

Table S1

**Supplementary information, Table S1** List of genes with altered expression pattern in tumor samples (related to Figure 1). Criteria for inclusion in this list are A) fold change of the control mucosa sample must be  $\geq 5$  or  $\leq 0.2$ ; and B) the P-value of fold change must be  $\leq 0.05$ . Genes are sorted by their fold changes and Wald scores (Wald

CST1	chr20:23 -	3385	3	156.21	0.0524	72.901	0
DPEP1	chr16:89 +	25124	13	89.057	0.3553	85.407	0
CA9	chr9:356 +	7240	11	88.323	0.8421	77.349	0
ETV4	chr17:41 -	18590	18	54.953	0.5674	82.168	0
CLDN1	chr3:190 -	16746	4	37.495	0.2826	75.33	0
SULT1C4	chr2:108 +	9850	7	46.828	0.8161	57.613	0
REG1A	chr2:793 +	2962	9	21.99	0	34.528	0
COMP	chr19:18 -	8532	22	23.102	0.1526	52.431	0
NKD1	chr16:50 +	92531	10	56.157	1.7604	141.52	0
CEACAM6	chr19:42 +	16716	6	460.48	26.875	214.01	0
GPT2	chr16:46 +	46894	15	62.382	2.9415	107.76	0
MACC1	chr7:201 -	82735	7	28.757	0.8596	104.02	0
HOXB8	chr17:46 -	2594	2	28.917	0.9027	46.442	0
C6orf223	chr6:439 +	5358	5	16.184	0.209	50.306	0
LGR5	chr12:71 +	146539	23	30.068	1.5893	75.153	0
TDGF1	chr3:466 +	7908	7	32.256	1.7975	51.876	0
FZD10	chr12:13 +	3282	1	12.539	0.1577	42.165	0
CALCA	chr11:14 -	5618	8	11.381	0.0677	32.125	0
FOXQ1	chr6:131 +	2319	1	11.228	0.1098	33.675	0
GZMB	chr14:25 -	3272	6	23.097	1.1874	28.915	0
CYP2B6	chr19:41 +	27098	10	16.762	0.63	45.73	0
MMP1	chr11:10 -	8326	12	16.158	0.591	36.569	0
FLJ22184	chr19:79 -	5722	7	12.204	0.2304	48.344	0
NFE2L3	chr7:261 +	34910	4	38.054	2.6953	71.676	0
NEBL	chr10:21 -	394214	34	23.191	1.3151	96.805	0
TESC	chr12:11 -	60524	9	27.085	1.7399	32.081	0
SAA1	chr11:18 +	3716	6	10.636	0.2353	17.394	0
CTHRC1	chr8:104 +	11490	6	17.382	0.9896	36.146	0
PROX1	chr1:214 +	53570	6	15.675	0.8313	72.422	0
MLXIPL	chr7:730 -	31347	27	19.242	1.2311	55.793	0
OR51E1	chr11:46 +	11561	4	10.017	0.2373	36.062	0
TOX3	chr16:52 -	109797	10	56.747	5.8202	79.686	0
TRIB3	chr20:36 +	16896	6	18.016	1.3612	42.919	0
HILPDA	chr7:128 +	2589	5	27.73	2.5796	36.504	0
HV98306	chr6:437 +	51	1	128.57	16.162	14.21	0
SLC6A6	chr3:144 +	86782	19	17.912	1.5107	68.581	0
GRM8	chr7:126 -	814496	18	11.437	0.6847	45.154	0
CCAT1	chr8:128 -	14688	2	7.4567	0.1814	41.737	0
UBD	chr6:295 -	4314	2	14.297	1.1664	22.33	0
ATHL1	chr11:28 +	6551	21	22.735	2.3709	52.136	0
ARL5B	chr10:18 +	18628	6	11.362	0.775	38.67	0
CDCA7	chr2:174 +	14158	11	81.61	11.06	82.776	0
THBS2	chr6:169 -	38263	23	34.711	4.2446	79.225	0
VEGFA	chr6:437 +	16278	15	45.841	5.8812	78.994	0
HOXB9	chr17:46 -	5317	2	102.14	14.305	90.137	0
SOX4	chr6:215 +	4878	1	68.782	9.4806	99.769	0
PCSK1	chr5:957 -	42946	16	12.719	1.0673	48.6	0
AZGP1	chr7:995 -	9386	4	40.738	5.4254	39.38	0

