$
DSC2	ENSG00000134755.14	11.835	2.190	2.008	$1.27x10^{-14}$

DSG2	ENSG00000046604.12	65.190	9.580	2.645	3.40×10^{-64}
DTL	ENSG00000143476.17	8.165	0.340	2.774	1.14×10^{-104}
DUOX1	ENSG00000137857.17	2.670	31.029	-3.126	7.41×10^{-26}
DUOXA1	ENSG00000140254.12	0.805	15.150	-3.161	5.82×10^{-29}
DUXAP8	ENSG00000206195.10	5.400	0.370	2.224	3.15×10^{-51}
DUXAP9	ENSG00000225210.9	4.240	0.270	2.045	3.04×10^{-49}
ECT2	ENSG00000114346.13	32.180	2.570	3.216	4.39×10^{-112}
EEF1A2	ENSG00000101210.10	0.820	9.510	-2.530	7.02×10^{-16}
EFNA2	ENSG00000099617.3	5.930	0.000	2.793	5.66×10^{-46}
EFNA3	ENSG00000143590.13	7.560	0.940	2.142	1.14×10^{-46}
EHF	ENSG00000135373.12	50.628	10.660	2.147	4.41×10^{-36}
EIF2AK2	ENSG00000055332.16	19.110	3.800	2.067	2.30×10^{-80}
ELFN1-AS1	ENSG00000236081.1	4.600	0.200	2.222	1.26×10^{-42}
ENC1	ENSG00000171617.13	29.695	6.090	2.114	1.73×10^{-68}
PDK4	ENSG00000004799.7	11.245	54.270	-2.174	2.67×10^{-30}
USH1C	ENSG00000006611.15	40.419	8.630	2.105	2.95×10^{-38}
PLEKHG6	ENSG00000008323.15	17.895	3.330	2.126	1.71×10^{-42}
IL32	ENSG00000008517.16	364.948	22.830	3.941	2.39×10^{-98}
ETV7	ENSG00000010030.13	9.900	1.250	2.276	1.20×10^{-53}
PRSS3	ENSG00000010438.16	87.141	4.890	3.904	1.23×10^{-45}
PLAUR	ENSG00000011422.11	63.542	10.580	2.479	1.41×10^{-51}
TYROBP	ENSG00000011600.11	133.301	26.241	2.302	2.69×10^{-49}
GPRC5A	ENSG00000013588.5	182.917	9.420	4.142	8.05×10^{-63}
TACC3	ENSG00000013810.18	26.925	4.890	2.245	8.16×10^{-77}

XYLT2	ENSG00000015532.9	12.440	58.781	-2.153	$1.53x10^{-32}$
VSIG2	ENSG00000019102.11	23.715	207.130	-3.074	$6.99x10^{-11}$
FHL1	ENSG00000022267.16	18.400	97.402	-2.343	$8.45x10^{-29}$
HMGB3	ENSG00000029993.14	36.794	5.640	2.509	$3.88x10^{-89}$
MYOC	ENSG00000034971.14	0.090	11.730	-3.546	$2.98x10^{-58}$
VCAN	ENSG00000038427.15	32.625	5.550	2.360	$1.08x10^{-45}$
RSF1	ENSG00000048649.13	28.420	6.260	2.019	$4.50x10^{-83}$
NFE2L3	ENSG00000050344.8	25.430	5.180	2.097	$3.03x10^{-88}$
RAD51	ENSG00000051180.16	8.625	0.660	2.536	$3.36x10^{-94}$
LY75	ENSG00000054219.10	14.535	1.570	2.596	$1.46x10^{-83}$
LAMC2	ENSG00000058085.14	31.749	2.710	3.142	$2.24x10^{-67}$
NDC1	ENSG00000058804.11	14.965	2.580	2.157	$4.77x10^{-90}$
WISP2	ENSG00000064205.10	0.380	4.930	-2.103	$3.79x10^{-51}$
FAR2	ENSG00000064763.10	11.795	1.920	2.131	$3.10x10^{-65}$
MCM10	ENSG00000065328.16	3.950	0.170	2.081	$4.66x10^{-82}$
PRR11	ENSG00000068489.12	13.890	0.500	3.311	$4.54x10^{-129}$
GUCY2C	ENSG00000070019.4	4.069	0.030	2.299	$9.55x10^{-28}$
PABPC1	ENSG00000070756.13	1955.808	391.969	2.316	$1.00x10^{-84}$
TRIP13	ENSG00000071539.13	10.675	0.680	2.797	$3.58x10^{-102}$
HMMR	ENSG00000072571.19	11.125	0.460	3.054	$2.08x10^{-100}$
MCM2	ENSG00000073111.13	20.644	2.430	2.658	$1.76x10^{-95}$
ST6GAL1	ENSG00000073849.14	31.095	6.800	2.041	$1.29x10^{-42}$
NOTCH3	ENSG00000074181.8	26.995	5.780	2.046	$3.03x10^{-46}$
GTSE1	ENSG00000075218.18	7.535	0.670	2.354	$2.75x10^{-76}$

FSCN1	ENSG00000075618.17	28.824	6.060	2.079	1.01×10^{-51}
RGS11	ENSG00000076344.15	0.830	10.560	-2.659	5.81×10^{-78}
SPAG5	ENSG00000076382.16	16.745	2.730	2.250	5.07×10^{-71}
TPD52	ENSG00000076554.15	113.495	24.540	2.164	2.33×10^{-58}
RAP1GAP	ENSG00000076864.19	9.565	49.360	-2.253	8.75×10^{-08}
UBE2T	ENSG00000077152.9	30.215	1.910	3.423	2.31×10^{-114}
LAMP3	ENSG00000078081.7	6.445	0.190	2.645	8.13×10^{-78}
FAP	ENSG00000078098.13	9.540	0.850	2.510	7.73×10^{-55}
NDC80	ENSG00000080986.12	9.310	0.730	2.575	1.38×10^{-93}
FYB	ENSG00000082074.15	10.905	1.290	2.378	6.52×10^{-65}
SNX10	ENSG00000086300.15	10.310	0.800	2.652	1.13×10^{-105}
ERO1LB	ENSG00000086619.13	2.590	13.380	-2.002	1.45×10^{-46}
HSD17B2	ENSG00000086696.10	22.080	4.260	2.134	6.34×10^{-20}
TPX2	ENSG00000088325.15	33.855	0.740	4.324	1.09×10^{-122}
SLC4A11	ENSG00000088836.12	5.835	0.630	2.068	2.41×10^{-36}
OAS1	ENSG00000089127.12	70.265	8.660	2.883	1.86×10^{-47}
FXYD5	ENSG00000089327.14	214.249	45.809	2.201	1.42×10^{-75}
HEPH	ENSG00000089472.16	19.060	3.090	2.294	8.72×10^{-14}
LYZ	ENSG00000090382.6	904.984	147.083	2.613	2.63×10^{-27}
KIF4A	ENSG00000090889.11	6.435	0.260	2.561	4.77×10^{-91}
ORC6	ENSG00000091651.8	6.785	0.900	2.035	2.43×10^{-76}
GABRP	ENSG00000094755.16	6.789	0.400	2.476	2.37×10^{-24}
TREM2	ENSG00000095970.16	8.460	0.440	2.716	2.90×10^{-84}
FKBP5	ENSG00000096060.14	14.655	62.721	-2.025	6.68×10^{-29}

PGC	ENSG00000096088.16	47.351	19376.225	-8.647	$2.39x10^{-21}$
SCD	ENSG00000099194.5	42.804	9.700	2.033	$2.07x10^{-31}$
MISP	ENSG00000099812.8	85.067	3.560	4.238	$3.51x10^{-93}$
MMP11	ENSG00000099953.9	31.224	1.320	3.796	$6.70x10^{-80}$
LGALS2	ENSG00000100079.6	14.505	1.600	2.576	$1.16x10^{-34}$
SH3BP1	ENSG00000100092.20	25.934	3.380	2.620	$3.31x10^{-69}$
SLC5A1	ENSG00000100170.9	11.695	0.330	3.255	$1.78x10^{-28}$
KDELR3	ENSG00000100196.10	42.951	7.070	2.445	$2.33x10^{-80}$
MCM5	ENSG00000100297.15	41.509	9.540	2.012	$3.63x10^{-76}$
IL2RB	ENSG00000100385.13	8.405	1.060	2.191	$1.86x10^{-49}$
PLEK2	ENSG00000100558.8	28.610	3.710	2.652	$1.23x10^{-53}$
NFATC4	ENSG00000100968.13	4.750	23.950	-2.117	$2.16x10^{-41}$
MMP9	ENSG00000100985.7	15.030	0.550	3.370	$1.06x10^{-68}$
GINS1	ENSG00000101003.9	6.530	0.380	2.448	$2.37x10^{-96}$
MYBL2	ENSG00000101057.15	38.276	0.700	4.530	$1.08x10^{-111}$
HNF4A	ENSG00000101076.16	40.434	4.400	2.940	$5.65x10^{-67}$
SLC52A3	ENSG00000101276.14	11.380	1.810	2.139	$1.97x10^{-59}$
FERMT1	ENSG00000101311.15	26.650	1.540	3.444	$6.25x10^{-90}$
LIPG	ENSG00000101670.11	8.599	0.990	2.270	$8.93x10^{-48}$
MXRA5	ENSG00000101825.7	28.150	1.970	3.295	$6.86x10^{-87}$
TIMP1	ENSG00000102265.11	860.391	115.223	2.890	$2.06x10^{-77}$
KLF5	ENSG00000102554.13	164.300	17.540	3.156	$6.53x10^{-67}$
OLFM4	ENSG00000102837.6	98.646	0.450	6.103	$1.21x10^{-29}$
MSLN	ENSG00000102854.14	31.665	0.980	4.044	$5.61x10^{-47}$

PYCARD	ENSG00000103490.13	61.250	10.870	2.391	$2.01x10^{-78}$
HOMER2	ENSG00000103942.12	3.215	24.160	-2.578	$1.73x10^{-31}$
OIP5	ENSG00000104147.8	6.425	0.370	2.438	$3.58x10^{-90}$
SFRP1	ENSG00000104332.11	0.855	6.680	-2.050	$5.55x10^{-17}$
LAPTM4B	ENSG00000104341.16	93.584	18.510	2.277	$4.55x10^{-48}$
MCM4	ENSG00000104738.16	67.388	6.020	3.284	$1.07x10^{-98}$
IL4I1	ENSG00000104951.15	5.720	0.350	2.316	$2.74x10^{-79}$
MYH14	ENSG00000105357.15	88.232	12.340	2.742	$2.96x10^{-68}$
NKG7	ENSG00000105374.9	16.169	2.320	2.371	$1.18x10^{-38}$
GRIN2D	ENSG00000105464.3	9.710	0.100	3.283	$2.85x10^{-89}$
SLC5A5	ENSG00000105641.3	0.220	5.990	-2.518	$3.64x10^{-23}$
HPN	ENSG00000105707.13	0.600	28.479	-4.204	$9.55x10^{-24}$
SIPA1L3	ENSG00000105738.10	26.135	4.690	2.254	$7.03x10^{-85}$
MET	ENSG00000105976.14	22.334	2.730	2.645	$1.00x10^{-76}$
HOXA13	ENSG00000106031.7	3.785	0.000	2.259	$4.99x10^{-46}$
SNX8	ENSG00000106266.8	37.109	7.920	2.095	$2.29x10^{-88}$
PTPRZ1	ENSG00000106278.11	0.710	6.860	-2.201	$1.71x10^{-31}$
SFRP4	ENSG00000106483.11	21.951	0.680	3.772	$2.10x10^{-47}$
MEST	ENSG00000106484.14	28.325	2.900	2.911	$1.73x10^{-97}$
TRIM14	ENSG00000106785.14	21.640	4.140	2.139	$4.87x10^{-79}$
SH3GL2	ENSG00000107295.9	0.040	3.470	-2.104	$2.74x10^{-74}$
UBE2S	ENSG00000108106.13	55.970	10.380	2.324	$1.28x10^{-72}$
LGALS3BP	ENSG00000108679.12	581.827	143.648	2.011	$1.39x10^{-57}$
TMEM33	ENSG00000109133.12	34.895	5.930	2.373	$3.94x10^{-89}$

NMU	ENSG00000109255.11	8.070	0.320	2.781	$8.85x10^{-34}$
KIAA1211	ENSG00000109265.12	5.905	0.300	2.409	$4.90x10^{-69}$
NCAPG	ENSG00000109805.9	8.815	0.390	2.820	$2.32x10^{-94}$
ZBTB16	ENSG00000109906.13	0.815	9.520	-2.535	$4.71x10^{-50}$
PVRL1	ENSG00000110400.10	16.955	2.950	2.184	$6.55x10^{-53}$
MDK	ENSG00000110492.15	399.208	30.210	3.681	$1.36x10^{-98}$
KRT18	ENSG00000111057.10	778.956	154.235	2.329	$1.26x10^{-52}$
FOXM1	ENSG00000111206.12	32.375	1.350	3.828	$1.42x10^{-108}$
RAD51AP1	ENSG00000111247.14	9.610	0.830	2.536	$1.38x10^{-100}$
OAS3	ENSG00000111331.12	30.915	3.300	2.892	$1.50x10^{-81}$
OAS2	ENSG00000111335.12	29.280	3.890	2.630	$1.29x10^{-56}$
VDR	ENSG00000111424.10	14.260	1.310	2.724	$2.41x10^{-63}$
NCOA7	ENSG00000111912.18	48.895	9.710	2.220	$2.31x10^{-71}$
PTP4A1	ENSG00000112245.9	155.864	36.091	2.080	$1.43x10^{-45}$
VNN1	ENSG00000112299.7	6.349	0.410	2.382	$1.41x10^{-22}$
MDFI	ENSG00000112559.13	19.805	2.880	2.423	$8.51x10^{-59}$
TTK	ENSG00000112742.9	8.010	0.530	2.558	$7.36x10^{-85}$
KIF20A	ENSG00000112984.11	10.535	0.440	3.002	$2.67x10^{-108}$
SPARC	ENSG00000113140.10	769.538	121.650	2.651	$2.06x10^{-48}$
LMNB1	ENSG00000113368.11	26.816	2.360	3.049	$5.95x10^{-96}$
LIFR	ENSG00000113594.9	2.315	12.360	-2.011	$2.35x10^{-50}$
SMC4	ENSG00000113810.15	40.415	9.160	2.027	$2.11x10^{-78}$
HHLA2	ENSG00000114455.13	6.060	0.400	2.334	$3.98x10^{-13}$
REEP6	ENSG00000115255.10	13.700	2.510	2.066	$8.81x10^{-27}$

STAT1	ENSG00000115415.18	89.924	17.689	2.282	$2.56x10^{-74}$
IL1RL1	ENSG00000115602.16	0.640	5.920	-2.077	$1.96x10^{-47}$
SDC1	ENSG00000115884.10	96.128	19.990	2.210	$1.24x10^{-35}$
PRRX1	ENSG00000116132.11	9.810	1.340	2.208	$1.06x10^{-33}$
MFAP2	ENSG00000117122.13	27.860	3.880	2.564	$1.24x10^{-44}$
SLC2A1	ENSG00000117394.19	72.263	14.730	2.220	$1.72x10^{-41}$
NEK2	ENSG00000117650.12	12.455	0.300	3.372	$2.06x10^{-107}$
MYB	ENSG00000118513.18	9.385	0.380	2.912	$8.96x10^{-71}$
SPP1	ENSG00000118785.13	47.929	3.490	3.446	$6.37x10^{-45}$
GDA	ENSG00000119125.16	7.035	0.180	2.768	$1.45x10^{-37}$
PTBP3	ENSG00000119314.15	43.885	6.990	2.490	$2.26x10^{-92}$
NEK6	ENSG00000119408.16	36.574	7.600	2.127	$1.71x10^{-77}$
ONECUT2	ENSG00000119547.5	3.460	0.020	2.128	$9.77x10^{-52}$
EPCAM	ENSG00000119888.10	402.054	47.530	3.054	$4.85x10^{-72}$
HELLS	ENSG00000119969.14	13.560	1.260	2.688	$8.23x10^{-114}$
MSX2	ENSG00000120149.8	6.165	0.500	2.256	$6.48x10^{-63}$
PLS1	ENSG00000120756.12	52.135	4.420	3.293	$1.91x10^{-66}$
NCAPH	ENSG00000121152.9	9.905	0.620	2.751	$2.68x10^{-87}$
PLBD1	ENSG00000121316.10	59.999	7.150	2.904	$1.83x10^{-66}$
KIF18A	ENSG00000121621.6	4.005	0.160	2.109	$1.04x10^{-96}$
INHBA	ENSG00000122641.9	12.270	0.290	3.363	$1.03x10^{-93}$
SPINK4	ENSG00000122711.8	5.770	0.170	2.533	$7.08x10^{-16}$
PLAU	ENSG00000122861.15	28.869	5.540	2.191	$4.38x10^{-50}$
ZWINT	ENSG00000122952.16	27.775	2.470	3.052	$1.01x10^{-85}$

STIL	ENSG00000123473.15	7.165	0.470	2.474	$1.60x10^{-96}$
HJURP	ENSG00000123485.11	9.390	0.580	2.717	$1.00x10^{-86}$
PI3	ENSG00000124102.4	85.238	0.750	5.623	$3.00x10^{-31}$
TMEM189-UBE2V1	ENSG00000124208.16	15.355	0.800	3.184	$1.15x10^{-66}$
PMEPA1	ENSG00000124225.15	60.239	5.960	3.137	$1.74x10^{-70}$
POF1B	ENSG00000124429.17	26.605	2.060	3.173	$2.87x10^{-62}$
HIF3A	ENSG00000124440.15	1.575	22.011	-3.160	$1.26x10^{-40}$
GNMT	ENSG00000124713.5	0.240	5.250	-2.334	$4.17x10^{-58}$
SOX4	ENSG00000124766.5	28.685	5.120	2.278	$2.97x10^{-89}$
SOX9	ENSG00000125398.5	64.435	8.620	2.766	$4.22x10^{-93}$
IFI6	ENSG00000126709.14	282.801	32.199	3.096	$8.30x10^{-62}$
PKMYT1	ENSG00000127564.16	20.659	1.330	3.217	$9.82x10^{-97}$
VIL1	ENSG00000127831.10	55.614	0.580	5.163	$2.15x10^{-71}$
SRD5A3	ENSG00000128039.10	31.909	6.440	2.145	$3.78x10^{-66}$
PAICS	ENSG00000128050.8	46.449	10.710	2.019	$1.05x10^{-91}$
RAC2	ENSG00000128340.14	43.296	9.380	2.093	$2.71x10^{-51}$
KRT17	ENSG00000128422.15	15.160	0.390	3.539	$5.36x10^{-34}$
ISLR	ENSG00000129009.12	43.364	9.730	2.048	$4.92x10^{-17}$
FAM64A	ENSG00000129195.15	5.225	0.470	2.082	$6.01x10^{-68}$
KLK10	ENSG00000129451.11	11.840	0.980	2.697	$2.10x10^{-23}$
SGOL1	ENSG00000129810.14	6.305	0.250	2.547	$1.11x10^{-105}$
RPS4Y1	ENSG00000129824.15	25.119	155.190	-2.580	$8.04x10^{-13}$
KLF16	ENSG00000129911.8	26.645	4.610	2.301	$1.01x10^{-78}$
GNL3L	ENSG00000130119.15	17.480	2.040	2.604	$1.66x10^{-121}$

FCHO1	ENSG00000130475.14	8.645	1.080	2.213	6.53×10^{-74}
PNPLA7	ENSG00000130653.15	1.320	12.930	-2.586	1.80×10^{-72}
GATA5	ENSG00000130700.6	0.445	5.820	-2.239	3.31×10^{-07}
FBP2	ENSG00000130957.4	0.210	16.450	-3.850	1.83×10^{-51}
GINS2	ENSG00000131153.8	6.460	0.520	2.295	2.73×10^{-76}
F12	ENSG00000131187.9	7.735	0.390	2.652	4.26×10^{-56}
PRR7	ENSG00000131188.11	10.905	0.940	2.617	3.84×10^{-97}
IDO1	ENSG00000131203.12	8.064	0.460	2.634	3.04×10^{-40}
TNS4	ENSG00000131746.12	11.854	0.250	3.362	2.88×10^{-38}
TOP2A	ENSG00000131747.14	41.326	1.870	3.882	4.01×10^{-106}
PPP1R1B	ENSG00000131771.13	68.055	4.510	3.648	7.67×10^{-27}
RHPN2	ENSG00000131941.7	34.215	7.610	2.032	9.43×10^{-44}
PCNA	ENSG00000132646.10	121.890	22.860	2.365	1.96×10^{-94}
EPSTI1	ENSG00000133106.14	20.829	2.280	2.734	1.47×10^{-69}
RFC3	ENSG00000133119.12	13.375	2.590	2.002	3.94×10^{-93}
EPHB2	ENSG00000133216.16	17.515	0.440	3.685	2.22×10^{-82}
REG4	ENSG00000134193.14	90.710	0.450	5.983	3.01×10^{-38}
GIF	ENSG00000134812.7	0.265	704.814	-9.124	1.12×10^{-54}
FAM189A2	ENSG00000135063.17	2.335	14.360	-2.203	4.02×10^{-43}
SDS	ENSG00000135094.10	7.575	0.330	2.689	9.45×10^{-68}
TROAP	ENSG00000135451.12	17.400	1.410	2.933	2.65×10^{-75}
ESPL1	ENSG00000135476.11	6.160	0.510	2.245	1.46×10^{-47}
KRT7	ENSG00000135480.14	51.173	4.330	3.291	4.24×10^{-27}
GLUL	ENSG00000135821.16	177.970	928.140	-2.376	2.77×10^{-46}

IGF2BP3	ENSG00000136231.13	4.715	0.150	2.313	$6.26x10^{-45}$
TTYH3	ENSG00000136295.14	52.864	9.180	2.404	$2.83x10^{-87}$
IL1RN	ENSG00000136689.18	30.525	6.800	2.015	$4.48x10^{-14}$
IL11RA	ENSG00000137070.17	2.615	14.880	-2.135	$3.27x10^{-66}$
GMPR	ENSG00000137198.9	3.735	19.920	-2.143	$9.98x10^{-38}$
TFAP2A	ENSG00000137203.10	10.115	0.480	2.909	$6.71x10^{-58}$
HMGA1	ENSG00000137309.19	319.085	34.611	3.168	$1.12x10^{-83}$
GGH	ENSG00000137563.11	28.520	3.790	2.624	$2.05x10^{-60}$
SULF1	ENSG00000137573.13	56.437	3.250	3.756	$5.23x10^{-69}$
TMPRSS4	ENSG00000137648.16	80.423	3.460	4.190	$1.84x10^{-65}$
MMP7	ENSG00000137673.8	26.250	0.210	4.493	$1.01x10^{-52}$
TRIM29	ENSG00000137699.16	24.145	0.840	3.772	$1.74x10^{-38}$
NUSAP1	ENSG00000137804.12	31.420	1.910	3.478	$3.14x10^{-97}$
KIF23	ENSG00000137807.13	11.314	1.540	2.277	$6.97x10^{-81}$
KIF11	ENSG00000138160.5	11.135	0.470	3.045	$4.36x10^{-116}$
KIF20B	ENSG00000138182.14	6.340	0.750	2.068	$2.03x10^{-114}$
LEF1	ENSG00000138795.9	9.460	1.320	2.173	$1.08x10^{-79}$
PIK3C2G	ENSG00000139144.9	0.805	7.590	-2.251	$7.70x10^{-08}$
FAM60A	ENSG00000139146.13	42.045	8.650	2.157	$7.93x10^{-93}$
LUM	ENSG00000139329.4	299.621	41.720	2.815	$1.77x10^{-46}$
PDX1	ENSG00000139515.5	6.720	0.070	2.851	$1.16x10^{-58}$
SLC39A5	ENSG00000139540.11	11.410	0.360	3.190	$4.52x10^{-36}$
SLC27A2	ENSG00000140284.10	7.240	0.400	2.557	$2.58x10^{-63}$
HDC	ENSG00000140287.10	0.675	11.920	-2.947	$5.13x10^{-72}$

GCNT3	ENSG00000140297.12	42.709	2.210	3.767	3.86×10^{-33}
NEIL1	ENSG00000140398.13	5.755	26.159	-2.007	5.59×10^{-46}
FANCI	ENSG00000140525.17	15.060	2.790	2.083	1.53×10^{-74}
MARVELD3	ENSG00000140832.9	12.725	1.600	2.400	4.66×10^{-82}
TNFRSF11A	ENSG00000141655.15	6.900	0.810	2.126	2.21×10^{-39}
PPAP2C	ENSG00000141934.9	79.406	18.989	2.008	3.10×10^{-43}
TM4SF5	ENSG00000142484.6	22.255	4.750	2.016	2.45×10^{-22}
EPHA2	ENSG00000142627.12	35.291	7.340	2.121	3.09×10^{-36}
IL22RA1	ENSG00000142677.3	9.930	0.780	2.618	2.83×10^{-44}
KIF2C	ENSG00000142945.12	12.730	0.840	2.900	2.95×10^{-96}
GPA33	ENSG00000143167.11	5.413	0.080	2.570	1.02×10^{-21}
FCGR2A	ENSG00000143226.13	29.635	5.680	2.197	1.83×10^{-45}
NUF2	ENSG00000143228.12	9.675	0.580	2.756	4.99×10^{-96}
XPR1	ENSG00000143324.13	14.200	1.940	2.370	2.42×10^{-98}
MALL	ENSG00000144063.3	31.519	3.330	2.909	6.59×10^{-32}
ZNF385B	ENSG00000144331.18	0.520	7.240	-2.439	8.56×10^{-53}
NR1I2	ENSG00000144852.16	3.830	0.100	2.134	5.80×10^{-23}
NCEH1	ENSG00000144959.9	16.120	2.750	2.191	3.20×10^{-72}
ILDR1	ENSG00000145103.12	4.650	0.060	2.414	5.38×10^{-94}
GC	ENSG00000145321.12	0.390	4.920	-2.091	6.47×10^{-06}
PLA2G7	ENSG00000146070.16	6.900	0.260	2.648	3.40×10^{-88}
MTFR2	ENSG00000146410.11	5.520	0.560	2.063	3.25×10^{-81}
IGFBP3	ENSG00000146674.14	96.288	22.561	2.046	3.79×10^{-46}
TRIM50	ENSG00000146755.10	0.050	19.770	-4.306	4.76×10^{-63}

SH3KBP1	ENSG00000147010.17	26.385	5.770	2.016	2.20×10^{-88}
IL2RG	ENSG00000147168.12	73.963	5.930	3.435	2.74×10^{-70}
GINS4	ENSG00000147536.11	5.295	0.450	2.118	1.30×10^{-86}
LACTB2	ENSG00000147592.8	36.581	7.010	2.230	3.19×10^{-74}
MTDH	ENSG00000147649.9	86.927	13.230	2.627	8.28×10^{-117}
MAL2	ENSG00000147676.13	135.232	32.079	2.042	1.34×10^{-44}
SLC39A4	ENSG00000147804.9	112.621	22.650	2.264	3.99×10^{-47}
LCN2	ENSG00000148346.11	691.914	27.980	4.580	6.20×10^{-27}
PLEKHS1	ENSG00000148735.14	12.955	0.140	3.614	8.62×10^{-61}
MKI67	ENSG00000148773.12	25.860	0.830	3.876	6.53×10^{-108}
SERPINH1	ENSG00000149257.13	107.925	25.230	2.054	9.06×10^{-49}
NCAM1	ENSG00000149294.16	1.085	9.270	-2.300	1.11×10^{-42}
ST14	ENSG00000149418.10	100.750	22.409	2.120	2.23×10^{-55}
INCENP	ENSG00000149503.12	18.240	3.670	2.043	1.07×10^{-76}
FCGR1A	ENSG00000150337.13	7.700	0.980	2.136	3.01×10^{-57}
TMEM45B	ENSG00000151715.7	64.281	10.950	2.450	1.72×10^{-36}
SPC25	ENSG00000152253.8	8.165	0.600	2.518	2.85×10^{-96}
SLC25A27	ENSG00000153291.15	1.840	15.390	-2.529	4.51×10^{-54}
FRMD1	ENSG00000153303.16	0.165	5.600	-2.502	1.85×10^{-47}
KCNJ16	ENSG00000153822.13	0.090	6.620	-2.805	3.27×10^{-46}
LGI4	ENSG00000153902.13	0.970	8.620	-2.288	2.52×10^{-58}
THY1	ENSG00000154096.13	81.676	13.100	2.552	3.46×10^{-48}
SKA1	ENSG00000154839.9	4.815	0.170	2.313	1.04×10^{-85}
PIK3AP1	ENSG00000155629.14	11.215	0.820	2.747	1.68×10^{-95}

FUT6	ENSG00000156413.13	9.565	0.070	3.304	$5.20x10^{-29}$
HKDC1	ENSG00000156510.12	11.425	0.180	3.396	$8.12x10^{-68}$
RAB11FIP1	ENSG00000156675.15	44.180	6.640	2.564	$1.04x10^{-56}$
SST	ENSG00000157005.3	0.705	101.468	-5.909	$9.91x10^{-44}$
GHRL	ENSG00000157017.15	0.775	167.625	-6.570	$1.51x10^{-48}$
TMED6	ENSG00000157315.4	1.250	12.610	-2.597	$1.58x10^{-30}$
FAM81A	ENSG00000157470.11	4.910	0.460	2.017	$1.18x10^{-70}$
MYO1E	ENSG00000157483.8	75.719	17.360	2.063	$1.05x10^{-81}$
TSC22D3	ENSG00000157514.16	41.130	198.362	-2.242	$1.44x10^{-46}$
SLAMF8	ENSG00000158714.10	8.190	1.290	2.005	$6.71x10^{-53}$
FCER1G	ENSG00000158869.10	131.342	22.119	2.517	$4.57x10^{-54}$
KCNE2	ENSG00000159197.3	0.360	139.991	-6.696	$6.92x10^{-59}$
TFF3	ENSG00000160180.15	133.324	4.930	4.502	$4.12x10^{-31}$
TFF2	ENSG00000160181.8	26.716	930.910	-5.071	$1.41x10^{-11}$
TMPRSS3	ENSG00000160183.13	16.845	2.550	2.330	$1.04x10^{-30}$
CBS	ENSG00000160200.17	1.625	13.430	-2.459	$4.40x10^{-29}$
FGFR4	ENSG00000160867.14	29.699	5.750	2.185	$1.01x10^{-43}$
LY6E	ENSG00000160932.10	350.652	46.990	2.873	$1.36x10^{-76}$
RECQL4	ENSG00000160957.12	13.500	2.510	2.046	$4.54x10^{-55}$
SIGLEC11	ENSG00000161640.15	0.175	4.570	-2.245	$1.23x10^{-69}$
RACGAP1	ENSG00000161800.12	23.330	4.310	2.196	$9.16x10^{-75}$
PDZK1IP1	ENSG00000162366.7	109.136	25.389	2.061	$9.62x10^{-19}$
LAPTM5	ENSG00000162511.7	87.465	20.490	2.041	$1.27x10^{-44}$
OLFML2B	ENSG00000162745.10	13.050	1.580	2.445	$7.86x10^{-51}$

PIGR	ENSG00000162896.5	156.405	36.011	2.088	$1.29x10^{-05}$
S100A11	ENSG00000163191.5	1543.456	291.226	2.402	$9.72x10^{-63}$
LMOD1	ENSG00000163431.12	5.985	29.400	-2.122	$4.02x10^{-23}$
FABP1	ENSG00000163586.9	9.355	0.520	2.768	$3.39x10^{-09}$
SLC6A20	ENSG00000163817.15	4.375	0.290	2.059	$1.89x10^{-22}$
KLF15	ENSG00000163884.3	0.880	15.470	-3.131	$1.24x10^{-88}$
ETNPPL	ENSG00000164089.8	0.040	3.430	-2.091	$2.86x10^{-51}$
MAD2L1	ENSG00000164109.13	21.820	1.540	3.167	$7.30x10^{-107}$
ITGA2	ENSG00000164171.10	11.530	1.000	2.647	$8.96x10^{-66}$
F2RL2	ENSG00000164220.6	5.660	0.500	2.151	$2.98x10^{-53}$
PTTG1	ENSG00000164611.12	54.119	3.650	3.567	$7.23x10^{-100}$
FNDC1	ENSG00000164694.16	6.864	0.110	2.825	$1.98x10^{-57}$
HNF4G	ENSG00000164749.11	12.740	1.290	2.585	$1.75x10^{-60}$
GPER1	ENSG00000164850.14	0.840	15.130	-3.132	$2.95x10^{-77}$
NKX6-3	ENSG00000165066.12	3.565	0.070	2.093	$8.10x10^{-16}$
MAMDC2	ENSG00000165072.9	0.525	7.500	-2.479	$4.85x10^{-52}$
MELK	ENSG00000165304.7	13.220	0.470	3.274	$1.66x10^{-101}$
GJB2	ENSG00000165474.5	21.769	1.200	3.372	$2.14x10^{-56}$
SKA3	ENSG00000165480.15	12.485	0.290	3.386	$1.75x10^{-121}$
PRAP1	ENSG00000165828.13	32.733	0.170	4.850	$4.70x10^{-38}$
IFI27	ENSG00000165949.12	635.588	140.078	2.174	$7.01x10^{-28}$
GPT2	ENSG00000166123.13	9.900	44.581	-2.064	$1.71x10^{-15}$
PPP1R14D	ENSG00000166143.9	6.959	0.160	2.779	$2.03x10^{-30}$
TMEM100	ENSG00000166292.11	0.765	7.260	-2.227	$1.01x10^{-48}$

RIC3	ENSG00000166405.14	0.540	7.740	-2.505	7.66×10^{-56}
WDR72	ENSG00000166415.14	4.605	0.100	2.349	5.37×10^{-41}
KIAA0101	ENSG00000166803.10	49.696	1.930	4.113	2.46×10^{-101}
PLK1	ENSG00000166851.14	33.871	2.660	3.252	3.84×10^{-93}
GREM1	ENSG00000166923.10	56.676	11.660	2.188	3.69×10^{-17}
SNRPD1	ENSG00000167088.10	100.516	23.131	2.073	2.55×10^{-94}
LINC00483	ENSG00000167117.8	5.990	0.090	2.681	7.21×10^{-29}
MYO5B	ENSG00000167306.18	35.335	7.090	2.167	1.47×10^{-41}
TUBA1C	ENSG00000167553.14	460.592	80.671	2.499	5.50×10^{-75}
PSCA	ENSG00000167653.4	23.115	1009.481	-5.389	1.50×10^{-22}
PLIN4	ENSG00000167676.4	0.540	7.790	-2.513	2.30×10^{-30}
GPT	ENSG00000167701.13	1.985	12.770	-2.206	8.29×10^{-21}
KLK1	ENSG00000167748.10	9.360	0.800	2.525	2.10×10^{-26}
KLK6	ENSG00000167755.13	3.845	0.040	2.220	5.10×10^{-26}
KLK11	ENSG00000167757.13	6.500	72.118	-3.285	4.38×10^{-08}
KRT80	ENSG00000167767.13	4.805	0.130	2.361	3.52×10^{-39}
TK1	ENSG00000167900.11	49.060	6.650	2.710	4.31×10^{-73}
PBK	ENSG00000168078.9	11.580	0.350	3.220	4.76×10^{-89}
SCARA5	ENSG00000168079.16	0.540	10.960	-2.957	1.45×10^{-78}
FAM83B	ENSG00000168143.8	5.650	0.470	2.178	1.59×10^{-43}
FAM107A	ENSG00000168309.16	1.565	15.230	-2.662	2.37×10^{-65}
SCNN1B	ENSG00000168447.10	0.570	8.300	-2.566	3.66×10^{-56}
TM4SF20	ENSG00000168955.3	3.100	0.020	2.007	7.21×10^{-16}
PCSK9	ENSG00000169174.10	5.104	0.250	2.288	1.65×10^{-31}