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ABCB1	chr7:871 -	209461	31	18.894	2.1267	53.455	0
BC03795	chr15:38 -	87271	4	16.338	1.8449	35.962	0
ECT2	chr3:172 +	70790	29	26.146	3.4636	61.645	0
HSPH1	chr13:31 -	25740	21	52.618	7.9166	88.563	0
SHCBP1	chr16:46 -	40844	13	11.829	1.1455	35.864	0
FGGY	chr1:597 +	465778	23	16.255	1.8994	45.232	0
ORC6	chr16:46 +	8749	11	20.199	2.5632	47.531	0
AK12423	chr13:11 -	3598	1	15.867	1.8504	42.521	0
VPS35	chr16:46 -	29556	21	86.779	13.835	124.36	0
ACE2	chrX:155 -	41037	20	12.158	1.2317	37.965	0
PLCB4	chr20:90 +	411762	40	36.294	5.3285	78.842	0
CARD11	chr7:294 -	137800	25	12.001	1.2139	41.688	0
SPP1	chr4:888 +	7762	8	41.861	6.2998	46.528	0
ALPK3	chr15:85 +	56803	15	13	1.3911	68.313	0
GTF2IRD	chr7:738 +	148801	32	20.347	2.6909	62.682	0
C6orf222	chr6:362 -	21128	12	13.025	1.4353	39.641	0
ANLN	chr7:364 +	63969	27	18.38	2.4364	51.413	0
SKIL	chr3:170 +	39165	11	14.403	1.7629	57.099	0
PUS7	chr7:105 -	65726	21	15.204	1.9112	40.482	0
PHLDA1	chr12:76 -	6330	4	18.922	2.6059	57.618	0
NPTX2	chr7:982 +	12585	5	10.822	1.1462	30.998	0
LMO7	chr13:76 +	239437	39	23.712	3.5069	79.24	0
XPO5	chr6:434 -	53745	32	32.219	5.0788	69.411	0
E2F3	chr6:204 +	91809	9	12.646	1.5362	45.135	0
NUP153	chr6:176 -	91800	23	30.437	4.8754	71.244	0
SFRP4	chr7:379 -	10991	6	37.314	6.2194	54.819	0
FGFRL1	chr4:100 +	15747	10	23.712	3.6625	48.395	0
SRPK1	chr6:358 -	88147	21	61.867	11.04	88.987	0
LAMC2	chr1:183 +	59089	25	23.329	3.7348	64.78	0
AK02291	chr10:18 +	3520	1	11.015	1.346	34.742	0
BC00508	chr1:156 -	1971	1	12.455	1.6471	27.218	0
SORBS1	chr10:97 -	249642	44	7.2082	40.428	-108.07	0
RRAS	chr19:50 -	4849	6	17.712	93.606	-50.067	0
THBS4	chr5:793 +	47938	22	18.767	98.945	-93.1	0
RARRES3	chr11:63 +	9658	4	7.8294	43.718	-30.705	0
GSN	chr9:123 +	131360	38	37.851	196	-176	0
FAXDC2	chr5:154 -	32162	9	3.5584	22.194	-44.684	0
CCL15	chr17:34 -	4467	4	4.3096	26.052	-28.816	0
FAM162A	chr3:122 +	25939	6	13.646	73.702	-53.631	0
SLC25A4	chr4:186 +	7122	4	2.4699	16.897	-48.475	0
BLVRB	chr19:40 -	18035	5	12.582	69.127	-40.641	0
KLF2	chr19:16 +	2689	3	4.7946	28.97	-37.543	0
RGMA	chr15:93 -	45808	12	1.8872	14.031	-45.149	0
IFI6	chr1:279 -	6153	7	59.119	313.28	-85.751	0
CD79A	chr19:42 +	4250	6	3.0471	20.272	-28.132	0
TGFB111	chr16:31 +	5806	13	14.247	79.598	-64.721	0
TPM1	chr15:63 +	29276	18	77.564	414.52	-202.35	0
NDUFA1	chrX:119 +	4896	3	53.78	289.35	-62.249	0
CHRD1	chrX:109 -	122203	17	3.1661	21.203	-52.401	0
POPDC2	chr3:119 -	35336	12	5.5728	34.091	-48.126	0
ECI2	chr6:411 -	19905	14	4.8299	30.141	-38.702	0
RASD2	chr22:35 +	12694	4	1.301	11.478	-34.727	0
OGN	chr9:951 -	20689	9	1.3715	11.891	-35.629	0

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KLHDC8B	chr3:492 +	4902	9	2.5814	18.645	-38.949	0
NCS1	chr9:132 +	64727	9	4.9414	31.612	-69.417	0
EMP3	chr19:48 +	5182	5	11.398	67.22	-40.274	0
DNAJB5	chr9:349 +	8793	6	1.7851	14.348	-38.069	0
CLIP3	chr19:36 -	18236	15	3.1046	21.676	-49.985	0
SECTM1	chr17:80 -	13022	5	2.3668	17.646	-36.308	0
PCSK7	chr11:11 -	27024	17	16.828	98.324	-99.601	0
PDLIM3	chr4:186 -	34898	10	4.2215	28.27	-67.651	0
GLIPR2	chr9:361 +	27162	13	2.9884	21.408	-47.051	0
LOC1005	chr1:159 +	17863	3	1.7171	14.273	-23.586	0
AK05519	chr15:63 +	2159	1	61.596	355.38	-148.55	0
UGT1A9	chr2:234 +	101408	7	1.1914	11.695	-33.948	0
MUC1	chr1:155 -	4407	36	8.0628	51.72	-67.425	0
WFDC2	chr20:44 +	11779	6	29.769	178.23	-64.375	0
ATP2B4	chr1:203 +	117295	24	8.2055	52.834	-121.49	0
ITIH5	chr10:76 -	107730	17	2.018	16.676	-66.823	0
KLF4	chr9:110 -	4915	8	7.3266	47.86	-68.79	0
UGT1A4	chr2:234 +	54514	6	1.3076	12.575	-33.79	0
SEMA3B	chr3:503 +	9533	29	1.6419	14.588	-44.63	0
MIR143H	chr5:148 +	25958	6	1.2507	12.293	-20.817	0
UGT1A5	chr2:234 +	60314	6	1.3172	12.714	-33.8	0
TNS1	chr2:218 -	203207	44	16.886	104.89	-202.56	0
UGT1A3	chr2:234 +	44179	6	1.3172	12.72	-33.811	0
UGT1A7	chr2:234 +	91368	6	1.3056	12.776	-33.878	0
ARHGEF2	chr12:58 +	7066	20	3.2407	24.42	-50.099	0
KCNMA1	chr10:78 -	768219	46	1.1639	12.107	-87.026	0
PDLIM7	chr5:176 -	14208	18	13.74	88.786	-85.214	0
EML1	chr14:10 +	204327	26	1.38	13.526	-49.936	0
ZNF575	chr19:44 +	10636	7	1.9207	16.903	-40.183	0
S100A14	chr1:153 -	2077	4	18.486	119.02	-62.057	0
ARL14	chr3:160 +	1288	1	1.0569	11.849	-24.043	0
JPH2	chr20:42 -	75882	7	1.8213	16.657	-59.267	0
HSPB7	chr1:163 -	5567	8	3.0812	24.723	-53.029	0
CES2	chr16:66 +	10648	15	11.974	81.06	-103.28	0
YIF1B	chr19:38 -	12407	15	5.8364	42.608	-66.821	0
UGT1A8	chr2:234 +	155661	6	1.2907	13.62	-35.849	0
SRPX	chrX:380 -	71590	10	1.3713	14.168	-31.57	0
EIF1AY	chrY:227 +	17430	7	1.5723	15.483	-27.989	0
GSTM4	chr1:110 +	9426	11	1.9962	18.228	-39.403	0
OCEL1	chr19:17 +	2974	6	2.2945	20.215	-27.79	0
SELM	chr22:31 -	2789	5	19.021	128.02	-52.548	0
CLU	chr8:274 -	17895	13	12.655	88.232	-103.84	0
REG4	chr1:120 -	17563	8	1.0854	12.638	-33.084	0
MYLK-AS	chr3:123 +	45264	3	3.559	29.013	-27.339	0
CITED2	chr6:139 -	2396	6	5.6477	43.059	-54.895	0
CHCHD1C	chr22:24 -	2121	4	21.583	149.32	-56.759	0
PLAC9	chr10:81 +	12527	4	1.879	18.191	-21.05	0
LGALS9C	chr17:18 +	18161	11	1.6021	16.412	-32.25	0
C7	chr5:409 +	73444	21	6.1403	46.806	-79.795	0
PPP1R14I	chr15:41 -	13265	5	7.1825	54.023	-39.369	0
ACADS	chr12:12 +	14241	11	7.1165	54.025	-60.556	0
GNAO1	chr16:56 +	166106	11	0.664	10.343	-57.987	0
FAM129A	chr1:184 -	183560	21	3.4439	29.472	-89.647	0