PDILT	ENSG00000169340.9	0.000	17.689	-4.224	$8.68x10^{-56}$
GKN1	ENSG00000169605.5	1.050	1550.910	-9.564	$1.18x10^{-38}$
MUC17	ENSG00000169876.13	9.084	0.010	3.320	$1.41x10^{-29}$
MUC3A	ENSG00000169894.17	72.158	0.320	5.792	$9.32x10^{-80}$
MYO7B	ENSG00000169994.18	15.905	0.660	3.348	$1.69x10^{-32}$
FABP4	ENSG00000170323.8	1.645	22.340	-3.141	$6.44x10^{-46}$
GPRC5C	ENSG00000170412.16	37.495	153.064	-2.001	$8.36x10^{-11}$
KRT8	ENSG00000170421.11	1274.044	253.228	2.326	$2.20x10^{-44}$
METTL7B	ENSG00000170439.6	17.545	0.490	3.638	$1.84x10^{-83}$
HOXB9	ENSG00000170689.9	5.185	0.020	2.600	$7.26x10^{-57}$
FUT3	ENSG00000171124.12	30.635	2.020	3.389	$2.13x10^{-22}$
SHCBP1	ENSG00000171241.8	4.985	0.490	2.006	$5.15x10^{-85}$
SOSTDC1	ENSG00000171243.7	0.645	5.860	-2.060	$2.62x10^{-24}$
ESCO2	ENSG00000171320.14	6.330	0.340	2.452	$2.02x10^{-73}$
KRT13	ENSG00000171401.14	0.200	4.000	-2.059	$8.00x10^{-09}$
FGA	ENSG00000171560.14	0.150	7.560	-2.896	$5.26x10^{-23}$
LGALS4	ENSG00000171747.8	561.385	38.929	3.816	$3.44x10^{-39}$
RRM2	ENSG00000171848.13	55.079	1.400	4.546	$4.32x10^{-99}$
LGALS9C	ENSG00000171916.16	1.505	10.590	-2.210	$3.72x10^{-15}$
MAL	ENSG00000172005.10	0.930	28.220	-3.920	$3.00x10^{-69}$
OVOL1	ENSG00000172818.9	6.665	0.770	2.115	$8.16x10^{-37}$
MYEOV	ENSG00000172927.7	22.240	1.450	3.246	$9.70x10^{-41}$
MIR4435-2HG	ENSG00000172965.14	45.965	6.050	2.736	$3.70x10^{-105}$
FAM222B	ENSG00000173065.13	25.355	4.960	2.145	$1.06x10^{-82}$

MUC13	ENSG00000173702.7	161.388	1.990	5.763	1.25×10^{-72}
JUP	ENSG00000173801.16	256.372	42.039	2.580	3.88×10^{-56}
REP15	ENSG00000174236.3	0.850	7.420	-2.186	1.92×10^{-20}
EXO1	ENSG00000174371.16	5.450	0.250	2.367	5.69×10^{-101}
SLC26A9	ENSG00000174502.18	0.900	18.181	-3.336	8.36×10^{-18}
MFSD4	ENSG00000174514.12	3.305	47.451	-3.492	3.14×10^{-25}
UBE2C	ENSG00000175063.16	93.347	2.400	4.794	4.90×10^{-107}
MARCKSL1	ENSG00000175130.6	196.705	38.191	2.335	8.51×10^{-90}
PHYHD1	ENSG00000175287.18	3.930	26.580	-2.484	1.00×10^{-52}
SCUBE2	ENSG00000175356.12	1.260	13.770	-2.708	1.25×10^{-64}
KCNE3	ENSG00000175538.10	39.086	3.880	3.038	5.36×10^{-53}
RMI2	ENSG00000175643.8	13.420	1.220	2.699	3.40×10^{-97}
PRIMA1	ENSG00000175785.12	0.595	5.570	-2.042	2.28×10^{-37}
SFN	ENSG00000175793.11	81.710	19.100	2.041	7.88×10^{-20}
ETV4	ENSG00000175832.12	19.775	0.820	3.513	8.38×10^{-83}
GPX2	ENSG00000176153.11	526.247	115.551	2.178	6.18×10^{-31}
PRR15	ENSG00000176532.3	34.809	5.480	2.466	3.90×10^{-50}
TTTY14	ENSG00000176728.7	0.345	5.190	-2.202	1.99×10^{-20}
RP11-334J6.7	ENSG00000176868.2	0.000	6.280	-2.864	1.47×10^{-45}
TYMS	ENSG00000176890.15	37.314	4.410	2.824	2.08×10^{-84}
LINC00982	ENSG00000177133.10	2.130	85.389	-4.787	2.14×10^{-55}
IRX3	ENSG00000177508.11	0.740	9.050	-2.530	1.21×10^{-23}
RPRM	ENSG00000177519.3	0.150	4.720	-2.314	7.66×10^{-89}
GPR35	ENSG00000178623.11	28.489	5.840	2.108	1.33×10^{-48}

TRIM73	ENSG00000178809.11	0.680	8.340	-2.475	$6.49x10^{-74}$
RCC2	ENSG00000179051.13	56.586	11.550	2.198	$5.28x10^{-101}$
PER1	ENSG00000179094.13	15.295	73.348	-2.190	$1.91x10^{-49}$
HLA-DQB1	ENSG00000179344.16	62.539	11.670	2.326	$6.16x10^{-31}$
TMEM150B	ENSG00000180061.9	8.175	0.590	2.529	$5.14x10^{-41}$
SLC9A4	ENSG00000180251.4	0.375	15.380	-3.574	$1.50x10^{-25}$
HOXC10	ENSG00000180818.4	7.315	0.020	3.027	$4.58x10^{-43}$
FAM83H	ENSG00000180921.6	49.740	6.080	2.841	$7.87x10^{-80}$
F2R	ENSG00000181104.6	21.780	2.980	2.517	$3.38x10^{-98}$
FDCSP	ENSG00000181617.5	3.855	0.120	2.116	$1.07x10^{-21}$
PHLDA2	ENSG00000181649.5	69.917	5.010	3.561	$1.75x10^{-64}$
RP11-69E11.4	ENSG00000182109.7	1.080	8.380	-2.173	$5.30x10^{-59}$
LIPF	ENSG00000182333.14	1.090	11514.785	-12.428	$1.68x10^{-44}$
KPNA2	ENSG00000182481.8	70.065	11.470	2.511	$6.77x10^{-101}$
GKN2	ENSG00000183607.9	0.705	284.088	-7.386	$2.14x10^{-30}$
MACC1	ENSG00000183742.12	11.160	0.690	2.847	$6.09x10^{-74}$
ZNF703	ENSG00000183779.6	46.560	6.930	2.584	$3.85x10^{-31}$
IQGAP3	ENSG00000183856.10	12.095	0.700	2.945	$9.57x10^{-78}$
TSPYL2	ENSG00000184205.14	7.785	46.549	-2.436	$3.29x10^{-58}$
TACSTD2	ENSG00000184292.6	66.134	5.070	3.467	$1.08x10^{-27}$
PKP3	ENSG00000184363.9	65.014	13.420	2.195	$7.86x10^{-41}$
MAP7D2	ENSG00000184368.15	0.190	4.010	-2.074	$1.06x10^{-18}$
TCEAL2	ENSG00000184905.8	0.550	7.190	-2.402	$3.38x10^{-23}$
MUC6	ENSG00000184956.15	6.744	136.636	-4.152	$9.10x10^{-10}$

PARPBP	ENSG00000185480.11	7.255	0.660	2.314	$2.41x10^{-99}$
PDIA2	ENSG00000185615.15	1.460	58.080	-4.586	$8.08x10^{-35}$
POMK	ENSG00000185900.9	5.935	0.560	2.152	$3.26x10^{-73}$
KIF18B	ENSG00000186185.13	8.730	0.380	2.818	$9.30x10^{-83}$
SAPCD2	ENSG00000186193.8	15.240	0.960	3.051	$3.32x10^{-90}$
THBS2	ENSG00000186340.14	22.670	1.450	3.272	$1.04x10^{-47}$
HPDL	ENSG00000186603.5	7.705	0.960	2.151	$2.68x10^{-50}$
LILRB4	ENSG00000186818.12	9.255	1.360	2.119	$6.67x10^{-50}$
TRABD2A	ENSG00000186854.10	9.765	0.470	2.872	$2.49x10^{-57}$
ESPN	ENSG00000187017.14	14.215	1.010	2.920	$3.17x10^{-32}$
MT1X	ENSG00000187193.8	47.125	249.552	-2.380	$5.08x10^{-41}$
FPR3	ENSG00000187474.4	8.639	0.920	2.328	$1.88x10^{-55}$
ISG15	ENSG00000187608.8	94.163	15.780	2.504	$1.85x10^{-53}$
FANCA	ENSG00000187741.14	16.969	2.590	2.323	$2.16x10^{-76}$
PALM3	ENSG00000187867.8	1.780	17.330	-2.721	$7.75x10^{-13}$
LCN10	ENSG00000187922.13	0.210	5.790	-2.488	$6.44x10^{-64}$
H2AFX	ENSG00000188486.3	58.720	12.060	2.193	$3.15x10^{-79}$
GJB3	ENSG00000188910.7	12.705	0.680	3.028	$1.47x10^{-47}$
FAM111B	ENSG00000189057.10	5.660	0.270	2.391	$1.67x10^{-55}$
HN1	ENSG00000189159.15	206.779	30.950	2.701	$5.30x10^{-67}$
FAM150B	ENSG00000189292.15	0.300	5.530	-2.329	$2.43x10^{-79}$
HLA-DRB1	ENSG00000196126.10	184.681	42.771	2.085	$1.87x10^{-30}$
ESRRG	ENSG00000196482.16	0.230	8.050	-2.879	$6.53x10^{-53}$
SULF2	ENSG00000196562.14	73.950	14.050	2.316	$3.26x10^{-49}$

MMP1	ENSG00000196611.4	33.401	4.230	2.718	$1.43x10^{-23}$
HLA-DQA1	ENSG00000196735.11	48.878	4.840	3.094	$6.22x10^{-40}$
SERPINA1	ENSG00000197249.12	189.709	35.799	2.374	$3.34x10^{-19}$
S100A10	ENSG00000197747.8	1059.559	124.516	3.079	$2.65x10^{-74}$
TEAD4	ENSG00000197905.8	19.225	3.950	2.031	$7.85x10^{-69}$
NRARP	ENSG00000198435.3	29.820	3.900	2.653	$1.31x10^{-73}$
F5	ENSG00000198734.10	5.889	0.580	2.124	$1.27x10^{-31}$
PRC1	ENSG00000198901.13	34.471	5.670	2.411	$1.20x10^{-74}$
SNORD118	ENSG00000200463.1	6.375	0.000	2.883	$1.31x10^{-17}$
RNU4-1	ENSG00000200795.1	28.350	0.000	4.875	$2.64x10^{-39}$
RN7SK	ENSG00000202198.1	200.116	14.930	3.658	$1.55x10^{-56}$
RNU4-2	ENSG00000202538.1	77.286	3.670	4.067	$4.00x10^{-35}$
FAM83H-AS1	ENSG00000203499.10	22.725	2.680	2.689	$1.70x10^{-66}$
FCGR3A	ENSG00000203747.9	21.615	2.420	2.725	$1.47x10^{-48}$
HLA-DRA	ENSG00000204287.13	587.135	86.007	2.757	$1.40x10^{-42}$
LST1	ENSG00000204482.10	19.240	3.770	2.085	$1.26x10^{-52}$
TRIM15	ENSG00000204610.12	9.085	0.020	3.306	$3.41x10^{-82}$
TRIM31	ENSG00000204616.10	33.675	2.670	3.240	$5.24x10^{-41}$
PRSS1	ENSG00000204983.12	1.320	15.950	-2.869	$5.39x10^{-10}$
MT1A	ENSG00000205362.10	1.720	12.550	-2.317	$1.94x10^{-32}$
MT1M	ENSG00000205364.3	1.995	37.320	-3.677	$3.97x10^{-71}$
SAMD9	ENSG00000205413.7	8.730	1.390	2.025	$2.22x10^{-33}$
RGL3	ENSG00000205517.12	2.370	26.119	-3.009	$2.27x10^{-25}$
SERPINB5	ENSG00000206075.13	27.295	0.130	4.646	$4.15x10^{-64}$

HCP5	ENSG00000206337.10	26.434	4.990	2.195	$9.28x10^{-53}$
RNVU1-7	ENSG00000206585.1	20.769	1.550	3.094	$3.90x10^{-13}$
RNU1-28P	ENSG00000206588.1	64.208	4.280	3.626	$1.16x10^{-42}$
RNU1-27P	ENSG00000206596.1	63.924	4.330	3.607	$1.92x10^{-42}$
SNORA22	ENSG00000206634.1	4.120	0.000	2.356	$3.29x10^{-09}$
RNU1-1	ENSG00000206652.1	64.208	4.280	3.626	$1.16x10^{-42}$
RNVU1-18	ENSG00000206737.1	64.208	4.280	3.626	$1.16x10^{-42}$
RNU1-2	ENSG00000207005.1	63.924	4.330	3.607	$1.92x10^{-42}$
SNORA7B	ENSG00000207088.1	8.865	0.000	3.302	$5.70x10^{-29}$
RNU1-4	ENSG00000207389.1	63.924	4.330	3.607	$1.92x10^{-42}$
SNORD15B	ENSG00000207445.1	6.705	0.000	2.946	$9.45x10^{-18}$
RNU1-3	ENSG00000207513.1	64.208	4.280	3.626	$1.16x10^{-42}$
SNORA48	ENSG00000209582.1	16.068	0.000	4.093	$2.07x10^{-23}$
GPX3	ENSG00000211445.11	31.060	212.496	-2.735	$1.29x10^{-62}$
IGKC	ENSG00000211592.6	5883.463	1210.342	2.280	$6.45x10^{-16}$
IGKV4-1	ENSG00000211598.2	108.808	24.540	2.104	$1.53x10^{-13}$
IGLC2	ENSG00000211677.2	1788.580	420.656	2.085	$7.64x10^{-15}$
TRBV25-1	ENSG00000211751.7	19.060	3.520	2.150	$7.16x10^{-39}$
TRBC2	ENSG00000211772.8	38.934	7.710	2.197	$4.96x10^{-37}$
IGHG4	ENSG00000211892.3	130.124	5.110	4.424	$7.71x10^{-49}$
IGHG2	ENSG00000211893.3	328.169	19.929	3.975	$2.13x10^{-35}$
IGHG1	ENSG00000211896.6	2306.915	154.428	3.892	$6.06x10^{-40}$
IGHG3	ENSG00000211897.7	191.267	15.320	3.558	$2.18x10^{-29}$
SNORD17	ENSG00000212232.1	16.660	0.510	3.548	$9.12x10^{-73}$

SNORA12	ENSG00000212464.1	17.640	0.000	4.220	$3.96x10^{-41}$
GSTM2	ENSG00000213366.12	9.025	114.348	-3.524	$8.36x10^{-93}$
UBD	ENSG00000213886.3	98.281	1.100	5.563	$1.32x10^{-91}$
PLIN5	ENSG00000214456.8	0.445	33.990	-4.598	$2.03x10^{-114}$
MEG3	ENSG00000214548.14	3.715	24.100	-2.412	$1.97x10^{-37}$
MUC5AC	ENSG00000215182.8	7.830	81.962	-3.232	$5.49x10^{-05}$
RSC1A1	ENSG00000215695.1	3.105	0.000	2.037	$2.22x10^{-48}$
IFI30	ENSG00000216490.3	248.869	49.080	2.319	$9.85x10^{-73}$
LINC00152	ENSG00000222041.10	33.759	6.370	2.238	$2.33x10^{-80}$
RN7SKP54	ENSG00000222636.1	7.785	0.000	3.135	$2.36x10^{-25}$
TMSB4XP4	ENSG00000223551.1	16.115	2.130	2.451	$1.48x10^{-39}$
SNHG14	ENSG00000224078.12	2.930	15.070	-2.032	$4.96x10^{-35}$
GS1-184P14.2	ENSG00000225071.1	4.085	0.220	2.059	$3.62x10^{-54}$
LTB	ENSG00000227507.2	14.910	1.350	2.759	$5.56x10^{-58}$
ORM2	ENSG00000228278.3	0.600	6.200	-2.170	$7.67x10^{-07}$
RP4-781K5.2	ENSG00000228830.1	0.000	24.220	-4.657	$6.85x10^{-50}$
PGA4	ENSG00000229183.8	0.430	36295.422	-14.632	$1.38x10^{-59}$
PGA3	ENSG00000229859.8	0.880	62631.464	-15.024	$3.60x10^{-58}$
RP11-284F21.7	ENSG00000229953.1	9.845	0.380	2.974	$1.84x10^{-57}$
TRPM2-AS	ENSG00000230061.2	4.275	0.030	2.357	$4.40x10^{-50}$
HLA-DPA1	ENSG00000231389.7	195.448	28.610	2.730	$2.77x10^{-41}$
LSM12P1	ENSG00000232024.2	19.065	3.850	2.049	$1.61x10^{-46}$
SEMA3B-AS1	ENSG00000232352.1	0.410	5.460	-2.196	$6.21x10^{-62}$
HLA-DQB2	ENSG00000232629.8	5.015	0.450	2.053	$6.61x10^{-32}$

TMEM238	ENSG00000233493.3	36.440	3.160	3.170	$5.81x10^{-85}$
ZNRF2P1	ENSG00000237004.3	4.915	0.310	2.175	$9.35x10^{-57}$
KIFC1	ENSG00000237649.7	13.345	0.880	2.932	$3.79x10^{-82}$
OR2I1P	ENSG00000237988.3	9.055	0.120	3.166	$2.97x10^{-62}$
SNORD97	ENSG00000238622.1	3.650	0.000	2.217	$7.48x10^{-04}$
SCARNA7	ENSG00000238741.1	12.285	0.430	3.216	$8.50x10^{-57}$
SNORA47	ENSG00000238961.1	6.010	0.000	2.809	$9.21x10^{-14}$
NME1	ENSG00000239672.7	102.628	22.620	2.133	$2.64x10^{-83}$
IGKV1D-33	ENSG00000239975.2	15.730	0.000	4.064	$7.95x10^{-25}$
PSMB9	ENSG00000240065.7	98.502	16.450	2.512	$1.86x10^{-62}$
IGKV1-39	ENSG00000242371.1	8.750	1.230	2.128	$4.33x10^{-11}$
IGKV2D-28	ENSG00000242534.2	50.801	1.360	4.456	$6.79x10^{-31}$
HLA-DMB	ENSG00000242574.8	48.160	9.850	2.180	$1.94x10^{-33}$
TNFRSF6B	ENSG00000243509.4	16.380	1.820	2.624	$8.15x10^{-32}$
GSTA1	ENSG00000243955.5	8.245	38.180	-2.083	$6.21x10^{-06}$
LINC01296	ENSG00000244306.9	6.370	0.230	2.583	$4.51x10^{-54}$
NEAT1	ENSG00000245532.5	157.324	1140.222	-2.850	$3.39x10^{-38}$
LINC01207	ENSG00000248771.5	4.239	0.110	2.239	$8.89x10^{-25}$
RAC1P2	ENSG00000249936.3	44.683	2.740	3.611	$8.33x10^{-86}$
TMEM158	ENSG00000249992.1	7.405	0.720	2.289	$1.22x10^{-59}$
PSMC1P5	ENSG00000250273.1	2.605	18.960	-2.469	$2.14x10^{-21}$
RP11-478C6.4	ENSG00000250321.1	4.070	0.000	2.342	$1.46x10^{-10}$
RP11-834C11.4	ENSG00000250742.1	8.690	43.779	-2.208	$5.01x10^{-23}$
MALAT1	ENSG00000251562.7	1501.094	156.649	3.252	$4.14x10^{-54}$