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AB23171 chr11: 11 +	1324	2	5.7052	44.995	-15.193	0
S100B chr21: 48 -	6505	4	1.3942	15.438	-26.761	0
DKFZp66 chr22: 22 +	462276	2	92.488	641.76	-197.15	0
FOXF2 chr6: 139 +	5764	2	0.8439	11.695	-31.988	0
AOC3 chr17: 41 +	6947	6	9.7365	73.204	-99.969	0
TMEM37 chr2: 120 +	6651	2	0.9387	12.509	-28.921	0
SYNPO2 chr4: 119 +	172407	8	9.7441	74.018	-183.57	0
GREM2 chr1: 240 -	122590	4	0.7043	10.908	-43.245	0
CAV1 chr7: 115 +	271334	15	6.8103	54.672	-91.189	0
AK09830 chr20: 42 -	2308	1	2.4943	24.025	-44.763	0
PTN chr7: 136 -	116455	5	0.9534	13.059	-28.371	0
CADM3 chr1: 159 +	31556	12	0.5624	10.29	-41.3	0
FXVD6-F)chr11: 11 -	56957	12	2.0436	21.321	-31.233	0
Myopodir chr4: 119 +	879	1	13.197	103.15	-55.038	0
ADIRF chr10: 88 +	2479	3	6.4101	53.798	-35.255	0
MYLK chr3: 123 -	272007	42	14.679	115	-196.73	0
ANGPTL1 chr1: 178 -	21546	9	0.7214	11.801	-42.149	0
MZB1 chr5: 138 -	2349	6	7.3665	61.408	-43.75	0
NKX2-3 chr10: 10 +	3591	2	0.9833	13.829	-34.11	0
CWH43 chr4: 489 +	75831	17	0.5299	10.54	-34.376	0
PHGR1 chr15: 40 +	5401	7	147.95	1124.4	-128.26	0
BTNL3 chr5: 180 +	17883	9	0.473	10.171	-33.539	0
ASB2 chr14: 94 -	42578	13	1.0644	14.678	-52.096	0
SCGN chr6: 256 +	49580	11	0.9054	13.676	-28.717	0
FOS chr14: 75 +	3457	5	21.977	176.86	-119.62	0
SMTN chr22: 31 +	23329	30	11.778	98.324	-149.49	0
LTBP4 chr19: 41 +	36654	44	5.1906	47.169	-103.41	0
WFDC1 chr16: 84 +	35050	9	3.5364	34.303	-41.378	0
AB23171 chr11: 11 +	1324	3	8.5652	73.517	-25.094	0
HHLA2 chr3: 108 +	81734	13	1.3159	17.116	-43.466	0
MOGAT2 chr11: 75 +	13398	9	0.5304	10.975	-35.131	0
PLIN4 chr19: 45 -	15525	9	3.0211	30.644	-84.592	0
CSRP1 chr1: 201 -	23730	11	32.427	262.12	-225.88	0
PI16 chr6: 369 +	16575	12	0.6319	11.906	-37.341	0
PLN chr6: 118 +	12146	4	4.9314	46.037	-53.115	0
CMBL chr5: 102 -	30462	6	2.0745	23.464	-60.053	0
GPT chr8: 145 +	3091	15	0.7033	12.651	-34.034	0
SELENBP chr1: 151 -	8433	15	29.492	244.61	-140.94	0
HRCT1 chr9: 359 +	950	1	1.3481	17.96	-26.005	0
AX74781 chr22: 31 +	2882	2	3.7022	37.296	-59.725	0
CRYAB chr11: 11 -	3124	4	7.0289	64.938	-53.903	0
TPSB2 chr16: 12 -	2914	12	2.9432	31.48	-42.406	0
RHOB chr2: 206 +	2367	1	20.927	181.41	-122.28	0
ALDH1A1 chr9: 755 -	179781	15	8.0011	74.008	-80.307	0
SDPR chr2: 192 -	12975	2	2.4806	28.086	-58.886	0
RNASE1 chr14: 21 -	1522	7	40.043	342.38	-107.25	0
CASQ2 chr1: 116 -	68801	11	2.0746	24.777	-50.784	0
DHRS11 chr17: 34 +	9008	7	4.7029	47.107	-52.493	0
CAPN9 chr1: 230 +	54620	20	0.6608	13.085	-38.133	0
FLNA chrX: 153 -	26107	48	120.76	1033	-553.97	0
PRPH chr12: 49 +	3573	9	0.5965	12.613	-31.637	0
HAND1 chr5: 153 -	3293	2	0.9631	15.744	-33.67	0
IGFBP6 chr12: 53 +	4693	4	4.5028	46.034	-40.477	0

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SDCBP2	chr20:12 -	19325	13	2.9274	32.574	-54.032	0
FOSB	chr19:45 +	7185	10	1.0144	16.257	-56.679	0
PNCK	chrX:152 -	17060	21	0.4645	11.59	-40.411	0
COX7A1	chr19:36 -	1948	4	3.151	34.81	-31.631	0
L1CAM	chrX:153 -	24660	31	0.4937	11.921	-52.737	0
RBPMS2	chr15:65 -	35676	8	1.6154	21.789	-41.559	0
MT1A	chr16:56 +	31522	5	16.925	156.87	-56.963	0
MAMDC2	chr9:726 +	183392	15	0.4251	11.625	-43.402	0
BCAS1	chr20:52 -	127226	15	1.8965	24.841	-64.763	0
TMEM35	chrX:100 +	17520	2	0.6146	13.465	-34.828	0
HSPA2	chr14:65 +	7332	3	3.5749	40.421	-66.026	0
ITM2C	chr2:231 +	14343	7	67.256	625.35	-215.72	0
GCNT3	chr15:59 +	8229	6	1.8582	25.302	-48.817	0
SLC26A2	chr5:149 +	26664	3	2.7581	33.833	-103	0
RGS2	chr1:192 +	3239	5	9.4712	96.264	-69.135	0
CES1	chr16:55 -	30312	16	2.0722	27.597	-46.911	0
TPSAB1	chr16:12 +	1878	7	2.7364	33.856	-39.661	0
MT2A	chr16:56 +	932	3	52.535	500.99	-86.954	0
RPS4Y1	chrY:262 +	114661	11	14.457	144.76	-78.232	0
NNAT	chr20:36 +	2484	3	1.8328	25.788	-36.714	0
SPDEF	chr6:345 -	18532	6	1.3864	21.715	-41.32	0
LIMS2	chr2:128 -	43365	19	3.6983	43.853	-83.656	0
TSPAN7	chrX:384 +	127442	11	1.9565	27.305	-47.647	0
CES3	chr16:66 +	13921	15	0.9856	18.085	-57.5	0
BCYRN1	chrX:704 -	518928	3	4.0633	47.668	-18.143	0
PIGR	chr1:207 -	17945	12	128.93	1252.7	-450.25	0
ENTPD8	chr9:140 -	7086	13	0.6641	15.247	-40.611	0
ADH1B	chr4:100 -	15046	13	2.16	30.216	-75.54	0
CD177	chr19:43 +	9656	14	2.7969	36.517	-63.075	0
TPSG1	chr16:12 -	3604	6	0.94	18.411	-29.502	0
ETHE1	chr19:44 -	20526	8	18.301	192.45	-95.659	0
AX74740	chr11:11 -	2544	1	4.1188	51.025	-71.086	0
C19orf33	chr19:38 +	843	5	20.67	220.93	-65.51	0
FXVD6	chr11:11 -	40511	11	5.3095	64.254	-77.517	0
LRRC26	chr9:140 -	1280	2	0.2428	11.888	-25.873	0
MRGPRF	chr11:68 -	8989	4	3.6348	48.551	-66.305	0
LDHD	chr16:75 -	4913	12	0.5431	15.652	-38.223	0
FLNC	chr7:128 +	28846	48	10.727	125.57	-209.86	0
RBFOX3	chr17:77 -	426804	18	0.1108	11.084	-50.006	0
FHL1	chrX:135 +	64658	20	8.1242	98.433	-126.3	0
CTSG	chr14:25 -	2743	5	0.2896	13.056	-23.776	0
SPINK4	chr9:332 +	8370	4	14.964	173.8	-49.468	0
CLCA4	chr1:870 +	33674	14	0.007	10.109	-40.316	0
PRIMA1	chr14:94 -	70123	6	0.2335	12.639	-47.85	0
SLPI	chr20:43 -	2328	4	6.2329	80.315	-43.454	0
CDC42EP	chr19:54 -	8213	3	8.0835	101.49	-58.896	0
SPIB	chr19:50 +	12115	8	0.2909	13.661	-47.603	0
CCDC69	chr5:150 -	43042	11	3.6965	52.447	-93.831	0
KCNMB1	chr5:169 -	11517	5	2.7185	41.469	-65.951	0
HSD11B2	chr16:67 +	6419	5	8.635	109.83	-90.007	0
HAND2	chr4:174 -	3727	5	1.2293	24.676	-50.098	0
PCP4	chr21:41 +	61976	3	4.3434	61.387	-37.035	0
TPM2	chr9:356 -	8064	13	85.239	1007	-262.47	0

Table S1

MMP28	chr17:34 -	39372	15	0.5372	17.013	-48.827	0
HBA1	chr16:22 +	842	3	2.6736	42.199	-31.624	0
ATP1A2	chr1:160 +	27855	27	0.5339	17.061	-68.117	0
SLC28A2	chr15:45 +	23705	18	0.3327	14.768	-41.263	0
SCGB2A1	chr11:61 +	5272	3	0	10.839	-16.842	0
DEFB1	chr8:672 -	7433	2	0.0482	11.438	-16.203	0
NDE1	chr16:15 +	83085	14	16.192	204.72	-207.56	0
PLAC8	chr4:840 -	24701	7	1.8219	33.122	-53.549	0
BCHE	chr3:165 -	64562	4	0.2462	14.192	-40.648	0
LYVE1	chr11:10 -	10953	6	1.3857	28.184	-55.069	0
HBB	chr11:52 -	1606	3	3.4573	53.88	-37.204	0
PTGS1	chr9:125 +	25174	18	2.0567	36.774	-94.724	0
TMEM171	chr5:724 +	11257	5	0.6117	19.146	-33.188	0
C10orf99	chr10:85 +	11497	3	16.083	212.97	-83.547	0
PGM5-AS	chr9:709 -	2649	2	0.1288	13.148	-18.459	0
HBA2	chr16:22 +	864	3	2.9882	49.209	-35.145	0
UGT2B15	chr4:695 -	24180	6	0.0494	12.247	-37.035	0
TMIGD1	chr17:28 -	17700	7	0.0424	12.178	-26.957	0
AKR1B10	chr7:134 +	13823	10	0.6293	19.637	-37.734	0
PSD	chr10:10 -	17318	22	0.9923	24.336	-71.162	0
TAGLN	chr11:11 +	5469	12	123.4	1594.4	-420.71	0
MFSD4	chr1:205 +	33935	11	0.2706	15.408	-55.528	0
CFD	chr19:85 +	3946	5	6.9539	101.72	-69.096	0
PCK1	chr20:56 +	5377	10	4.191	66.619	-85.854	0
PPP1R14	chr19:38 -	5355	4	3.4383	57.757	-43.232	0
DQ57504	chr22:23 +	1737	1	30.748	419.76	-170.55	0
IGLL5	chr22:23 +	8054	4	51.109	698.46	-171.96	0
LMOD1	chr1:201 -	50133	6	10.534	154.1	-157.38	0
C21orf88	chr21:40 -	15675	4	0.0204	12.737	-37.354	0
MAB21L2	chr4:151 +	2769	1	3.2253	57.364	-81.768	0
SCARA5	chr8:277 -	122971	10	0.2936	16.885	-60.522	0
FXYD3	chr19:35 +	8497	14	28.394	407.95	-195.72	0
LGALS4	chr19:39 -	11430	13	71.955	1035.6	-292.74	0
BEST4	chr1:452 -	4170	9	0.0834	14.783	-39.105	0
HSD17B2	chr16:82 +	63282	5	0.7826	25.053	-40.451	0
CHP2	chr16:23 +	4309	7	3.7066	67.88	-82.432	0
CHST5	chr16:75 -	16966	10	0.3827	19.551	-56.664	0
PLA2G2A	chr1:203 -	5009	8	7.6897	130.05	-74.814	0
DNASE1L	chr3:581 -	22501	13	0.2328	17.763	-42.499	0
SYNM	chr15:99 +	30515	8	11.66	193.75	-243.51	0
FXYD1	chr19:35 +	4223	9	0.7688	26.739	-27.452	0
HSPB8	chr12:11 +	15957	3	5.8988	107.27	-95.263	0
SLC51B	chr15:65 +	8027	4	0.2928	19.348	-29.518	0
CKB	chr14:10 -	3202	8	65.571	1063	-253.37	0
ST6GALN	chr9:130 -	20027	11	4.45	86.288	-99.968	0
SLC26A3	chr7:107 -	37767	22	5.1685	98.542	-110.23	0
C2orf40	chr2:106 +	12497	4	0.2203	18.988	-26.819	0
PI3	chr20:43 +	1646	3	0.9669	31.314	-28.125	0
HOXB13	chr17:46 -	3985	2	2.1687	51.116	-82.607	0
NXPE1	chr11:11 -	38144	12	0.16	18.095	-50.532	0
PGM5	chr9:709 +	174163	11	3.354	74.601	-104.23	0
DES	chr2:220 +	8363	9	143.3	2519.7	-489.06	0
MGAT4B	chr5:179 -	9355	17	2.4109	58.785	-93.529	0