RNA5SP216	ENSG00000251920.1	0.000	6.100	-2.828	$1.27x10^{-21}$
HOXA10	ENSG00000253293.4	9.750	0.070	3.329	$1.77x10^{-65}$
IGHGP	ENSG00000253755.1	4.115	0.250	2.033	$2.59x10^{-26}$
LYN	ENSG00000254087.7	30.749	4.720	2.473	$9.18x10^{-80}$
RP11-598P20.3	ENSG00000254198.1	7.675	0.850	2.229	$8.07x10^{-74}$
KRT8P3	ENSG00000254285.3	5.780	0.550	2.129	$1.82x10^{-41}$
RP11-152H18.3	ENSG00000254665.1	0.205	6.720	-2.680	$1.33x10^{-16}$
RPL41P2	ENSG00000256338.2	1.785	22.181	-3.057	$1.95x10^{-47}$
PGA5	ENSG00000256713.7	0.130	6785.314	-12.552	$1.83x10^{-72}$
RP11-603J24.9	ENSG00000257411.1	15.645	0.000	4.057	$7.40x10^{-48}$
RP11-290L1.3	ENSG00000257453.1	13.455	0.000	3.854	$5.76x10^{-39}$
MGAM2	ENSG00000257743.8	6.800	0.060	2.879	$6.10x10^{-44}$
RP11-162P23.2	ENSG00000257767.2	30.420	0.960	4.003	$1.99x10^{-30}$
RP11-386G11.10	ENSG00000258017.1	0.735	14.100	-3.122	$1.07x10^{-17}$
RP11-161H23.5	ENSG00000258232.2	0.000	26.270	-4.769	$2.26x10^{-29}$
RP11-841O20.2	ENSG00000258757.1	7.810	0.660	2.408	$7.43x10^{-31}$
TUBB3	ENSG00000258947.6	12.620	2.190	2.094	$1.02x10^{-36}$
RP11-554A11.9	ENSG00000259799.1	0.110	7.090	-2.866	$3.53x10^{-73}$
RP11-304L19.1	ENSG00000259933.6	8.825	1.200	2.159	$5.69x10^{-50}$
LINC00261	ENSG00000259974.2	1.455	23.530	-3.321	$6.50x10^{-15}$
HOXB7	ENSG00000260027.4	18.650	1.790	2.816	$1.79x10^{-41}$
RP11-24N18.1	ENSG00000260570.1	0.000	5.480	-2.696	$4.73x10^{-46}$
EPPK1	ENSG00000261150.2	9.380	1.270	2.193	$4.97x10^{-50}$
MMP12	ENSG00000262406.2	13.867	0.040	3.837	$7.07x10^{-52}$

SNORD3A	ENSG00000263934.4	742.938	30.890	4.544	$1.74x10^{-44}$
RP11-746M1.1	ENSG00000263986.1	0.000	5.220	-2.637	$5.99x10^{-13}$
MIR3648-2	ENSG00000264462.1	6.605	0.000	2.927	$1.78x10^{-50}$
RP11-138I1.4	ENSG00000265401.1	1.005	35.901	-4.202	$1.08x10^{-17}$
GATA6-AS1	ENSG00000266010.1	2.135	37.809	-3.630	$3.13x10^{-37}$
FXYD1	ENSG00000266964.5	4.645	23.450	-2.115	$4.97x10^{-29}$
LCN6	ENSG00000267206.5	0.225	6.680	-2.648	$1.59x10^{-85}$
RP11-323N12.5	ENSG00000267601.1	27.970	0.000	4.856	$1.36x10^{-67}$
SLC6A14	ENSG00000268104.2	5.085	0.050	2.535	$1.40x10^{-33}$
RP11-394O4.5	ENSG00000269936.3	1.905	17.410	-2.664	$4.41x10^{-33}$
RNU11	ENSG00000270103.3	89.905	0.000	6.506	$2.22x10^{-35}$
RP11-544M22.13	ENSG00000270149.5	9.565	0.150	3.200	$3.96x10^{-44}$
RP11-284F21.10	ENSG00000272405.1	5.485	0.370	2.243	$1.54x10^{-46}$
RP11-379F4.6	ENSG00000272440.1	3.810	0.000	2.266	$6.34x10^{-65}$
MUSTN1	ENSG00000272573.5	0.385	7.250	-2.575	$3.90x10^{-47}$
RP11-357H14.17	ENSG00000272763.1	9.120	0.000	3.339	$1.08x10^{-65}$
U1	ENSG00000273768.1	63.924	4.330	3.607	$1.92x10^{-42}$
Metazoa_SRP	ENSG00000274012.1	2340.092	145.320	4.000	$3.63x10^{-55}$
RP11-229E13.4	ENSG00000274630.1	3.295	0.000	2.103	$9.43x10^{-07}$
MIR3648-1	ENSG00000275708.1	6.605	0.000	2.927	$1.78x10^{-50}$
UHRF1	ENSG00000276043.4	10.065	0.480	2.902	$7.32x10^{-91}$
RN7SL1	ENSG00000276168.1	2064.890	110.376	4.213	$2.08x10^{-66}$
RMRP	ENSG00000277027.1	48.994	1.790	4.163	$1.48x10^{-55}$
RPPH1	ENSG00000277209.1	135.086	1.790	5.608	$1.32x10^{-73}$

TRAC	ENSG00000277734.4	36.564	6.990	2.233	$4.15x10^{-45}$
Metazoa_SRP	ENSG00000278771.1	6.885	0.140	2.790	$1.12x10^{-53}$
RP5-1039K5.12	ENSG00000278948.1	1.780	12.400	-2.269	$5.50x10^{-62}$
RP11-2K6.1	ENSG00000279225.1	24.185	2.350	2.910	$9.26x10^{-58}$
IGHV1-69-2	ENSG00000280411.1	33.139	7.240	2.051	$1.55x10^{-10}$
PAPD7	ENSG00000282558.1	3.180	0.000	2.063	$6.58x10^{-39}$

Table SIII. Enriched genes in SERPINA1 altered and unaltered groups in The Cancer Genome Atlas-stomach adenocarcinoma dataset.

Gene	Cytoband	μ in altered group[a]	μ in unaltered group[b]	σ in altered group[c]	σ in unaltered group[d]	Log ratio	P-value	q-value	Tendency
SERPINA3	14q32.13	12.39	9.42	2.93	2.46	2.97	$8.57x10^{-08}$	0.0011	Overexpressed
NFIA	1p31.3	10.01	10.59	0.64	0.99	-0.58	$1.78x10^{-06}$	0.0118	Underexpressed
DHCR24	1p32.3	12.74	12.04	0.85	1.14	0.71	$7.53x10^{-06}$	0.0331	Overexpressed
LRRFIP2	3p22.2	9.27	9.52	0.31	0.49	-0.25	$1.43x10^{-05}$	0.0384	Underexpressed
CDH1	16q22.1	13.35	12.79	0.62	1.49	0.56	$1.46x10^{-05}$	0.0384	Overexpressed
DGKZ	11p11.2	9.38	9.77	0.52	0.66	-0.40	$2.51x10^{-05}$	0.0552	Underexpressed
CAMK2G	10q22.2	9.68	10.05	0.48	0.71	-0.37	$3.07x10^{-05}$	0.0558	Underexpressed
PCSK6	15q26.3	9.81	9.08	0.99	1.08	0.73	$3.39x10^{-05}$	0.0558	Overexpressed
PLPP3	1p32.2	10.61	10.04	0.78	0.75	0.57	$4.02x10^{-05}$	0.0589	Overexpressed
SNTB1	8q24.12	10.03	9.18	1.17	1.29	0.85	$4.75x10^{-05}$	0.0603	Overexpressed
SAFB2	19p13.3	10.04	10.27	0.32	0.37	-0.23	$5.03x10^{-05}$	0.0603	Underexpressed
FTL	19q13.33	16.00	15.39	0.89	0.72	0.61	$7.69x10^{-05}$	0.0825	Overexpressed
MERTK	2q13	8.60	7.91	0.99	1.04	0.69	$8.13x10^{-05}$	0.0825	Overexpressed
CD276	15q24.1	11.39	10.99	0.58	0.71	0.40	$1.09x10^{-04}$	0.1030	Overexpressed
GATAD2B	1q21.3	10.06	10.31	0.36	0.45	-0.24	$1.37x10^{-04}$	0.1060	Underexpressed
UXS1	2q12.2	9.82	9.48	0.51	0.47	0.34	$1.39x10^{-04}$	0.1060	Overexpressed
GLMP	1q22	10.50	10.06	0.66	0.67	0.44	$1.43x10^{-04}$	0.1060	Overexpressed
GPR84	12q13.13	5.49	4.42	1.62	1.47	1.07	$1.54x10^{-04}$	0.1060	Overexpressed
FBXO30	6q24.3	8.59	8.94	0.51	0.69	-0.35	$1.63x10^{-04}$	0.1060	Underexpressed
SCD	10q24.31	12.68	12.04	0.93	1.38	0.64	$1.67x10^{-04}$	0.1060	Overexpressed
MPHOSPH8	13q12.11	9.94	10.19	0.36	0.54	-0.25	$1.81x10^{-04}$	0.1060	Underexpressed
NINJ1	9q22.31	10.46	10.04	0.63	0.64	0.41	$1.87x10^{-04}$	0.1060	Overexpressed

GNA11	19p13.3	9.89	10.21	0.48	0.56	-0.32	1.89×10^{-04}	0.1060	Underexpressed
CFI	4q25	9.82	8.95	1.35	1.32	0.88	2.02×10^{-04}	0.1060	Overexpressed
METTL7B	12q13.2	9.36	8.73	0.91	1.51	0.63	2.11×10^{-04}	0.1060	Overexpressed
LTBP4	19q13.2	11.30	11.89	0.90	1.04	-0.59	2.12×10^{-04}	0.1060	Underexpressed
MELTF	3q29	9.12	8.17	1.45	1.76	0.96	2.16×10^{-04}	0.1060	Overexpressed
TTC39A	1p32.3	9.64	8.82	1.26	1.52	0.82	2.46×10^{-04}	0.1070	Overexpressed
G0S2	1q32.2	8.37	7.33	1.63	1.46	1.04	2.61×10^{-04}	0.1070	Overexpressed
OTUD7B	1q21.2	9.39	9.66	0.42	0.47	-0.27	2.72×10^{-04}	0.1070	Underexpressed
PON2	7q21.3	11.08	10.42	1.04	1.00	0.66	2.73×10^{-04}	0.1070	Overexpressed
PPP1R12C	19q13.42	9.89	10.27	0.57	0.80	-0.38	2.77×10^{-04}	0.1070	Underexpressed
LFNG	7p22.3	9.44	10.14	1.10	1.05	-0.70	2.86×10^{-04}	0.1070	Underexpressed
SLC40A1	2q32.2	12.62	11.96	1.02	1.18	0.65	2.89×10^{-04}	0.1070	Overexpressed
SLC35F5	2q14.1	10.03	9.68	0.55	0.57	0.35	2.95×10^{-04}	0.1070	Overexpressed
CCL3	17q12	6.86	5.90	1.51	1.63	0.96	2.95×10^{-04}	0.1070	Overexpressed
ASGR1	17p13.1	5.24	3.90	2.16	1.71	1.34	3.06×10^{-04}	0.1070	Overexpressed
DCLRE1C	10p13	8.71	8.99	0.43	0.61	-0.28	3.09×10^{-04}	0.1070	Underexpressed
PLCB3	11q13.1	10.33	10.91	0.93	0.80	-0.58	3.23×10^{-04}	0.1080	Underexpressed
TRIM35	8p21.2	8.57	8.88	0.49	0.50	-0.31	3.27×10^{-04}	0.1080	Underexpressed
GPSM2	1p13.3	9.28	9.70	0.67	0.66	-0.41	3.58×10^{-04}	0.1150	Underexpressed
HSD17B14	19q13.33	6.98	6.14	1.37	1.31	0.85	3.67×10^{-04}	0.1150	Overexpressed
NUMA1	11q13.4	12.33	12.69	0.58	0.53	-0.36	3.79×10^{-04}	0.1160	Underexpressed
RGS19	20q13.33	8.99	8.51	0.77	0.88	0.48	3.94×10^{-04}	0.1180	Overexpressed
SLAIN2	4p11	10.20	10.46	0.44	0.40	-0.27	4.23×10^{-04}	0.1220	Underexpressed
PDIA6	2p25.1	12.81	12.53	0.45	0.50	0.28	4.31×10^{-04}	0.1220	Overexpressed
TLR2	4q31.3	8.30	7.60	1.14	1.09	0.69	4.47×10^{-04}	0.1220	Overexpressed
KMT2A	11q23.3	11.17	11.56	0.64	0.55	-0.39	4.47×10^{-04}	0.1220	Underexpressed

PDIA4	7q36.1	12.85	12.42	0.71	0.72	0.43	$4.53x10^{-04}$	0.1220	Overexpressed
XBP1	22q12.1|22q12	12.90	12.32	0.97	0.77	0.58	$4.70x10^{-04}$	0.1240	Overexpressed
GPRC5C	17q25.1	10.36	9.67	1.13	1.19	0.69	$4.96x10^{-04}$	0.1280	Overexpressed
TM4SF18	3q25.1	6.70	6.17	0.85	1.04	0.52	$5.20x10^{-04}$	0.1320	Overexpressed
GLUL	1q25.3	13.11	12.60	0.86	0.76	0.51	$5.79x10^{-04}$	0.1410	Overexpressed
SPP1	4q22.1	11.43	10.22	2.00	2.19	1.21	$5.86x10^{-04}$	0.1410	Overexpressed
FOXO4	Xq13.1	8.09	8.52	0.71	0.73	-0.42	$5.89x10^{-04}$	0.1410	Underexpressed
GNL3L	Xp11.22	10.50	10.80	0.51	0.55	-0.30	$6.20x10^{-04}$	0.1410	Underexpressed
AHI1	6q23.3	8.28	8.65	0.62	0.63	-0.37	$6.23x10^{-04}$	0.1410	Underexpressed
SLC38A6	14q23.1	7.23	6.86	0.61	0.60	0.36	$6.30x10^{-04}$	0.1410	Overexpressed
TOM1L2	17p11.2	9.76	10.16	0.68	0.74	-0.40	$6.47x10^{-04}$	0.1410	Underexpressed
TFAP4	16p13.3	8.24	8.64	0.68	0.67	-0.40	$6.75x10^{-04}$	0.1410	Underexpressed
DFFB	1p36.32	7.10	7.50	0.69	0.62	-0.40	$6.77x10^{-04}$	0.1410	Underexpressed
ZBTB7A	19p13.3	11.17	11.53	0.61	0.58	-0.36	$6.79x10^{-04}$	0.1410	Underexpressed
TMEM251	14q32.12	8.26	7.98	0.47	0.47	0.28	$6.85x10^{-04}$	0.1410	Overexpressed
LRG1	19p13.3	9.67	8.77	1.54	1.52	0.90	$6.96x10^{-04}$	0.1410	Overexpressed
WASF2	1p36.11	11.88	12.14	0.43	0.46	-0.26	$7.07x10^{-04}$	0.1410	Underexpressed
LRCH1	13q14.13-q14.2	9.47	9.83	0.60	0.60	-0.35	$7.29x10^{-04}$	0.1410	Underexpressed
INPP5A	10q26.3	9.05	9.34	0.48	0.63	-0.29	$7.32x10^{-04}$	0.1410	Underexpressed
KIF13B	8p12	10.74	11.15	0.70	0.77	-0.41	$7.48x10^{-04}$	0.1410	Underexpressed
ABCC4	13q32.1	9.48	8.88	1.02	1.13	0.60	$7.51x10^{-04}$	0.1410	Overexpressed
DMKN	19q13.12	8.04	6.71	2.24	2.78	1.33	$7.65x10^{-04}$	0.1410	Overexpressed
HOXB5	17q21.32	6.56	7.28	1.23	1.29	-0.72	$7.76x10^{-04}$	0.1410	Underexpressed
SCARNA2	1p13.3	4.81	5.63	1.42	1.42	-0.82	$7.77x10^{-04}$	0.1410	Underexpressed
LMNA	1q22	12.75	13.12	0.65	0.60	-0.37	$7.79x10^{-04}$	0.1410	Underexpressed
SLC35B1	17q21.33	10.08	9.72	0.63	0.55	0.36	$7.91x10^{-04}$	0.1410	Overexpressed

CREB3L2	7q33	11.43	11.08	0.58	0.73	0.34	$8.11x10^{-04}$	0.1410	Overexpressed
PLCD4	2q35	5.42	5.86	0.73	1.00	-0.44	$8.23x10^{-04}$	0.1410	Underexpressed
RPN2	20q11.23	13.47	13.10	0.64	0.59	0.37	$8.33x10^{-04}$	0.1410	Overexpressed
MACROD1	11q13.1	7.64	8.21	0.99	1.04	-0.57	$8.33x10^{-04}$	0.1410	Underexpressed
SLC25A13	7q21.3	9.98	9.55	0.75	0.72	0.43	$8.62x10^{-04}$	0.1410	Overexpressed
ADGRL1	19p13.12	9.53	10.13	1.05	0.96	-0.60	$8.89x10^{-04}$	0.1410	Underexpressed
MIB2	1p36.33	9.12	9.65	0.92	0.86	-0.53	$8.93x10^{-04}$	0.1410	Underexpressed
RND1	12q13.12	8.00	7.25	1.30	1.33	0.75	$9.23x10^{-04}$	0.1410	Overexpressed
HIST1H2BC	6p22.2	6.52	5.77	1.32	1.31	0.75	$9.34x10^{-04}$	0.1410	Overexpressed
RAP1GAP	1p36.12	9.53	8.82	1.16	1.92	0.71	$9.46x10^{-04}$	0.1410	Overexpressed
WBP4	13q14.11	8.52	8.82	0.51	0.69	-0.30	$9.54x10^{-04}$	0.1410	Underexpressed
ZNF653	19p13.2	6.79	7.08	0.51	0.56	-0.29	$9.69x10^{-04}$	0.1410	Underexpressed
PPP1R12A	12q21.2-q21.31	10.52	10.85	0.57	0.70	-0.33	$9.78x10^{-04}$	0.1410	Underexpressed
HECA	6q24.1	9.76	10.08	0.56	0.55	-0.32	$9.86x10^{-04}$	0.1410	Underexpressed
CXCL2	4q13.3	9.20	8.17	1.82	1.77	1.03	$9.86x10^{-04}$	0.1410	Overexpressed
ACSL1	4q35.1	10.37	9.90	0.83	0.85	0.47	$9.92x10^{-04}$	0.1410	Overexpressed
EDEM2	20q11.22	9.95	9.63	0.58	0.51	0.33	$1.01x10^{-03}$	0.1410	Overexpressed
CASZ1	1p36.22	9.86	10.41	0.99	0.79	-0.55	$1.02x10^{-03}$	0.1410	Underexpressed
GPD1L	3p22.3	9.40	9.81	0.73	0.74	-0.41	$1.04x10^{-03}$	0.1410	Underexpressed
TAMM41	3p25.2	6.86	7.14	0.50	0.49	-0.28	$1.05x10^{-03}$	0.1410	Underexpressed
ST7L	1p13.2	7.78	8.07	0.50	0.61	-0.29	$1.05x10^{-03}$	0.1410	Underexpressed
XPA	9q22.33	7.64	7.91	0.47	0.53	-0.27	$1.05x10^{-03}$	0.1410	Underexpressed
C2ORF72	2q37.1	9.57	8.80	1.31	1.78	0.77	$1.06x10^{-03}$	0.1410	Overexpressed
CKAP4	12q23.3	11.68	11.29	0.70	0.67	0.40	$1.07x10^{-03}$	0.1410	Overexpressed
TNFRSF19	13q12.12	8.38	7.37	1.79	1.98	1.02	$1.07x10^{-03}$	0.1410	Overexpressed
P4HB	17q25.3	14.58	14.23	0.63	0.63	0.35	$1.08x10^{-03}$	0.1410	Overexpressed

C18ORF25	18q21.1	8.90	9.17	0.48	0.52	-0.27	$1.08x10^{-03}$	0.1410	Underexpressed
BAMBI	10p12.1	8.62	7.57	1.86	1.95	1.05	$1.10x10^{-03}$	0.1420	Overexpressed
CCSER2	10q23.1	9.89	10.20	0.54	0.68	-0.31	$1.13x10^{-03}$	0.1450	Underexpressed
ENGASE	17q25.3	8.32	8.70	0.67	0.75	-0.38	$1.15x10^{-03}$	0.1450	Underexpressed
MESD	15q25.1	10.55	10.31	0.43	0.43	0.24	$1.19x10^{-03}$	0.1480	Overexpressed
HNRNPUL2	11q12.3	11.34	11.60	0.48	0.41	-0.27	$1.19x10^{-03}$	0.1480	Underexpressed
TRPV4	12q24.11	6.66	5.97	1.23	1.43	0.69	$1.23x10^{-03}$	0.1510	Overexpressed
STK32B	4p16.2	5.62	4.79	1.50	1.41	0.83	$1.26x10^{-03}$	0.1540	Overexpressed
TSEN2	3p25.2	7.30	7.62	0.57	0.59	-0.32	$1.32x10^{-03}$	0.1580	Underexpressed
VKORC1	16p11.2	10.22	9.94	0.50	0.66	0.28	$1.32x10^{-03}$	0.1580	Overexpressed
SPTAN1	9q34.11	12.83	13.09	0.47	0.46	-0.26	$1.34x10^{-03}$	0.1590	Underexpressed
LINC00476	9q22.32	6.43	6.92	0.87	0.98	-0.48	$1.38x10^{-03}$	0.1610	Underexpressed
SQLE	8q24.13	10.43	9.91	0.92	1.17	0.52	$1.39x10^{-03}$	0.1610	Overexpressed
PMS2P1	7q22.1	7.20	6.70	0.90	0.97	0.50	$1.39x10^{-03}$	0.1610	Overexpressed
ABHD4	14q11.2	10.20	9.89	0.55	0.66	0.31	$1.41x10^{-03}$	0.1610	Overexpressed
HEXA	15q23	10.93	10.60	0.61	0.65	0.34	$1.45x10^{-03}$	0.1640	Overexpressed
RSF1	11q14.1	9.91	10.17	0.48	0.50	-0.27	$1.47x10^{-03}$	0.1660	Underexpressed
CD14	5q31.3	10.70	10.09	1.14	1.07	0.62	$1.49x10^{-03}$	0.1660	Overexpressed
PPIL6	6q21	4.80	5.36	1.03	1.02	-0.56	$1.50x10^{-03}$	0.1660	Underexpressed
LDAH	2p24.1	8.82	8.53	0.47	0.92	0.28	$1.61x10^{-03}$	0.1710	Overexpressed
MRPS23	17q22	9.26	8.96	0.54	0.53	0.29	$1.62x10^{-03}$	0.1710	Overexpressed
ZNF395	8p21.1	9.86	10.19	0.60	0.57	-0.33	$1.63x10^{-03}$	0.1710	Underexpressed
IRF5	7q32.1	8.19	7.84	0.62	0.90	0.35	$1.64x10^{-03}$	0.1710	Overexpressed
TDRD3	13q21.2	8.08	8.39	0.59	0.53	-0.32	$1.64x10^{-03}$	0.1710	Underexpressed
RTN4R	22q11.21	8.04	7.47	1.06	1.12	0.58	$1.64x10^{-03}$	0.1710	Overexpressed
TXNDC5	6p24.3	12.96	12.66	0.56	0.56	0.30	$1.65x10^{-03}$	0.1710	Overexpressed

TNRC6B	22q13.1	10.44	10.73	0.52	0.57	-0.29	$1.65x10^{-03}$	0.1710	Underexpressed
FOXA3	19q13.32	9.57	9.02	0.95	1.69	0.56	$1.66x10^{-03}$	0.1710	Overexpressed
HR	8p21.3	8.84	9.90	2.00	1.52	-1.07	$1.67x10^{-03}$	0.1710	Underexpressed
SLC2A3	12p13.31	10.16	9.41	1.40	1.13	0.74	$1.70x10^{-03}$	0.1710	Overexpressed
NUDT14	14q32.33	8.71	8.32	0.72	0.77	0.39	$1.71x10^{-03}$	0.1710	Overexpressed
NRCAM	7q31.1	8.06	6.93	2.11	2.00	1.13	$1.73x10^{-03}$	0.1710	Overexpressed
GNAI1	7q21.11	8.64	8.08	1.00	1.23	0.55	$1.73x10^{-03}$	0.1710	Overexpressed
CTSA	20q13.12	13.01	12.63	0.72	0.71	0.38	$1.75x10^{-03}$	0.1710	Overexpressed
ASL	7q11.21	10.38	9.97	0.74	0.88	0.41	$1.76x10^{-03}$	0.1710	Overexpressed
DNAJB9	7q31.1|14q24.2-q24.3	9.48	9.13	0.66	0.58	0.35	$1.86x10^{-03}$	0.1800	Overexpressed
PTGFRN	1p13.1	10.91	11.25	0.63	0.68	-0.34	$1.88x10^{-03}$	0.1810	Underexpressed
ANKRD13C	1p31.1	9.00	9.22	0.40	0.42	-0.21	$1.92x10^{-03}$	0.1830	Underexpressed
NET1	10p15.1	11.33	11.70	0.69	0.69	-0.37	$1.93x10^{-03}$	0.1830	Underexpressed
ANKS1A	6p21.31	10.10	10.39	0.54	0.56	-0.29	$1.94x10^{-03}$	0.1830	Underexpressed
HM13	20q11.21	12.06	11.75	0.58	0.61	0.31	$1.97x10^{-03}$	0.1830	Overexpressed
NFIX	19p13.13	10.98	11.56	1.11	0.90	-0.58	$1.98x10^{-03}$	0.1830	Underexpressed
MMP9	20q13.12	10.05	9.20	1.60	1.64	0.85	$2.00x10^{-03}$	0.1830	Overexpressed
WIPI1	17q24.2	9.15	8.76	0.72	0.80	0.39	$2.01x10^{-03}$	0.1830	Overexpressed
DRAM1	12q23.2	9.89	9.38	0.95	0.84	0.50	$2.02x10^{-03}$	0.1830	Overexpressed
ECI2	6p25.2	9.33	8.91	0.79	0.89	0.42	$2.03x10^{-03}$	0.1830	Overexpressed
EFNB2	13q33.3	10.44	10.91	0.90	0.77	-0.47	$2.05x10^{-03}$	0.1840	Underexpressed
GBA	1q22	10.16	9.79	0.69	0.71	0.36	$2.07x10^{-03}$	0.1840	Overexpressed
MSMO1	4q32.3	10.28	9.90	0.68	0.90	0.37	$2.14x10^{-03}$	0.1880	Overexpressed
USP7	16p13.2	11.20	11.42	0.42	0.42	-0.22	$2.16x10^{-03}$	0.1880	Underexpressed
KATNA1	6q25.1	7.65	7.87	0.42	0.40	-0.22	$2.17x10^{-03}$	0.1880	Underexpressed

ZNF575	19q13.31	5.55	5.97	0.81	0.69	-0.42	$2.17x10^{-03}$	0.1880	Underexpressed
TPPP	5p15.33	8.18	8.89	1.35	1.47	-0.71	$2.22x10^{-03}$	0.1910	Underexpressed
FRAS1	4q21.21	9.32	8.12	2.30	2.25	1.20	$2.24x10^{-03}$	0.1910	Overexpressed
HOXA2	7p15.2	4.21	4.95	1.40	1.59	-0.74	$2.26x10^{-03}$	0.1920	Underexpressed
SUGT1P3	13q14.11	5.10	5.50	0.76	0.90	-0.40	$2.28x10^{-03}$	0.1920	Underexpressed
HMOX1	22q12.3	9.76	9.22	1.03	0.97	0.53	$2.31x10^{-03}$	0.1920	Overexpressed
SPINT1	15q15.1	12.50	12.19	0.55	0.89	0.30	$2.34x10^{-03}$	0.1920	Overexpressed
AKAP8	19p13.12	9.21	9.40	0.36	0.36	-0.19	$2.34x10^{-03}$	0.1920	Underexpressed
SLC2A14	12p13.31	4.39	3.47	1.80	1.48	0.93	$2.35x10^{-03}$	0.1920	Overexpressed
APMAP	20p11.21	11.23	10.93	0.57	0.54	0.29	$2.37x10^{-03}$	0.1920	Overexpressed
GNG10	9q31.3	9.21	8.88	0.62	0.67	0.32	$2.38x10^{-03}$	0.1920	Overexpressed
CES2	16q22.1	10.91	11.57	1.25	1.43	-0.66	$2.38x10^{-03}$	0.1920	Underexpressed
PCNT	21q22.3	9.53	9.83	0.58	0.58	-0.30	$2.43x10^{-03}$	0.1950	Underexpressed
SIRPB1	20p13	7.19	6.57	1.18	1.29	0.62	$2.45x10^{-03}$	0.1960	Overexpressed
COBLL1	2q24.3	10.21	9.85	0.68	0.85	0.36	$2.52x10^{-03}$	0.1960	Overexpressed
MIA2	14q13.2	10.31	9.99	0.63	0.60	0.32	$2.52x10^{-03}$	0.1960	Overexpressed
IL1RAP	3q28	8.57	8.12	0.87	0.91	0.45	$2.52x10^{-03}$	0.1960	Overexpressed
GABPB2	1q21.3	7.02	7.39	0.72	0.66	-0.37	$2.54x10^{-03}$	0.1960	Underexpressed
C12ORF49	12q24.22	10.01	9.61	0.78	0.64	0.40	$2.55x10^{-03}$	0.1960	Overexpressed
SGK1	6q23.2	10.97	10.49	0.91	1.00	0.48	$2.56x10^{-03}$	0.1960	Overexpressed
SDF2	17q11.2	9.66	9.41	0.49	0.49	0.25	$2.56x10^{-03}$	0.1960	Overexpressed
SHISA4	1q32.1	7.42	6.89	1.00	1.29	0.53	$2.58x10^{-03}$	0.1970	Overexpressed
WNT2B	1p13.2	5.20	6.03	1.61	1.63	-0.83	$2.63x10^{-03}$	0.1980	Underexpressed
EVPL	17q25.1	9.71	10.54	1.64	1.34	-0.83	$2.64x10^{-03}$	0.1980	Underexpressed
PKD1	16p13.3	10.26	10.71	0.86	0.90	-0.44	$2.66x10^{-03}$	0.1980	Underexpressed
SEC11A	15q25.2-q25.3	10.86	10.62	0.47	0.45	0.24	$2.66x10^{-03}$	0.1980	Overexpressed

DGKH	13q14.11	6.26	6.89	1.24	1.05	-0.63	$2.68x10^{-03}$	0.1980	Underexpressed
IKBKB	8p11.21	9.16	9.44	0.55	0.48	-0.28	$2.70x10^{-03}$	0.1980	Underexpressed
NDE1	16p13.11	9.42	9.78	0.70	0.64	-0.36	$2.73x10^{-03}$	0.1980	Underexpressed
ELMSAN1	14q24.3	10.23	10.47	0.47	0.55	-0.24	$2.74x10^{-03}$	0.1980	Underexpressed
PLIN2	9p22.1	10.15	9.57	1.13	1.11	0.58	$2.74x10^{-03}$	0.1980	Overexpressed
GRAMD1A	19q13.11	10.76	10.37	0.76	0.83	0.39	$2.74x10^{-03}$	0.1980	Overexpressed
LINC02381	12q13.13	8.50	7.50	1.94	2.05	1.00	$2.78x10^{-03}$	0.1980	Overexpressed
KIFC3	16q21	9.20	8.78	0.80	0.94	0.42	$2.78x10^{-03}$	0.1980	Overexpressed
YIPF3	6p21.1	11.77	11.46	0.62	0.54	0.31	$2.79x10^{-03}$	0.1980	Overexpressed
RAVER1	19p13.2	11.26	11.48	0.42	0.53	-0.22	$2.84x10^{-03}$	0.2000	Underexpressed
GGCX	2p11.2	9.33	9.04	0.58	0.56	0.29	$2.86x10^{-03}$	0.2010	Overexpressed
FAM45BP	Xq26.1	7.65	7.35	0.57	0.66	0.30	$2.88x10^{-03}$	0.2010	Overexpressed
KIF13A	6p22.3	9.71	10.04	0.62	0.73	-0.32	$2.93x10^{-03}$	0.2020	Underexpressed
FOXK1	7p22.1	10.57	10.96	0.78	0.72	-0.39	$2.97x10^{-03}$	0.2020	Underexpressed
CEACAM1	19q13.2	11.04	10.42	1.21	1.36	0.62	$2.97x10^{-03}$	0.2020	Overexpressed
RAB17	2q37.3	8.37	7.89	0.93	1.03	0.48	$2.98x10^{-03}$	0.2020	Overexpressed
STRADA	17q23.3	8.88	8.68	0.40	0.48	0.20	$2.98x10^{-03}$	0.2020	Overexpressed
PYGL	14q22.1	8.86	8.16	1.36	1.48	0.70	$2.99x10^{-03}$	0.2020	Overexpressed
OSR2	8q22.2	6.66	7.53	1.75	1.15	-0.87	$3.00x10^{-03}$	0.2020	Underexpressed
CCDC25	8p21.1	9.50	9.80	0.59	0.61	-0.30	$3.04x10^{-03}$	0.2020	Underexpressed
ZNF697	1p12	7.86	7.54	0.63	0.80	0.33	$3.04x10^{-03}$	0.2020	Overexpressed
NRN1	6p25.1	5.40	6.04	1.22	1.64	-0.64	$3.08x10^{-03}$	0.2020	Underexpressed
KDELR1	19q13.33	12.80	12.56	0.46	0.51	0.24	$3.11x10^{-03}$	0.2020	Overexpressed
KAT6A	8p11.21	10.78	11.05	0.55	0.49	-0.28	$3.11x10^{-03}$	0.2020	Underexpressed
ANKRD42	11q14.1	7.52	7.77	0.49	0.48	-0.25	$3.12x10^{-03}$	0.2020	Underexpressed
ADPGK	15q24.1	10.11	9.85	0.51	0.42	0.26	$3.13x10^{-03}$	0.2020	Overexpressed

ADAMTS9	3p14.1	9.25	8.74	1.02	1.09	0.52	$3.20x10^{-03}$	0.2020	Overexpressed
LINC00852	3p25.3	4.00	4.39	0.76	0.86	-0.39	$3.20x10^{-03}$	0.2020	Underexpressed
MAOB	Xp11.3	9.03	8.19	1.63	2.07	0.84	$3.21x10^{-03}$	0.2020	Overexpressed
OGFRL1	6q13	7.89	7.45	0.85	1.04	0.44	$3.23x10^{-03}$	0.2020	Overexpressed
TUBE1	6q21	7.42	7.74	0.64	0.59	-0.32	$3.23x10^{-03}$	0.2020	Underexpressed
FADS1	11q12.2	9.19	8.63	1.11	1.29	0.57	$3.26x10^{-03}$	0.2020	Overexpressed
NUDT16P1	3q22.1	7.86	7.46	0.73	1.25	0.40	$3.26x10^{-03}$	0.2020	Overexpressed
COLGALT2	1q25.3	7.04	5.62	2.87	2.22	1.42	$3.27x10^{-03}$	0.2020	Overexpressed
ZNF250	8q24.3	7.33	7.59	0.53	0.52	-0.27	$3.27x10^{-03}$	0.2020	Underexpressed
ATF2	2q31.1	9.39	9.13	0.51	0.58	0.26	$3.30x10^{-03}$	0.2020	Overexpressed
TRIM26	6p22.1	10.22	10.46	0.49	0.43	-0.24	$3.32x10^{-03}$	0.2020	Underexpressed
GMPPA	2q35	10.17	9.96	0.41	0.56	0.21	$3.33x10^{-03}$	0.2020	Overexpressed
RNF6	13q12.13	10.01	10.23	0.43	0.52	-0.22	$3.34x10^{-03}$	0.2020	Underexpressed
ANO1	11q13.3	10.06	10.87	1.64	1.43	-0.82	$3.35x10^{-03}$	0.2020	Underexpressed
HIST2H2AA3	1q21.2	8.51	7.94	1.13	1.13	0.57	$3.36x10^{-03}$	0.2020	Overexpressed
INO80	15q15.1	9.78	9.95	0.35	0.40	-0.18	$3.38x10^{-03}$	0.2020	Underexpressed
SLC6A12	12p13.33	5.44	4.48	1.93	1.77	0.96	$3.38x10^{-03}$	0.2020	Overexpressed
PLAU	10q22.2	10.78	10.25	1.06	1.19	0.54	$3.39x10^{-03}$	0.2020	Overexpressed
AKAP11	13q14.11	10.47	10.78	0.61	0.66	-0.31	$3.41x10^{-03}$	0.2030	Underexpressed
BEND3P3	10q22.3	5.34	5.89	1.10	1.19	-0.55	$3.43x10^{-03}$	0.2030	Underexpressed
MYH14	19q13.33	12.80	13.19	0.74	1.09	-0.39	$3.45x10^{-03}$	0.2030	Underexpressed
CDKN2D	19p13.2	7.14	7.44	0.60	0.65	-0.30	$3.50x10^{-03}$	0.2050	Underexpressed
GLE1	9q34.11	9.63	9.89	0.53	0.50	-0.26	$3.55x10^{-03}$	0.2060	Underexpressed
RAB11FIP1	8p11.23	12.07	12.42	0.68	0.90	-0.35	$3.57x10^{-03}$	0.2060	Underexpressed
TMED9	5q35.3	11.35	11.08	0.55	0.57	0.27	$3.57x10^{-03}$	0.2060	Overexpressed
SIRPA	20p13	10.69	10.28	0.83	0.93	0.42	$3.59x10^{-03}$	0.2060	Overexpressed