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HSPB6	chr19:36 -	2464	3	11.141	213.31	-115.23	0
CNN1	chr19:11 +	11560	9	39.206	710.98	-236.53	0
CEACAM7	chr19:42 -	14862	7	4.2927	94.315	-96.96	0
AX74784	chr16:15 +	3498	1	17.638	335.73	-223.74	0
MYL9	chr20:35 +	8340	4	144.59	2647.6	-366.7	0
ADAMDE1	chr8:242 +	21729	15	4.182	93.498	-99.756	0
VSIG2	chr11:12 -	4740	8	5.5035	121.38	-86.2	0
CLEC3B	chr3:450 +	9805	3	2.3354	63.735	-49.31	0
MYH11	chr16:15 -	153896	50	58.711	1182.9	-810.36	0
TSPAN1	chr1:466 +	10886	9	14.828	314.01	-148.87	0
PADI2	chr1:173 -	52693	17	1.4189	47.365	-99.783	0
TACR2	chr10:71 -	12717	6	1.032	39.693	-69.434	0
CLDN8	chr21:31 -	2146	1	0	19.356	-45.677	0
BEST2	chr19:12 +	5865	9	0.1244	22.36	-45.916	0
LGALS2	chr22:37 -	9772	4	2.4944	73.744	-41.94	0
IL1R2	chr2:102 +	36579	12	0.9165	41.029	-57.141	0
Ig_alpha	chr14:10 -	639	2	0.8337	39.916	-25.966	0
MT1X	chr16:56 +	1727	4	6.5598	168.15	-64.693	0
SPINK1	chr5:147 -	7118	4	5.3991	146.8	-53.828	0
LYPD8	chr1:248 -	435	1	3.0108	94.985	-43.349	0
ACTG2	chr2:741 +	26688	11	82.518	2009.5	-474.87	0
FABP1	chr2:884 -	5143	4	77.259	1912.2	-218.37	0
REP15	chr12:27 +	1139	1	0.3194	31.563	-41.828	0
DPT	chr1:168 -	33748	4	3.1659	105.26	-91.192	0
CA7	chr16:66 +	9768	8	0.0818	30.831	-53.29	0
HEPACAM1	chr7:928 -	37884	12	0.2921	38.382	-65.345	0
MUC2	chr11:10 +	29543	51	8.4994	322.94	-359.38	0
MT1H	chr16:56 +	1316	3	0.4498	51.998	-31.768	0
NXPE4	chr11:11 -	25172	7	1.0294	73.294	-87.304	0
MT1F	chr16:56 +	1361	3	2.6869	134.47	-52.897	0
GUCA2B	chr1:426 +	2404	3	0.0374	37.521	-33.491	0
ADH1C	chr4:100 -	16269	10	3.0492	167.88	-108.23	0
MT1M	chr16:56 +	16526	4	1.4922	105.62	-53.79	0
FW34004	chr8:863 +	2277	1	0.4442	62.723	-83.771	0
IGJ	chr4:715 -	11091	5	25.378	1197.6	-286.63	0
MS4A12	chr11:60 +	14651	9	0.0383	46.637	-63.873	0
CA4	chr17:58 +	20959	9	0.0891	51.046	-61.91	0
CHGA	chr14:93 +	12194	8	5.0532	299.9	-170.92	0
ST6GALN1	chr17:74 -	19050	10	1.8039	150.86	-139.92	0
MT1E	chr16:56 +	1440	4	5.7674	387.59	-126	0
AQP8	chr16:25 +	11969	6	0.367	80.355	-72.145	0
FCGBP	chr19:40 -	86571	36	1.7822	168.65	-367.01	0
UGT2B17	chr4:694 -	31343	6	0.471	101.33	-102.06	0
CA2	chr8:863 +	17591	7	2.0719	225.25	-135.36	0
B3GNT7	chr2:232 +	5541	2	0.548	116.32	-144.49	0
GCG	chr2:162 -	9536	6	0.345	105.09	-82.23	0
GUCA2A	chr1:426 -	2034	3	4.2208	424.47	-109.03	0
INSL5	chr1:672 -	3519	2	0.0417	96.851	-59.062	0
ITLN1	chr1:160 -	8631	8	3.4791	472.95	-165.7	0
IGH@	chr14:10 -	277245	4	32.941	3959.9	-466.07	0
PYY	chr17:42 -	51731	9	0.5485	184.25	-104.03	0
MT1G	chr16:56 -	1325	4	2.2375	400.1	-88.774	0
SST	chr3:187 -	1508	2	0.0353	143.67	-67.51	0

Table S1

CLCA1	chr1:869 +	31580	16	0.2248	546.97	-298.93	0
ZG16	chr16:29 +	3409	4	0.0741	528.92	-219.16	0
CA1	chr8:862 -	49885	12	0.0654	632.97	-216.25	0



Table S1

ns from RNA-seq of the paired CRC/control mucosa  
 ≥ RPKM value of CRC sample versus the RPKM value of  
 st be <0.05 (Wald score >1.96). Normalized reads from  
 ldStat).