SMARCC2	12q13.2	11.15	11.35	0.40	0.39	-0.20	$3.66x10^{-03}$	0.2080	Underexpressed
ERICH1	8p23.3	8.33	8.65	0.66	0.66	-0.33	$3.67x10^{-03}$	0.2080	Underexpressed
R3HDM2	12q13.3	10.38	10.61	0.48	0.48	-0.24	$3.68x10^{-03}$	0.2080	Underexpressed
NPC2	14q24.3	11.82	11.48	0.69	0.61	0.34	$3.72x10^{-03}$	0.2080	Overexpressed
C1ORF53	1q31.3	5.53	5.01	1.05	0.98	0.52	$3.72x10^{-03}$	0.2080	Overexpressed
SCAI	9q33.3	7.99	8.32	0.66	0.63	-0.33	$3.75x10^{-03}$	0.2080	Underexpressed
IFNGR2	21q22.11	10.98	10.67	0.62	0.58	0.30	$3.75x10^{-03}$	0.2080	Overexpressed
SPATA5	4q28.1	7.99	8.32	0.68	0.67	-0.33	$3.76x10^{-03}$	0.2080	Underexpressed
TMEM185B	2q14.2	9.94	9.64	0.61	0.52	0.30	$3.79x10^{-03}$	0.2080	Overexpressed
CPQ	8q22.1	9.12	8.73	0.76	1.01	0.39	$3.80x10^{-03}$	0.2080	Overexpressed
ZNHIT6	1p22.3	8.42	8.61	0.38	0.43	-0.19	$3.81x10^{-03}$	0.2080	Underexpressed
OPRL1	20q13.33	4.98	4.39	1.20	1.30	0.60	$3.81x10^{-03}$	0.2080	Overexpressed
OXCT1	5p13.1	8.39	8.97	1.16	1.34	-0.58	$3.83x10^{-03}$	0.2090	Underexpressed
HIF1A	14q23.2	12.43	12.08	0.70	0.67	0.34	$3.87x10^{-03}$	0.2090	Overexpressed
MDN1	6q15	9.89	10.26	0.76	0.67	-0.37	$3.88x10^{-03}$	0.2090	Underexpressed
MARC2	1q41	7.96	7.63	0.63	1.04	0.33	$3.89x10^{-03}$	0.2090	Overexpressed
DAD1	14q11.2	11.34	11.10	0.47	0.56	0.23	$3.91x10^{-03}$	0.2090	Overexpressed
METTL9	16p12.2	11.00	10.82	0.36	0.38	0.18	$3.92x10^{-03}$	0.2090	Overexpressed
RTF1	15q15.1	10.70	10.91	0.43	0.50	-0.21	$3.99x10^{-03}$	0.2120	Underexpressed
GK	Xp21.2	8.25	7.81	0.89	0.99	0.44	$4.00x10^{-03}$	0.2120	Overexpressed
CNTRL	9q33.2	8.46	8.83	0.75	0.73	-0.37	$4.04x10^{-03}$	0.2130	Underexpressed
ZC3H6	2q14.1	7.91	8.28	0.75	0.82	-0.37	$4.06x10^{-03}$	0.2130	Underexpressed
SH3GLB2	9q34.11	9.88	10.22	0.70	0.59	-0.34	$4.09x10^{-03}$	0.2130	Underexpressed
FAM20A	17q24.2	7.37	6.72	1.34	1.38	0.66	$4.11x10^{-03}$	0.2130	Overexpressed
ANGPT2	8p23.1	8.60	8.12	0.99	1.02	0.49	$4.11x10^{-03}$	0.2130	Overexpressed
HERC2	15q13.1	10.42	10.74	0.67	0.59	-0.33	$4.12x10^{-03}$	0.2130	Underexpressed

TLN2	15q22.2	9.28	9.80	1.06	1.02	-0.51	$4.14x10^{-03}$	0.2130	Underexpressed
APOC2	19q13.32	8.19	7.17	2.10	1.79	1.01	$4.18x10^{-03}$	0.2140	Overexpressed
SLC30A1	1q32.3	9.22	8.89	0.68	0.64	0.33	$4.18x10^{-03}$	0.2140	Overexpressed
CCDC112	5q22.3	7.54	7.86	0.66	0.71	-0.33	$4.23x10^{-03}$	0.2150	Underexpressed
DMPK	19q13.32	8.70	9.18	0.95	1.28	-0.48	$4.25x10^{-03}$	0.2150	Underexpressed
PCBD1	10q22.1	11.19	10.91	0.58	0.68	0.29	$4.28x10^{-03}$	0.2160	Overexpressed
ELL3	15q15.3	7.55	7.94	0.80	0.88	-0.39	$4.28x10^{-03}$	0.2160	Underexpressed
AFAP1	4p16.1	10.25	10.63	0.78	0.74	-0.38	$4.32x10^{-03}$	0.2170	Underexpressed
SOCS3	17q25.3	11.27	10.80	0.96	0.99	0.47	$4.37x10^{-03}$	0.2180	Overexpressed
SREK1IP1	5q12.3	9.59	9.90	0.63	0.65	-0.31	$4.37x10^{-03}$	0.2180	Underexpressed
NUP210	3p25.1	10.53	9.96	1.10	1.68	0.56	$4.45x10^{-03}$	0.2200	Overexpressed
SNTB2	16q22.1	9.87	10.18	0.65	0.54	-0.31	$4.47x10^{-03}$	0.2210	Underexpressed
SYF2	1p36.11	9.93	10.11	0.36	0.51	-0.18	$4.50x10^{-03}$	0.2210	Underexpressed
CLCF1	11q13.2	8.00	7.51	1.00	1.07	0.48	$4.57x10^{-03}$	0.2230	Overexpressed
MXI1	10q25.2	8.90	9.25	0.74	0.75	-0.36	$4.59x10^{-03}$	0.2230	Underexpressed
FJX1	11p13	7.46	6.97	1.01	0.95	0.49	$4.60x10^{-03}$	0.2230	Overexpressed
ERCC5	13q33.1	10.01	10.23	0.47	0.51	-0.23	$4.62x10^{-03}$	0.2230	Underexpressed
CCZ1P-OR7E38P	7q21.3	7.14	6.69	0.94	0.92	0.45	$4.64x10^{-03}$	0.2230	Overexpressed
GATD1	11p15.5	9.58	9.92	0.71	0.67	-0.34	$4.64x10^{-03}$	0.2230	Underexpressed
MTCP1	Xq28	4.31	4.65	0.71	0.76	-0.34	$4.65x10^{-03}$	0.2230	Underexpressed
CACHD1	1p31.3	8.54	7.90	1.35	1.29	0.65	$4.70x10^{-03}$	0.2230	Overexpressed
SSR3	3q25.31	12.11	11.82	0.61	0.48	0.29	$4.70x10^{-03}$	0.2230	Overexpressed
NBL1	1p36.13	11.19	11.72	1.11	0.92	-0.53	$4.75x10^{-03}$	0.2230	Underexpressed
SMPD1	11p15.4	9.41	9.15	0.52	0.73	0.26	$4.76x10^{-03}$	0.2230	Overexpressed
CTSL	9q21.33	10.78	10.33	0.95	0.90	0.45	$4.76x10^{-03}$	0.2230	Overexpressed
SLC12A8	3q21.2	9.02	8.72	0.61	0.79	0.30	$4.77x10^{-03}$	0.2230	Overexpressed

PPP1R12B	1q32.1	10.56	11.19	1.27	1.72	-0.63	$4.77x10^{-03}$	0.2230	Underexpressed
TMEM216	11q12.2	8.28	7.99	0.61	0.54	0.29	$4.88x10^{-03}$	0.2230	Overexpressed
CDC40	6q21	9.16	9.39	0.47	0.46	-0.23	$4.89x10^{-03}$	0.2230	Underexpressed
SNIP1	1p34.3	7.94	8.11	0.35	0.36	-0.17	$4.90x10^{-03}$	0.2230	Underexpressed
SPEN	1p36.21-p36.13	11.38	11.64	0.55	0.44	-0.26	$4.90x10^{-03}$	0.2230	Underexpressed
MCFD2	2p21	11.20	10.98	0.45	0.45	0.22	$4.95x10^{-03}$	0.2230	Overexpressed
ZNF512B	20q13.33	9.00	8.34	1.39	1.28	0.66	$4.96x10^{-03}$	0.2230	Overexpressed
CASP8AP2	6q15	8.74	9.04	0.63	0.62	-0.30	$4.98x10^{-03}$	0.2230	Underexpressed
SCAMP5	15q24.2	9.07	8.38	1.42	1.50	0.68	$4.99x10^{-03}$	0.2230	Overexpressed
NNAT	20q11.23	4.42	4.99	1.16	1.54	-0.57	$5.01x10^{-03}$	0.2230	Underexpressed
PNKD	2q35	11.51	11.14	0.77	0.79	0.37	$5.02x10^{-03}$	0.2230	Overexpressed
SEPTIN2	2q37.3	13.03	12.84	0.39	0.38	0.18	$5.02x10^{-03}$	0.2230	Overexpressed
GORASP2	2q31.1	11.80	11.62	0.38	0.35	0.18	$5.03x10^{-03}$	0.2230	Overexpressed
BID	22q11.21	9.82	9.52	0.63	0.62	0.30	$5.03x10^{-03}$	0.2230	Overexpressed
OSM	22q12.2	6.22	5.28	1.99	1.74	0.94	$5.04x10^{-03}$	0.2230	Overexpressed
NFIB	9p23-p22.3	10.43	10.97	1.14	1.03	-0.54	$5.04x10^{-03}$	0.2230	Underexpressed
ARRDC3-AS1	5q14.3	2.91	3.32	0.86	0.85	-0.41	$5.07x10^{-03}$	0.2230	Underexpressed
ANXA5	4q27	12.79	12.42	0.77	0.77	0.37	$5.10x10^{-03}$	0.2230	Overexpressed
ITPKB	1q42.12	9.38	9.79	0.82	1.10	-0.40	$5.11x10^{-03}$	0.2230	Underexpressed
KIF5C	2q23.1-q23.2	5.60	4.92	1.42	1.42	0.68	$5.12x10^{-03}$	0.2230	Overexpressed
CPD	17q11.2	12.29	11.88	0.87	0.81	0.41	$5.13x10^{-03}$	0.2230	Overexpressed
KLF5	13q22.1	12.31	12.86	1.16	1.02	-0.55	$5.13x10^{-03}$	0.2230	Underexpressed
SNX15	11q13.1	8.77	8.99	0.48	0.49	-0.23	$5.13x10^{-03}$	0.2230	Underexpressed
TCHP	12q24.11	8.26	8.54	0.60	0.42	-0.28	$5.18x10^{-03}$	0.2240	Underexpressed
PHOSPHO2	2q31.1	5.97	5.61	0.77	0.72	0.36	$5.21x10^{-03}$	0.2240	Overexpressed
RAPGEFL1	17q21.1	9.13	9.77	1.33	1.54	-0.64	$5.30x10^{-03}$	0.2270	Underexpressed

HERC3	4q22.1	8.91	9.15	0.51	0.55	-0.24	$5.37x10^{-03}$	0.2280	Underexpressed
PLA2G15	16q22.1	9.21	8.92	0.61	0.54	0.29	$5.39x10^{-03}$	0.2280	Overexpressed
PDS5B	13q13.1	9.95	10.16	0.43	0.60	-0.21	$5.42x10^{-03}$	0.2280	Underexpressed
TMEM106C	12q13.11	10.89	10.61	0.59	0.66	0.28	$5.42x10^{-03}$	0.2280	Overexpressed
SEZ6L2	16p11.2	11.02	10.50	1.09	1.27	0.52	$5.43x10^{-03}$	0.2280	Overexpressed
USP20	9q34.11	8.92	9.16	0.51	0.58	-0.24	$5.44x10^{-03}$	0.2280	Underexpressed
HP1BP3	1p36.12	11.65	11.86	0.44	0.44	-0.21	$5.45x10^{-03}$	0.2280	Underexpressed
MTA2	11q12.3	10.94	11.16	0.46	0.42	-0.22	$5.45x10^{-03}$	0.2280	Underexpressed
MANBA	4q24	9.50	9.21	0.60	0.58	0.28	$5.46x10^{-03}$	0.2280	Overexpressed
UNC5CL	6p21.1	9.40	8.55	1.81	1.89	0.86	$5.60x10^{-03}$	0.2330	Overexpressed
GAMT	19p13.3	7.16	6.11	2.29	1.67	1.06	$5.66x10^{-03}$	0.2340	Overexpressed
CFB	6p21.33	12.55	11.72	1.80	1.45	0.83	$5.68x10^{-03}$	0.2340	Overexpressed
CXCL8	4q13.3	10.72	9.60	2.40	2.13	1.12	$5.69x10^{-03}$	0.2340	Overexpressed
FYCO1	3p21.31	10.17	10.46	0.59	0.86	-0.29	$5.72x10^{-03}$	0.2350	Underexpressed
PRDM2	1p36.21	9.78	10.02	0.51	0.55	-0.24	$5.74x10^{-03}$	0.2350	Underexpressed
VMO1	17p13.2	5.71	5.07	1.35	1.50	0.64	$5.76x10^{-03}$	0.2350	Overexpressed
POR	7q11.23	11.36	11.03	0.71	0.71	0.33	$5.80x10^{-03}$	0.2360	Overexpressed
TMPRSS2	21q22.3	11.47	10.87	1.24	1.63	0.60	$5.86x10^{-03}$	0.2360	Overexpressed
GID4	17p11.2|17p11.2	7.94	8.19	0.51	0.63	-0.24	$5.87x10^{-03}$	0.2360	Underexpressed
NFIL3	9q22.31	9.33	9.00	0.70	0.64	0.33	$5.88x10^{-03}$	0.2360	Overexpressed
TCTN3	10q24.1	9.99	9.77	0.46	0.43	0.22	$5.89x10^{-03}$	0.2360	Overexpressed
STX3	11q12.1	10.40	10.09	0.65	0.80	0.31	$5.89x10^{-03}$	0.2360	Overexpressed
CC2D1A	19p13.12	9.69	9.97	0.59	0.61	-0.28	$5.95x10^{-03}$	0.2370	Underexpressed
ZNF106	15q15.1	10.52	10.77	0.53	0.59	-0.25	$5.98x10^{-03}$	0.2370	Underexpressed
CCL20	2q36.3	9.77	8.72	2.22	2.47	1.05	$5.98x10^{-03}$	0.2370	Overexpressed
CELF1	11p11.2	10.74	10.90	0.34	0.40	-0.16	$6.00x10^{-03}$	0.2370	Underexpressed

TSHZ1	18q22.3	9.18	9.52	0.72	0.80	-0.34	$6.01x10^{-03}$	0.2370	Underexpressed
UCP3	11q13.4	3.48	3.98	1.09	0.91	-0.50	$6.05x10^{-03}$	0.2380	Underexpressed
C2CD2L	11q23.3	8.45	8.73	0.60	0.54	-0.28	$6.09x10^{-03}$	0.2390	Underexpressed
OSTC	4q25	10.59	10.35	0.51	0.55	0.24	$6.10x10^{-03}$	0.2390	Overexpressed
BCL2A1	15q25.1	7.45	6.77	1.47	1.41	0.68	$6.14x10^{-03}$	0.2390	Overexpressed
PPP1CB	2p23.2	12.13	12.28	0.31	0.44	-0.15	$6.18x10^{-03}$	0.2400	Underexpressed
LPP	3q27.3-q28	10.91	11.36	0.97	1.09	-0.46	$6.21x10^{-03}$	0.2410	Underexpressed
VHL	3p25.3	9.88	10.12	0.50	0.53	-0.23	$6.25x10^{-03}$	0.2420	Underexpressed
TSPYL1	6q22.1	10.39	10.71	0.70	0.46	-0.32	$6.30x10^{-03}$	0.2420	Underexpressed
HMBOX1	8p21.1-p12	7.33	7.63	0.65	0.67	-0.30	$6.31x10^{-03}$	0.2420	Underexpressed
TRIB1	8q24.13	11.57	11.19	0.83	0.81	0.38	$6.32x10^{-03}$	0.2420	Overexpressed
CROCC	1p36.13	7.88	8.31	0.92	0.74	-0.42	$6.37x10^{-03}$	0.2430	Underexpressed
SYS1	20q13.12	9.99	9.69	0.65	0.58	0.30	$6.44x10^{-03}$	0.2430	Overexpressed
NCK1	3q22.3	9.46	9.17	0.62	0.47	0.28	$6.44x10^{-03}$	0.2430	Overexpressed
TNRC6C	17q25.3	8.71	9.04	0.70	0.94	-0.34	$6.45x10^{-03}$	0.2430	Underexpressed
ADM	11p15.4	8.32	7.73	1.29	1.27	0.60	$6.46x10^{-03}$	0.2430	Overexpressed
BTN2A3P	6p22.2	4.23	4.74	1.14	0.85	-0.52	$6.46x10^{-03}$	0.2430	Underexpressed
PCGF1	2p13.1	7.93	7.71	0.45	0.55	0.21	$6.50x10^{-03}$	0.2440	Overexpressed
SAFB	19p13.3	10.15	10.30	0.32	0.34	-0.15	$6.54x10^{-03}$	0.2450	Underexpressed
CEP83	12q22	7.23	7.56	0.72	0.63	-0.33	$6.55x10^{-03}$	0.2450	Underexpressed
MRPS7	17q25.1	9.93	9.71	0.48	0.52	0.22	$6.58x10^{-03}$	0.2450	Overexpressed
TP53I3	2p23.3	8.81	8.49	0.71	0.74	0.33	$6.66x10^{-03}$	0.2450	Overexpressed
PURA	5q31.3	8.95	9.17	0.48	0.51	-0.22	$6.67x10^{-03}$	0.2450	Underexpressed
ZKSCAN3	6p22.1	5.75	6.07	0.70	0.66	-0.32	$6.68x10^{-03}$	0.2450	Underexpressed
MYCBP2	13q22.3	10.58	10.89	0.66	0.63	-0.30	$6.69x10^{-03}$	0.2450	Underexpressed
TMEM37	2q14.2	8.60	7.97	1.37	1.34	0.63	$6.72x10^{-03}$	0.2450	Overexpressed

TYRO3	15q15.1	8.79	8.34	0.98	0.94	0.45	$6.74x10^{-03}$	0.2450	Overexpressed
RBM15	1p13.3	8.32	8.55	0.49	0.49	-0.23	$6.77x10^{-03}$	0.2450	Underexpressed
SNX10	7p15.2	9.16	8.74	0.89	0.98	0.41	$6.77x10^{-03}$	0.2450	Overexpressed
VPS35L	16p12.3	9.20	8.89	0.63	1.07	0.31	$6.77x10^{-03}$	0.2450	Overexpressed
FBXL16	16p13.3	6.11	6.71	1.27	1.75	-0.61	$6.81x10^{-03}$	0.2450	Underexpressed
BTBD9	6p21.2	8.76	9.03	0.57	0.53	-0.26	$6.82x10^{-03}$	0.2450	Underexpressed
FCER1G	1q23.3	10.50	9.92	1.27	1.18	0.58	$6.83x10^{-03}$	0.2450	Overexpressed
ARID1B	6q25.3	10.92	11.12	0.43	0.51	-0.20	$6.84x10^{-03}$	0.2450	Underexpressed
TSKU	11q13.5	10.04	10.42	0.82	0.78	-0.38	$6.89x10^{-03}$	0.2450	Underexpressed
LRRCC1	8q21.2	8.76	9.09	0.70	0.74	-0.32	$6.92x10^{-03}$	0.2450	Underexpressed
VPS26B	11q25	10.23	10.40	0.37	0.42	-0.17	$6.93x10^{-03}$	0.2450	Underexpressed
CHST10	2q11.2	6.79	6.30	1.05	1.29	0.49	$6.94x10^{-03}$	0.2450	Overexpressed
MYRF	11q12.2	11.80	11.36	0.92	1.22	0.44	$6.95x10^{-03}$	0.2450	Overexpressed
WDTC1	1p36.11	10.68	10.88	0.43	0.62	-0.21	$6.98x10^{-03}$	0.2450	Underexpressed
RGL3	19p13.2	6.47	5.56	1.94	2.51	0.91	$7.01x10^{-03}$	0.2450	Overexpressed
SRRD	22q12.1	8.02	7.82	0.45	0.39	0.20	$7.02x10^{-03}$	0.2450	Overexpressed
HHEX	10q23.33	8.18	7.58	1.33	1.23	0.61	$7.04x10^{-03}$	0.2450	Overexpressed
BCKDHB	6q14.1	8.43	8.72	0.62	0.72	-0.29	$7.04x10^{-03}$	0.2450	Underexpressed
VCPIP1	8q13.1	9.58	9.78	0.42	0.48	-0.19	$7.04x10^{-03}$	0.2450	Underexpressed
P2RX4	12q24.31	9.41	9.04	0.81	0.75	0.37	$7.04x10^{-03}$	0.2450	Overexpressed
HBB	11p15.4	8.57	7.39	2.65	1.92	1.19	$7.05x10^{-03}$	0.2450	Overexpressed
IKBIP	12q23.1	8.54	8.26	0.62	0.65	0.28	$7.10x10^{-03}$	0.2450	Overexpressed
SLC35G2	3q22.3	6.27	5.73	1.20	1.13	0.55	$7.13x10^{-03}$	0.2450	Overexpressed
VPS13A	9q21.2	9.72	10.09	0.82	0.77	-0.37	$7.17x10^{-03}$	0.2450	Underexpressed
GRN	17q21.31	13.61	13.39	0.48	0.60	0.22	$7.17x10^{-03}$	0.2450	Overexpressed
MOB2	11p15.5	8.61	8.83	0.48	0.57	-0.22	$7.21x10^{-03}$	0.2450	Underexpressed

HIST1H2AC	6p22.2	9.47	9.03	0.97	1.09	0.45	$7.22x10^{-03}$	0.2450	Overexpressed
YBX1	1p34.2	12.80	13.04	0.53	0.48	-0.24	$7.23x10^{-03}$	0.2450	Underexpressed
H2AFV	7p13	11.67	11.82	0.33	0.42	-0.15	$7.24x10^{-03}$	0.2450	Underexpressed
PMS2CL	7p22.1	6.78	7.00	0.46	0.59	-0.22	$7.25x10^{-03}$	0.2450	Underexpressed
UBE3A	15q11.2	10.88	11.09	0.47	0.50	-0.21	$7.25x10^{-03}$	0.2450	Underexpressed
PLEKHA2	8p11.22	9.66	9.96	0.65	0.73	-0.30	$7.31x10^{-03}$	0.2450	Underexpressed
HDDC3	15q26.1	8.21	7.89	0.70	0.68	0.32	$7.32x10^{-03}$	0.2450	Overexpressed
NFYA	6p21.1	10.05	9.68	0.83	0.51	0.37	$7.33x10^{-03}$	0.2450	Overexpressed
ZNF490	19p13.2-p13.13	7.58	7.80	0.49	0.56	-0.22	$7.36x10^{-03}$	0.2450	Underexpressed
CCDC9B	15q15.1	7.21	7.93	1.59	1.50	-0.72	$7.37x10^{-03}$	0.2450	Underexpressed
SLC25A45	11q13.1	6.37	6.69	0.69	0.87	-0.32	$7.38x10^{-03}$	0.2450	Underexpressed
NEIL2	8p23.1	7.75	8.12	0.80	1.02	-0.37	$7.38x10^{-03}$	0.2450	Underexpressed
NIPAL3	1p36.11	9.42	9.68	0.58	0.61	-0.26	$7.38x10^{-03}$	0.2450	Underexpressed
TMEM39A	3q13.33	9.46	9.19	0.59	0.49	0.27	$7.42x10^{-03}$	0.2450	Overexpressed
SLC7A7	14q11.2	9.81	9.32	1.08	0.93	0.49	$7.47x10^{-03}$	0.2460	Overexpressed
ZNF441	19p13.2	6.57	6.89	0.72	0.76	-0.33	$7.48x10^{-03}$	0.2460	Underexpressed
SCARB1	12q24.31	10.66	10.25	0.90	0.88	0.41	$7.53x10^{-03}$	0.2460	Overexpressed
TCAIM	3p21.31	9.02	9.21	0.44	0.47	-0.20	$7.53x10^{-03}$	0.2460	Underexpressed
FNBP4	11p11.2	10.11	10.33	0.49	0.63	-0.23	$7.58x10^{-03}$	0.2470	Underexpressed
HUNK	21q22.11	7.36	6.52	1.87	1.85	0.84	$7.62x10^{-03}$	0.2470	Overexpressed
TAOK3	12q24.23	10.46	10.72	0.58	0.54	-0.26	$7.64x10^{-03}$	0.2470	Underexpressed
OSBPL5	11p15.4	8.56	9.04	1.07	0.90	-0.48	$7.64x10^{-03}$	0.2470	Underexpressed
ATP6V1E1	22q11.21	10.74	10.55	0.42	0.43	0.19	$7.67x10^{-03}$	0.2470	Overexpressed
YIPF1	1p32.3	9.24	9.03	0.47	0.44	0.21	$7.68x10^{-03}$	0.2470	Overexpressed
ING1	13q34	8.73	8.96	0.51	0.49	-0.23	$7.71x10^{-03}$	0.2480	Underexpressed
ANAPC16	10q22.1	10.40	10.62	0.47	0.56	-0.22	$7.72x10^{-03}$	0.2480	Underexpressed

PSTPIP2	18q21.1|tdb7990	8.07	7.59	1.03	1.36	0.48	7.82×10^{-03}	0.2500	Overexpressed
GATM	15q21.1	11.02	10.05	2.20	1.63	0.97	7.85×10^{-03}	0.2500	Overexpressed
ANKS3	16p13.3	7.17	7.49	0.73	0.58	-0.32	7.86×10^{-03}	0.2500	Underexpressed
STAG3L3	7q11.23	7.05	7.40	0.79	0.77	-0.36	7.88×10^{-03}	0.2500	Underexpressed
MRNIP	5q35.3	5.80	6.08	0.60	0.78	-0.28	7.89×10^{-03}	0.2500	Underexpressed
TMEM263	12q23.3	10.29	10.02	0.59	0.59	0.27	7.92×10^{-03}	0.2500	Overexpressed
LYPD1	2q21.2	6.01	5.35	1.48	1.56	0.67	7.93×10^{-03}	0.2500	Overexpressed
GRK5	10q26.11	8.79	9.12	0.70	0.92	-0.33	7.93×10^{-03}	0.2500	Underexpressed
BOD1L1	4p15.33	10.42	10.70	0.62	0.57	-0.28	7.96×10^{-03}	0.2500	Underexpressed
TPRG1L	1p36.32	10.26	10.45	0.43	0.48	-0.19	7.99×10^{-03}	0.2500	Underexpressed
SPIN4	Xq11.1	7.95	8.45	1.13	1.02	-0.50	8.01×10^{-03}	0.2500	Underexpressed
PIK3AP1	10q24.1	10.24	9.84	0.88	1.02	0.40	8.05×10^{-03}	0.2510	Overexpressed
TTLL11	9q33.2	6.17	6.48	0.68	0.81	-0.31	8.06×10^{-03}	0.2510	Underexpressed
EZH1	17q21.2	8.81	9.06	0.54	0.67	-0.25	8.16×10^{-03}	0.2530	Underexpressed
CD300C	17q25.1	4.90	4.28	1.39	1.33	0.62	8.21×10^{-03}	0.2540	Overexpressed
TATDN2	3p25.3	10.13	10.30	0.38	0.42	-0.17	8.25×10^{-03}	0.2550	Underexpressed
HEATR6	17q23.1	8.65	8.45	0.44	0.54	0.20	8.31×10^{-03}	0.2550	Overexpressed
BCL6	3q27.3	10.01	9.69	0.70	0.87	0.32	8.32×10^{-03}	0.2550	Overexpressed
AFMID	17q25.3	8.64	8.31	0.74	0.68	0.33	8.35×10^{-03}	0.2550	Overexpressed
RHOU	1q42.13	10.08	9.64	0.97	1.12	0.44	8.39×10^{-03}	0.2550	Overexpressed
CTDP1	18q23	9.01	9.25	0.56	0.50	-0.25	8.41×10^{-03}	0.2550	Underexpressed
TNK2	3q29	9.89	10.20	0.69	0.80	-0.31	8.43×10^{-03}	0.2550	Underexpressed
SHROOM2	Xp22.2	7.63	6.88	1.68	1.71	0.75	8.43×10^{-03}	0.2550	Overexpressed
CEP104	1p36.32	9.37	9.57	0.45	0.41	-0.20	8.44×10^{-03}	0.2550	Underexpressed
FOLR2	11q13.4	7.44	6.76	1.48	1.75	0.67	8.45×10^{-03}	0.2550	Overexpressed
SLC11A2	12q13.12	10.62	10.33	0.64	0.65	0.28	8.51×10^{-03}	0.2570	Overexpressed

VWA8	13q14.11	9.50	9.72	0.49	0.60	-0.22	$8.55x10^{-03}$	0.2570	Underexpressed
RBSN	3p25.1	9.18	9.37	0.41	0.54	-0.19	$8.59x10^{-03}$	0.2580	Underexpressed
SERPINB5	18q21.33	8.84	10.21	3.14	2.32	-1.37	$8.64x10^{-03}$	0.2580	Underexpressed
NFKBIZ	3q12.3	9.99	9.51	1.09	1.10	0.48	$8.64x10^{-03}$	0.2580	Overexpressed
RDH13	19q13.42	8.29	8.55	0.60	0.64	-0.27	$8.65x10^{-03}$	0.2580	Underexpressed
UBN1	16p13.3	10.49	10.72	0.52	0.44	-0.23	$8.67x10^{-03}$	0.2580	Underexpressed
APCDD1	18p11.22	9.52	8.59	2.14	1.60	0.93	$8.72x10^{-03}$	0.2580	Overexpressed
CYP51A1	7q21.2	11.25	10.82	0.95	1.03	0.42	$8.74x10^{-03}$	0.2580	Overexpressed
HMG20B	19p13.3	10.06	10.27	0.48	0.54	-0.22	$8.75x10^{-03}$	0.2580	Underexpressed
EPM2A	6q24.3	6.29	6.58	0.63	0.98	-0.30	$8.76x10^{-03}$	0.2580	Underexpressed
FAM120C	Xp11.22	7.39	7.63	0.50	0.82	-0.24	$8.97x10^{-03}$	0.2640	Underexpressed
CTNS	17p13.2	8.80	8.55	0.59	0.48	0.26	$8.98x10^{-03}$	0.2640	Overexpressed
PTK7	6p21.1	10.83	10.21	1.42	1.23	0.62	$9.10x10^{-03}$	0.2660	Overexpressed
PRSS8	16p11.2	12.08	11.58	1.08	1.49	0.49	$9.10x10^{-03}$	0.2660	Overexpressed
TNFAIP1	17q11.2	10.76	10.56	0.46	0.44	0.20	$9.25x10^{-03}$	0.2700	Overexpressed
RSBN1	1p13.2	9.12	9.33	0.48	0.44	-0.21	$9.28x10^{-03}$	0.2700	Underexpressed
FAM110B	8q12.1	6.69	6.04	1.48	1.43	0.65	$9.33x10^{-03}$	0.2700	Overexpressed
NSD3	8p11.23	10.04	10.31	0.64	0.52	-0.28	$9.33x10^{-03}$	0.2700	Underexpressed
BRD4	19p13.12	11.30	11.48	0.41	0.45	-0.18	$9.38x10^{-03}$	0.2710	Underexpressed
TGM2	20q11.23	13.06	12.57	1.11	1.28	0.49	$9.41x10^{-03}$	0.2710	Overexpressed
ZFYVE28	4p16.3	7.38	7.74	0.83	0.84	-0.36	$9.45x10^{-03}$	0.2710	Underexpressed
LGALSL	2p14	9.06	8.83	0.50	0.63	0.23	$9.47x10^{-03}$	0.2710	Overexpressed
CDC37	19p13.2	11.33	11.51	0.39	0.47	-0.18	$9.48x10^{-03}$	0.2710	Underexpressed
MLXIP	12q24.31	11.07	11.37	0.69	0.72	-0.30	$9.51x10^{-03}$	0.2710	Underexpressed
CCL4	17q12	7.98	7.36	1.41	1.47	0.62	$9.52x10^{-03}$	0.2710	Overexpressed
PSAP	10q22.1	14.82	14.56	0.60	0.64	0.26	$9.52x10^{-03}$	0.2710	Overexpressed

CDKL5	Xp22.13	6.47	6.04	0.95	1.24	0.43	$9.58x10^{-03}$	0.2720	Overexpressed
TPD52L2	20q13.33	11.58	11.36	0.51	0.48	0.22	$9.61x10^{-03}$	0.2720	Overexpressed
SYNC	1p35.1	6.58	7.32	1.67	2.00	-0.74	$9.65x10^{-03}$	0.2720	Underexpressed
THAP12	11q13.5	9.91	10.14	0.53	0.56	-0.23	$9.66x10^{-03}$	0.2720	Underexpressed
CDKN1B	12p13.1	9.78	10.10	0.74	0.61	-0.32	$9.69x10^{-03}$	0.2720	Underexpressed
PRRT1	6p21.32	5.28	5.73	0.99	1.31	-0.45	$9.69x10^{-03}$	0.2720	Underexpressed
SLC25A32	8q22.3	9.35	9.54	0.44	0.53	-0.19	$9.72x10^{-03}$	0.2720	Underexpressed
NT5DC3	12q23.3	8.11	8.50	0.88	1.00	-0.39	$9.73x10^{-03}$	0.2720	Underexpressed
DUSP5	10q25.2	8.91	8.48	0.95	1.31	0.43	$9.76x10^{-03}$	0.2720	Overexpressed
OTUB2	14q32.12	7.20	6.71	1.12	1.15	0.49	$9.78x10^{-03}$	0.2720	Overexpressed
UPF2	10p14	10.16	10.38	0.51	0.54	-0.22	$9.78x10^{-03}$	0.2720	Underexpressed
EPOR	19p13.2	6.45	6.07	0.87	0.91	0.38	$9.85x10^{-03}$	0.2730	Overexpressed
NCSTN	1q23.2	11.88	11.70	0.41	0.42	0.18	$9.89x10^{-03}$	0.2740	Overexpressed
LOC100130987	11q13.2	3.93	4.32	0.89	0.90	-0.39	$9.90x10^{-03}$	0.2740	Underexpressed
MRPS11	15q25.3	9.52	9.28	0.55	0.49	0.24	$9.94x10^{-03}$	0.2740	Overexpressed
CNPY3	6p21.1	10.71	10.40	0.73	0.58	0.31	$9.95x10^{-03}$	0.2740	Overexpressed
ATRX	Xq21.1	11.33	11.56	0.51	0.66	-0.23	$9.97x10^{-03}$	0.2740	Underexpressed

[a]Mean $\log_2$ expression of the listed gene in samples that have alterations in SERPINA1. [b]Mean $\log_2$ expression of the listed gene in samples that do not have alterations in SERPINA1.[c]Standard deviation of $\log_2$ expression of the listed gene in samples that have alterations in SERPINA1. [d]Standard deviation of $\log_2$ expression of the listed gene in samples that do not have alterations in SERPINA1. SERPINA1, serpin peptidase inhibitor clade A member 1.

Table SV. Protein-protein interaction data of serpin peptidase inhibitor clade A member 1 (Wiki-Pi).