- 149.38 Homo sapiens cystatin SN (CST1), mRNA.
- 66.446 Homo sapiens dipeptidase 1 (renal) (DPEP1), mRNA.
- 48.489 Homo sapiens carbonic anhydrase IX (CA9), mRNA.
- 35.698 Homo sapiens ets variant 4 (ETV4), mRNA.
- 30.013 Homo sapiens claudin 1 (CLDN1), mRNA.
- 26.335 Homo sapiens sulfotransferase family, cytosolic, 1C, member 4 (SULT1C4), r
- 22.99 Homo sapiens regenerating islet-derived 1 alpha (REG1A), mRNA.
- 20.91 Homo sapiens cartilage oligomeric matrix protein (COMP), mRNA.
- 20.706 Homo sapiens naked cuticle homolog 1 (Drosophila) (NKD1), mRNA.
- 16.555 Homo sapiens carcinoembryonic antigen-related cell adhesion molecule 6 (nc
- 16.081 Homo sapiens glutamic pyruvate transaminase (alanine aminotransferase) 2
- 16.002 Homo sapiens metastasis associated in colon cancer 1 (MACC1), mRNA.
- 15.723 Homo sapiens homeobox B8 (HOXB8), mRNA.
- 14.213 Homo sapiens chromosome 6 open reading frame 223 (C6orf223), mRNA.
- 11.999 Homo sapiens leucine-rich repeat containing G protein-coupled receptor 5 (L
- 11.888 Homo sapiens teratocarcinoma-derived growth factor 1 (TDGF1), mRNA.
- 11.695 Homo sapiens frizzled family receptor 10 (FZD10), mRNA.
- 11.596 Homo sapiens calcitonin-related polypeptide alpha (CALCA), mRNA.
- 11.018 Homo sapiens forkhead box Q1 (FOXQ1), mRNA.
- 11.016 Homo sapiens granzyme B (granzyme 2, cytotoxic T-lymphocyte-associated
- 10.897 Homo sapiens cytochrome P450, family 2, subfamily B, polypeptide 6 (CYP2E
- 10.784 Homo sapiens matrix metalloproteinase 1 (interstitial collagenase) (MMP1), r
- 10.731 Homo sapiens putative uncharacterized protein FLJ22184 (FLJ22184), mRNA
- 10.569 Homo sapiens nuclear factor (erythroid-derived 2)-like 3 (NFE2L3), mRNA.
- 10.449 Homo sapiens nebulin (NEBL), mRNA.
- 10.25 Homo sapiens tescalcin (TESC), non-coding RNA.
- 9.4201 Homo sapiens serum amyloid A1 (SAA1), mRNA.
- 9.239 Homo sapiens collagen triple helix repeat containing 1 (CTHRC1), mRNA.
- 9.1053 Homo sapiens prospero homeobox 1 (PROX1), mRNA.
- 9.0727 Homo sapiens MLX interacting protein-like (MLXIPL), mRNA.
- 8.9043 Homo sapiens olfactory receptor, family 51, subfamily E, member 1 (OR51E1
- 8.4671 Homo sapiens TOX high mobility group box family member 3 (TOX3), mRNA
- 8.0536 Homo sapiens tribbles homolog 3 (Drosophila) (TRIB3), mRNA.
- 8.0259 Homo sapiens hypoxia inducible lipid droplet-associated (HILPDA), mRNA.
- 7.55 Homo sapiens cDNA FLJ32352 fis, clone PROST2007389, moderately similar
- 7.5325 Homo sapiens solute carrier family 6 (neurotransmitter transporter, taurine),
- 7.3822 Homo sapiens glutamate receptor, metabotropic 8 (GRM8), non-coding RNA.
- 7.1579 Homo sapiens cDNA FLJ43320 fis, clone NT2RI2024935.
- 7.0609 Homo sapiens ubiquitin D (UBD), mRNA.
- 7.0412 Homo sapiens ATH1, acid trehalase-like 1 (yeast) (ATHL1), mRNA.
- 6.9643 Homo sapiens ADP-ribosylation factor-like 5B (ARL5B), mRNA.
- 6.8498 Homo sapiens cell division cycle associated 7 (CDCA7), mRNA.
- 6.8092 Homo sapiens thrombospondin 2 (THBS2), mRNA.
- 6.8071 Homo sapiens vascular endothelial growth factor A (VEGFA), mRNA.
- 6.7389 Homo sapiens homeobox B9 (HOXB9), mRNA.
- 6.6582 Homo sapiens SRY (sex determining region Y)-box 4 (SOX4), mRNA.
- 6.6362 Homo sapiens proprotein convertase subtilisin/kexin type 1 (PCSK1), mRNA.
- 6.4957 Homo sapiens alpha-2-glycoprotein 1, zinc-binding (AZGP1), mRNA.

Table S1

6.3625 Homo sapiens ATP-binding cassette, sub-family B (MDR/TAP), member 1 (AE  
6.0947 Homo sapiens, clone IMAGE: 3923347, mRNA.  
6.0816 Homo sapiens epithelial cell transforming sequence 2 oncogene (ECT2), mRNA  
6.0133 Homo sapiens heat shock 105kDa/110kDa protein 1 (HSPH1), mRNA.  
5.9795 Homo sapiens SHC SH2-domain binding protein 1 (SHCBP1), mRNA.  
5.9512 Homo sapiens FGGY carbohydrate kinase domain containing (FGGY), non-coc  
5.9495 Homo sapiens origin recognition complex, subunit 6 (ORC6), non-coding RNA  
5.9173 Homo sapiens cDNA FLJ42239 fis, clone TKIDN2002329.  
5.9172 Homo sapiens vacuolar protein sorting 35 homolog (S. cerevisiae) (VPS35), mRNA  
5.8959 Homo sapiens angiotensin I converting enzyme (peptidyl-dipeptidase A) 2 (ACE2)  
5.893 Homo sapiens phospholipase C, beta 4 (PLCB4), mRNA.  
5.8726 Homo sapiens caspase recruitment domain family, member 11 (CARD11), mRNA  
5.8715 Homo sapiens secreted phosphoprotein 1 (SPP1), mRNA.  
5.8549 Homo sapiens alpha-kinase 3 (ALPK3), mRNA.  
5.7838 Homo sapiens GTF2I repeat domain containing 1 (GTF2IRD1), mRNA.  
5.7591 Homo sapiens chromosome 6 open reading frame 222 (C6orf222), mRNA.  
5.6395 Homo sapiens anillin, actin binding protein (ANLN), mRNA.  
5.5751 Homo sapiens SKI-like oncogene (SKIL), mRNA.  
5.5659 Homo sapiens pseudouridylate synthase 7 homolog (S. cerevisiae) (PUS7), mRNA  
5.5248 Homo sapiens pleckstrin homology-like domain, family A, member 1 (PHLDA1)  
5.5085 Homo sapiens neuronal pentraxin II (NPTX2), mRNA.  
5.4831 Homo sapiens LIM domain 7 (LMO7), mRNA.  
5.4647 Homo sapiens exportin 5 (XPO5), mRNA.  
5.3805 Homo sapiens E2F transcription factor 3 (E2F3), mRNA.  
5.3507 Homo sapiens nucleoporin 153kDa (NUP153), mRNA.  
5.3071 Homo sapiens secreted frizzled-related protein 4 (SFRP4), mRNA.  
5.3002 Homo sapiens fibroblast growth factor receptor-like 1 (FGFRL1), mRNA.  
5.2214 Homo sapiens SRSF protein kinase 1 (SRPK1), non-coding RNA.  
5.1383 Homo sapiens laminin, gamma 2 (LAMC2), mRNA.  
5.1213 Homo sapiens cDNA FLJ12853 fis, clone NT2RP2003456.  
5.0828 Homo sapiens brevican, mRNA (cDNA clone IMAGE: 3618761), with apparent  
0.1981 Homo sapiens sorbin and SH3 domain containing 1 (SORBS1), mRNA.  
0.1978 Homo sapiens related RAS viral (r-ras) oncogene homolog (RRAS), mRNA.  
0.1978 Homo sapiens thrombospondin 4 (THBS4), mRNA.  
0.1974 Homo sapiens retinoic acid receptor responder (tazarotene induced) 3 (RARR3)  
0.1972 Homo sapiens gelsolin (GSN), mRNA.  
0.1965 Homo sapiens fatty acid hydroxylase domain containing 2 (FAXDC2), mRNA.  
0.1963 Homo sapiens chemokine (C-C motif) ligand 15 (CCL15), mRNA.  
0.1961 Homo sapiens family with sequence similarity 162, member A (FAM162A), mRNA  
0.1939 Homo sapiens solute carrier family 25 (mitochondrial carrier; adenine nucleoside  
0.1937 Homo sapiens biliverdin reductase B (flavin reductase (NADPH)) (BLVRB), mRNA  
0.1933 Homo sapiens Kruppel-like factor 2 (lung) (KLF2), mRNA.  
0.1921 Homo sapiens RGM domain family, member A (RGMA), mRNA.  
0.1913 Homo sapiens interferon, alpha-inducible protein 6 (IFI6), mRNA.  
0.1903 Homo sapiens CD79a molecule, immunoglobulin-associated alpha (CD79A), mRNA  
0.1892 Homo sapiens transforming growth factor beta 1 induced transcript 1 (TGFB1-IT1)  
0.1891 Homo sapiens tropomyosin 1 (alpha) (TPM1), mRNA.  
0.1887 Homo sapiens NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 1, 7, 7L  
0.1876 Homo sapiens chordin-like 1 (CHRDL1), mRNA.  
0.1873 Homo sapiens popeye domain containing 2 (POPDC2), mRNA.  
0.1872 Homo sapiens enoyl-CoA delta isomerase 2 (ECI2), non-coding RNA.  
0.1844 Homo sapiens RASD family, member 2 (RASD2), mRNA.  
0.184 Homo sapiens osteoglycin (OGN), mRNA.

Table S1

0.1823 Homo sapiens kelch domain containing 8B (KLHDC8B), mRNA.  
 0.1822 Homo sapiens neuronal calcium sensor 1 (NCS1), mRNA.  
 0.1817 Homo sapiens epithelial membrane protein 3 (EMP3), mRNA.  
 0.1815 Homo sapiens DnaJ (Hsp40) homolog, subfamily B, member 5 (DNAJB5), mRNA.  
 0.181 Homo sapiens CAP-GLY domain containing linker protein 3 (CLIP3), mRNA.  
 0.1806 Homo sapiens secreted and transmembrane 1 (SECTM1), mRNA.  
 0.1795 Homo sapiens proprotein convertase subtilisin/kexin type 7 (PCSK7), mRNA.  
 0.1784 Homo sapiens PDZ and LIM domain 3 (PDLIM3), non-coding RNA.  
 0.178 Homo sapiens GLI pathogenesis-related 2 (GLIPR2), mRNA.  
 0.1779 Homo sapiens uncharacterized LOC100505633 (LOC100505633), non-coding RNA.  
 0.1756 Homo sapiens mRNA for TPM1 protein variant protein.  
 0.1726 Homo sapiens UDP glucuronosyltransferase 1 family, polypeptide A9 (UGT1A9), mRNA.  
 0.1719 Homo sapiens mucin 1, cell surface associated (MUC1), mRNA.  
 0.1717 Homo sapiens WAP four-disulfide core domain 2 (WFDC2), mRNA.  
 0.171 Homo sapiens ATPase, Ca++ transporting, plasma membrane 4 (ATP2B4), mRNA.  
 0.1707 Homo sapiens inter-alpha-trypsin inhibitor heavy chain family, member 5 (ITIH5), mRNA.  
 0.1704 Homo sapiens Kruppel-like factor 4 (gut) (KLF4), mRNA.  
 0.17 Homo sapiens UDP glucuronosyltransferase 1 family, polypeptide A4 (UGT1A4), mRNA.  
 0.1695 Homo sapiens sema domain, immunoglobulin domain (Ig), short basic domain (semaphorin) 4B (SEMA4B), mRNA.  
 0.1693 Homo sapiens MIR143 host gene (non-protein coding) (MIR143HG), non-coding RNA.  
 0.169 Homo sapiens UDP glucuronosyltransferase 1 family, polypeptide A5 (UGT1A5), mRNA.  
 0.1689 Homo sapiens tensin 1 (TNS1), mRNA.  
 0.1689 Homo sapiens UDP glucuronosyltransferase 1 family, polypeptide A3 (UGT1A3), mRNA.  
 0.1674 Homo sapiens UDP glucuronosyltransferase 1 family, polypeptide A7 (UGT1A7), mRNA.  
 0.1668 Homo sapiens Rho guanine nucleotide exchange factor (GEF) 25 (ARHGEF25), mRNA.  
 0.1651 Homo sapiens potassium large conductance calcium-activated channel, subfamily D, member 1 (KCNN1), mRNA.  
 0.1642 Homo sapiens PDZ and LIM domain 7 (enigma) (PDLIM7), mRNA.  
 0.1638 Homo sapiens echinoderm microtubule associated protein like 1 (EML1), mRNA.  
 0.1631 Homo sapiens zinc finger protein 575 (ZNF575), mRNA.  
 0.1624 Homo sapiens S100 calcium binding protein A14 (S100A14), mRNA.  
 0.1601 Homo sapiens ADP-ribosylation factor-like 14 (ARL14), mRNA.  
 0.1598 Homo sapiens junctophilin 2 (JPH2), mRNA.  
 0.1587 Homo sapiens heat shock 27kDa protein family, member 7 (cardiovascular) (HSP27), mRNA.  
 0.1581 Homo sapiens carboxylesterase 2 (CES2), non-coding RNA.  
 0.1568 Homo sapiens Yip1 interacting factor homolog B (S. cerevisiae) (YIF1B), mRNA.  
 0.1567 Homo sapiens UDP glucuronosyltransferase 1 family, polypeptide A8 (UGT1A8), mRNA.  
 0.1563 Homo sapiens sushi-repeat containing protein, X-linked (SRPX), mRNA.  
 0.1561 Homo sapiens eukaryotic translation initiation factor 1A, Y-linked (EIF1AY), mRNA.  
 0.1558 Homo sapiens glutathione S-transferase mu 4 (GSTM4), non-coding RNA.  
 0.1553 Homo sapiens occludin/ELL domain containing 1 (OCEL1), mRNA.  
 0.1552 Homo sapiens selenoprotein M (SELM), mRNA.  
 0.153 Homo sapiens clusterin (CLU), non-coding RNA.  
 0.1529 Homo sapiens regenerating islet-derived family, member 4 (REG4), mRNA.  
 0.1519 Homo sapiens MYLK antisense RNA 1 (MYLK-AS1), non-coding RNA.  
 0.1509 Homo sapiens Cbp/p300-interacting transactivator, with Glu/Asp-rich carboxy-terminal domain 1 (CITED1), mRNA.  
 0.1502 Homo sapiens coiled-coil-helix-coiled-coil-helix domain containing 10 (CHCHD10), mRNA.  
 0.15 Homo sapiens placenta-specific 9 (PLAC9), mRNA.  
 0.1494 Homo sapiens lectin, galactoside-binding, soluble, 9C (LGALS9C), mRNA.  
 0.1494 Homo sapiens complement component 7 (C7), mRNA.  
 0.1487 Homo sapiens protein phosphatase 1, regulatory (inhibitor) subunit 14D (PPP1R14D), mRNA.  
 0.1475 Homo sapiens acyl-CoA dehydrogenase, C-2 to C-3 short chain (ACADS), nuclear DNA.  
 0.1467 Homo sapiens guanine nucleotide binding protein (G protein), alpha activating activity 11 (GNAO1), mRNA.  
 0.1458 Homo sapiens family with sequence similarity 129, member A (FAM129A), mRNA.