Official symbol	Official full name	Associated pathways	Binding drugs
ADAMTS4	ADAM metallopeptidase with thrombospondin type 1 motif, 4	Post-translational protein modification O-glycosylation of thrombospondin type 1 repeat domain-containing proteins Degradation of the ECM O-linked glycosylation	
ATP5C1	ATP synthase, H+ transporting, mitochondrial F1 complex, γ polypeptide 1	Respiratory electron transport, ATP synthesis by chemiosmotic coupling, and heat production by uncoupling proteins. The citric acid cycle and respiratory electron transport Formation of ATP by chemiosmotic coupling	
CELA1	Chymotrypsin-like elastase family, member 1		
CTRB1	Chymotrypsinogen B1		
CTSG	Cathepsin G	Regulation of IGF transport and uptake by IGFBPs Peptide hormone metabolism Activation of MMPs Metabolism of angiotensinogen to angiotensins Degradation of the ECM	Bis-Napthyl Β-Ketophosphonic Acid 2-[3-({Methyl[1-(2-Naphthoyl)Piperidin-4-Yl]Amino}Carbonyl)-2-Naphthyl]-1-(1-Naphthyl)-2-Oxoethylphosphonic Acid
DERL2	Derlin 2	Hedgehog ligand biogenesis Processing-defective Hh variants abrogate ligand secretion Hh ligand biogenesis disease Signaling by Hedgehog	

DERL3	Derlin 3		
ECHS1	Enoyl CoA hydratase, short chain, 1, mitochondrial	Fatty acid, triacylglycerol, and ketone body metabolism Β oxidation of octanoyl-CoA to hexanoyl-CoA Metabolism of lipids and lipoproteins Β oxidation of decanoyl-CoA to octanoyl-CoA-CoA Mitochondrial Fatty Acid Β-Oxidation Β oxidation of lauroyl-CoA to decanoyl-CoA-CoA mitochondrial fatty acid β-oxidation of saturated fatty acids Β oxidation of hexanoyl-CoA to butanoyl-CoA Β oxidation of butanoyl-CoA to acetyl-CoA	
ELANE	Elastase, neutrophil expressed	Collagen degradation Activation of MMPs Degradation of the ECM	Pegfilgrastim Α-1-proteinase inhibitor Filgrastim Mdl 101,146 ONO-6818
GSDMB	Gasdermin B		
KLK13	Kallikrein-related peptidase 13	Regulation of IGF transport and uptake by IGFBPs	
KLK3	Kallikrein-related peptidase 3	Regulation of IGF transport and uptake by IGFBPs	
KLK5	Kallikrein-related peptidase 5		

LRP1	Low density lipoprotein receptor-related protein 1	Scavenging of heme from plasma Visual phototransduction Diseases associated with visual transduction Retinoid metabolism and transport	
MMP11	Matrix metallopeptidase 11 (stromelysin 3)	Collagen degradation Activation of MMPs Degradation of the ECM	
MMP26	Matrix metallopeptidase 26		
MMP7	Matrix metallopeptidase 7 (matrilysin, uterine)	Collagen formation Collagen degradation Activation of MMPs Degradation of the ECM Assembly of collagen fibrils and other multimeric structures	
PRSS1	Protease, serine, 1 (trypsin 1)	Metabolism of vitamins and cofactors Defective CD320 causes methylmalonic aciduria Defective LMBRD1 causes methylmalonic aciduria and homocystinuria type cblF Defective BTD causes biotidinase deficiency Defective MMACHC causes methylmalonic aciduria and homocystinuria type cblC Defective MTR causes methylmalonic aciduria and homocystinuria	ZK-800270 Bis(5-Amidino-Benzimidazolyl)Methane CRA_7806 Nα-(2-Naphthylsulfonylglycyl)-3-Amidino-D,L-Phenylalanine-Isopropylester CRA_17693 N-Α-(2-Naphthylsulfonyl)-N(3-Amidino-L-Phenylalaninyl)Isopipecolinic Acid Methyl Ester

		type cblG Degradation of the ECM Defective MTRR causes methylmalonic aciduria and homocystinuria type cblE Defective AMN causes hereditary megaloblastic anemia 1 Defects in cobalamin metabolism Defective MIF causes intrinsic factor deficiency Defective HLCS causes multiple carboxylase deficiency Defective MMAB causes methylmalonic aciduria type cblB Activation of MMPs Defective MMADHC causes methylmalonic aciduria and homocystinuria type cblD Defective MMAA causes methylmalonic aciduria type cblA Defective CUBN causes hereditary megaloblastic anemia 1 Cobalamin transport and metabolism Defective MMUT causes methylmalonic aciduria mut type Metabolism of water-soluble vitamins and cofactors Defects in biotin metabolism Defective TCN2 causes hereditary megaloblastic anemia Defects in vitamin and cofactor metabolism	Hemi-Babim CRA_10991 Monoisopropylphosphorylserine [4-(6-Chloro-Naphthalene-2-Sulfonyl)-Piperazin-1-Yl]-(3,4,5,6-Tetrahydro-2h-[1,4\']Bipyridinyl-4-Yl)-Methanone Bis(5-Amidino-2-Benzimidazolyl)Methanone 2-(2-Hydroxy-5-Methoxy-Phenyl)-1h-Benzoimidazole-5-Carboxamidine 5-Amidino-Benzimidazole Amylamine CRA_16847 Bis-Benzamidine CRA_17312 Zk-806450 2-(2-Hydroxy-Phenyl)-1h-Benzoimidazole-5-Carboxamidine [4-({[5-Benzyloxy-1-(3-Carbamimidoyl-Benzyl)-1h-Indole-2-Carbonyl]-Amino}-Methyl)-Phenyl]-Trimethyl-Ammonium 2-(2-Hydroxy-Phenyl)-3h-Benzoimidazole-5-Carboxamidine CRA_9334 4-{[1-Methyl-5-(2-Methyl-Benzoimidazol-1-Ylmethyl)-1h-Benzoimidazol-2-Ylmethyl]-Amino}-Benzamidine CRA_10762 Aminomethylcyclohexane 2-(2-Hydroxy-Phenyl)-1h-Indole-5-Carboxamidine Benzylamine CRA_10655

			Trans-2-Phenylcyclopropylamine RPR131247 Hexane (2s,4r)-1-Acetyl-N-[(1s)-4-[(Aminoiminomethyl)Amino]-1-(2-Benzothiazolylcarbonyl)Butyl]-4-Hydroxy-2-Pyrrolidinecarboxamide CRA_1802 CRA_10972 CRA_1801 Crc200 (Chiron-Behring) Benzamidine 4-Iodobenzo[B]Thiophene-2-Carboxamidine CRA_8696 CRA_10433 Bis(5-Amidino-2-Benzimidazolyl)Methane Ketone 4-Fluorobenzylamine RWJ-51084 1-(2-Amidinophenyl)-3-(Phenoxyphenyl)Urea ZK-806711 3,5-Diiodotyrosine 1-(4-Tert-Butylcarbamoyl-Piperazine-1-Carbonyl)-3-(3-Guanidino-Propyl)-4-Oxo-Azetidine-2-Carboxylic Acid Bis(5-Amidino-Benzimidazolyl)Methanone Zinc CRA_10950 CRA_11092 Cyclohexane

			CRA_9785 Diminazene CRA_1144 6-Chloro-2-(2-Hydroxy-Biphenyl-3-Yl)-1h-Indole-5-Carboxamidine Thieno[2,3-B]Pyridine-2-Carboxamidine Phosphorylisopropane Bis(5-Amidino-Benzimidazolyl)Methane Zinc [(1-{2[(4-Carbamimidoyl-Phenylamino)-Methyl]-1-Methyl-1h-Benzoimidazol-5-Yl}-Cyclopropyl)-Pyridin-2-Yl-Methyleneaminooxy]-Acetic Acid Ethyl Ester N-A-(2-Naphthylsulfonyl)-N(3-Amidino-L-Phenylalaninyl)-4-Acetyl-Piperazine CRA_9076 N-A-(2-Naphthylsulfonyl)-N-(3-Amidino-L-Phenylalaninyl)-D-Pipecolinic Acid CRA_23653 Cyclotheonamide A Bis(5-Amidino-2-Benzimidazolyl)Methane Ketone Hydrate 4-Phenylbutylamine 2-Phenylethylamine 1-(4-Amidinophenyl)-3-(4-Chlorophenyl)Urea Aeruginosin 98-B 3-Phenylpropylamine RPR128515 ZK-805623

			2-(2-Oxo-1,2-Dihydro-Pyridin-3-Yl)-1h-Benzoimidazole-5-Carboxamidine Benzo[B]Thiophene-2-Carboxamidine CRA_10656 CRA_9678 4-PIPERIDIN-4-YLBUTANAL 2,5-bis-o-{3-[amino(imino)methyl]phenyl}-1,4:3,6-dianhydro-d-glucitol 2-O-(4\'-AMIDINOPHENYL)-5-O-(3\'\'-AMIDINOPHENYL)-1,4:3,6-DIANHYDRO-D-SORBITOL 2,5-O,O-BIS-{4\',4\'\'-AMIDINOPHENYL}-1,4:3,6-DIANHYDRO-D-SORBITOL 2-O-(3\'-AMIDINOPHENYL)-5-O-(4\'\'-AMIDINOPHENYL}-1,4:3,6-DIANHYDRO-D-SORBITOL Aprotinin diethyl [(1R)-1,5-diaminopentyl]boronate (S)-N-(4-carbamimidoylbenzyl)-1-(2-(cyclopentylamino)ethanoyl)pyrrolidine-2-carboxamide (S)-N-(4-carbamimidoylbenzyl)-1-(2-(cyclohexylamino)ethanoyl)pyrrolidine-2-carboxamide N-cycloheptylglycyl-N-(4-carbamimidoylbenzyl)-L-prolinamide N-cyclooctylglycyl-N-(4-carbamimidoylbenzyl)-L-prolinamide 2-(2-METHYLPHENYL)-1H-INDOLE-6-CARBOXIMIDAMIDE 2-(3-METHYLPHENYL)-1H-INDOLE-5-CARBOXIMIDAMIDE (S)-N-(4-carbamimidoylbenzyl)-1-(2-(cyclopentyloxy)ethanoyl)pyrrolidine-2-carboxamide

			(S)-N-(4-carbamimidoylbenzyl)-1-(2-(cyclohexyloxy)ethanoyl)pyrrolidine-2-carboxamide (S)-N-(4-carbamimidoylbenzyl)-1-(3-cyclopentylpropanoyl)pyrrolidine-2-carboxamide (S)-N-(4-carbamimidoylbenzyl)-1-(3-cyclohexylpropanoyl)pyrrolidine-2-carboxamide 3-{5-[AMINO(IMINIO)METHYL]-1H-INDOL-2-YL}-5-METHOXY-1,1\'-BIPHENYL-2-OLATE 4-(METHYLSULFONYL)BENZENECARBOXIMIDAMIDE 5-amino-2,4,6-tribromobenzene-1,3-dicarboxylic acid +/-METHYL 4-(AMINOIMINOMETHYL)-Β-[3- INH (AMINOIMINO)PHENYL]BENZENE PENTANOATE 2-(2-METHYLPHENYL)-1H-INDOLE-5-CARBOXIMIDAMIDE 2-NAPHTHALENESULFONIC ACID 1-{[1-(2-AMINO-3-PHENYL-PROPIONYL)-PYRROLIDINE-2-CARBONYL]-AMINO}-2-(3-CYANO-PHENYL)-ETHANEBORONIC ACID [N-(BENZYLOXYCARBONYL)AMINO](4-AMIDINOPHENYL)METHANE-PHOSPHONATE
PRSS2	Protease, serine, 2 (trypsin 2)	Collagen degradation Activation of MMPs Α-defensins Defensins Degradation of the ECM Innate immune system	

PRSS3	Protease, serine, 3	Metabolism of vitamins and cofactors Defective CD320 causes methylmalonic aciduria Defective LMBRD1 causes methylmalonic aciduria and homocystinuria type cblF Defective BTD causes biotidinase deficiency Defective MMACHC causes methylmalonic aciduria and homocystinuria type cblC Defective MTR causes methylmalonic aciduria and homocystinuria type cblG Defective MTRR causes methylmalonic aciduria and homocystinuria type cblE Defective AMN causes hereditary megaloblastic anemia 1 Defects in cobalamin metabolism Innate Immune System Defective MIF causes intrinsic factor deficiency Defective HLCS causes multiple carboxylase deficiency Defective MMAB causes methylmalonic aciduria type cblB Defective MMADHC causes methylmalonic aciduria and homocystinuria type cblD Defective MMAA causes methylmalonic aciduria type cblA Defective CUBN causes hereditary megaloblastic anemia 1 Cobalamin transport and metabolism Defective MMUT causes methylmalonic aciduria mut type Metabolism of water-soluble vitamins and cofactors Defects in biotin (Btn) metabolism Α-defensins	4-(1,3,2-Dioxaborolan-2-Yloxy)Butan-1-Aminium 4-Hydroxybutan-1-Aminium 4-(Hydroxymethyl)Benzamidine Benzamidine [3-(1,3,2-Dioxaborolan-2-Yloxy)Propyl]Guanidine Guanidine-3-Propanol [4-(1,3,2-Dioxaborolan-2-Yloxy)Methyl]Benzamidine 1,3,2-Dioxaborolan-2-Ol

		Defensins Defective TCN2 causes hereditary megaloblastic anemia Defects in vitamin and cofactor metabolism	
PRTN3	Proteinase 3	Common Pathway Formation of Fibrin Clot (Clotting Cascade)	
RAP2A	RAP2A, member of RAS oncogene family		Guanosine-5\'-Triphosphate Guanosine-5\'-Diphosphate
RCHY1	Ring finger and CHY zinc finger domain containing 1, E3 ubiquitin protein ligase	Antigen processing: Ubiquitination and Proteasome degradation Class I major histocompatibility complex mediated antigen processing and presentation Adaptive immune system	
SDC2	Syndecan 2	MPS IIIB - Sanfilippo syndrome B Diseases of glycosylation Axon guidance Defective β-1,4-galactosyltransferase 7 causes EDS, progeroid type HS-GAG metabolism MPS I - Hurler syndrome MPS IX - Natowicz syndrome Chondroitin sulfate/dermatan sulfate metabolism Defective solute carrier family 26 member 2 causes chondrodysplasias GAG metabolism Eph receptor B-mediated forward signaling Defective carbohydrate sulfotransferase 14 causes EDS,	

		musculocontractural type Defective B4GALT1 causes B4GALT1-congenital disorder of glycosylation, type IId Defective 3'-phosphoadenosine 5'-phosphosulfate synthase 2 causes spondyloepimetaphyseal dysplasia Pakistani type MPS IIIA - Sanfilippo syndrome A Myoclonic epilepsy of Lafora Defective carbohydrate sulfotransferase 6 causes macular corneal dystrophy, type 1 Glycogen storage diseases MPS IIID - Sanfilippo syndrome D Eph-Ephrin signaling A tetrasaccharide linker sequence is required for GAG synthesis MPS IIIC - Sanfilippo syndrome C Retinoid metabolism and transport Diseases associated with GAG metabolism Mucopolysaccharidoses Defective exostosin glycosyltransferase 2 causes exostoses 2 MPS II - Hunter syndrome Defective β-1,3-glucuronyltransferase 3 causes multiple joint dislocations, short stature, craniofacial dysmorphism, and congenital heart defects Defective carbohydrate sulfotransferase 3 causes spondyloepiphyseal dysplasia with congenital joint dislocations Non-integrin membrane-ECM interactions Diseases associated with visual transduction	

		Defective exostosin glycosyltransferase 1 causes exostoses 1, type II trichorhinophalangeal syndromes and congenital heart defects Syndecan interactions MPS IV - Morquio syndrome A Visual phototransduction MPS IV - Morquio syndrome B Defective chondroitin sulfate synthase 1 causes temtamy preaxial brachydactyly syndrome MPS VII - Sly syndrome Metabolism of carbohydrates HS-GAG biosynthesis HS-GAG degradation MPS VI - Maroteaux-Lamy syndrome	
SMAD4	SMAD family member 4	Loss of function of TGFBR2 in cancer SMAD2/3 MH2 domain mutants in cancer TGF-β receptor signaling activates SMADs TGFBR1 ligand-binding domain mutants in cancer Downregulation of SMAD2/3:SMAD4 transcriptional activity SMAD2/SMAD3:SMAD4 heterotrimer regulates transcription Transcriptional activity of SMAD2/SMAD3:SMAD4 heterotrimer Signaling by bone morphogenetic proteins Transcriptional regulation of pluripotent stem cells Generic transcription pathway Signaling by nodal growth differentiation factor TGFBR2 microsatellite instability frameshift mutants in cancer SMAD2/3 phosphorylation motif mutants in cancer	

		Loss of function of SMAD2/3 in cancer signaling by activin TGFBR2 kinase domain mutants in cancer Loss of function of SMAD4 in cancer TGFBR1 kinase domain mutants in cancer Loss of function of TGFBR1 in cancer Signaling by TGF-β Receptor complex in cancer Signaling by TGF-β receptor Complex SMAD4 MH2 Domain Mutants in cancer	
VKORC1	Vitamin K epoxide reductase complex, subunit 1	Post-translational protein modification Γ carboxylation, hypusine formation and arylsulfatase activation Γ-carboxylation, transport, and amino-terminal cleavage of proteins	Menadione Dicumarol Phenindione Warfarin Phenprocoumon Acenocoumarol

ADAM, a disintegrin and metalloproteinase; ATP, adenosine triphosphate; IGF, insulin-like growth factor; IGFBPs, IGF binding proteins; ECM, extracellular matrix; MMPs, matrix metalloproteinases; GAG, glycosaminoglycan; LMBRD1, LMBR1 domain containing 1; BTD, biotinidase; MMACHC, metabolism of cobalamin associated C; MTR, 5-methyltetrahydrofolate-homocysteine methyltransferase; MTRR, MTR reductase; AMN, amnion associated transmembrane protein; MIF, macrophage migration inhibitory factor; HLCS, holocarboxylase synthetase; MMAB, metabolism of cobalamin associated B; MMADHC, metabolism of cobalamin associated D; MMAA, metabolism of cobalamin associated A; CUBN, cubilin; MMUT, methylmalonyl-CoA mutase; TCN2, transcobalamin 2; MPS, mucopolysaccharidosis; EDS, Ehlers-Danlos syndrome; HS-GAG, heparan sulfate/heparin; B4GALT1, β-1,4-galactosyltransferase 1; SMAD, Sma and Mad proteins; TGF-β, transforming growth factor β; TGFBR1/2, transforming growth factor β receptor 1/2.