Table S1

0.1458 Homo sapiens mRNA for hypothetical protein, partial cds, clone:Hsa11-digit0  
0.1456 Homo sapiens S100 calcium binding protein B (S100B), mRNA.  
0.1454 Homo sapiens cDNA FLJ43597 fis, clone SMINT2015787, moderately similar  
0.1452 Homo sapiens forkhead box F2 (FOXF2), mRNA.  
0.1447 Homo sapiens amine oxidase, copper containing 3 (AOC3), non-coding RNA.  
0.1435 Homo sapiens transmembrane protein 37 (TMEM37), mRNA.  
0.1432 Homo sapiens synaptopodin 2 (SYNPO2), mRNA.  
0.1431 Homo sapiens gremlin 2, DAN family BMP antagonist (GREM2), mRNA.  
0.1403 Homo sapiens caveolin 1, caveolae protein, 22kDa (CAV1), mRNA.  
0.1396 Homo sapiens cDNA FLJ40969 fis, clone UTERU2012688.  
0.139 Homo sapiens pleiotrophin (PTN), mRNA.  
0.1384 Homo sapiens cell adhesion molecule 3 (CADM3), mRNA.  
0.1364 Homo sapiens FXVD6-FXVD2 readthrough (FXVD6-FXVD2), mRNA.  
0.1363 Homo sapiens mRNA for myopodin.  
0.1352 Homo sapiens adipogenesis regulatory factor (ADIRF), mRNA.  
0.1352 Homo sapiens myosin light chain kinase (MYLK), mRNA.  
0.1345 Homo sapiens angiopoietin-like 1 (ANGPTL1), mRNA.  
0.1341 Homo sapiens marginal zone B and B1 cell-specific protein (MZB1), mRNA.  
0.1337 Homo sapiens NK2 homeobox 3 (NKX2-3), mRNA.  
0.1326 Homo sapiens cell wall biogenesis 43 C-terminal homolog (*S. cerevisiae*) (CV  
0.1323 Homo sapiens proline/histidine/glycine-rich 1 (PHGR1), mRNA.  
0.1319 Homo sapiens butyrophilin-like 3 (BTNL3), mRNA.  
0.1317 Homo sapiens ankyrin repeat and SOCS box containing 2 (ASB2), mRNA.  
0.1298 Homo sapiens secretagogen, EF-hand calcium binding protein (SCGN), mRNA  
0.1292 Homo sapiens FBJ murine osteosarcoma viral oncogene homolog (FOS), mRNA  
0.1287 Homo sapiens smoothelin (SMTN), mRNA.  
0.1285 Homo sapiens latent transforming growth factor beta binding protein 4 (LTBF  
0.1285 Homo sapiens WAP four-disulfide core domain 1 (WFDC1), mRNA.  
0.1284 Homo sapiens mRNA for hypothetical protein, partial cds, clone:Hsa11-digit0  
0.1278 Homo sapiens HERV-H LTR-associating 2 (HHLA2), mRNA.  
0.1278 Homo sapiens monoacylglycerol O-acyltransferase 2 (MOGAT2), mRNA.  
0.1271 Homo sapiens perilipin 4 (PLIN4), mRNA.  
0.127 Homo sapiens cysteine and glycine-rich protein 1 (CSR1), mRNA.  
0.1264 Homo sapiens peptidase inhibitor 16 (PI16), mRNA.  
0.1261 Homo sapiens phospholamban (PLN), mRNA.  
0.1257 Homo sapiens carboxymethylenebutenolidase homolog (*Pseudomonas*) (CME  
0.1248 Homo sapiens glutamic-pyruvate transaminase (alanine aminotransferase) (A  
0.1242 Homo sapiens selenium binding protein 1 (SELENBP1), mRNA.  
0.1238 Homo sapiens histidine rich carboxyl terminus 1 (HRCT1), mRNA.  
0.1228 Homo sapiens cDNA FLJ35168 fis, clone PLACE6012604.  
0.1218 Homo sapiens crystallin, alpha B (CRYAB), mRNA.  
0.1214 Homo sapiens tryptase beta 2 (gene/pseudogene) (TPSB2), mRNA.  
0.1202 Homo sapiens ras homolog family member B (RHOB), mRNA.  
0.12 Homo sapiens aldehyde dehydrogenase 1 family, member A1 (ALDH1A1), mi  
0.1197 Homo sapiens serum deprivation response (SDPR), mRNA.  
0.1195 Homo sapiens ribonuclease, RNase A family, 1 (pancreatic) (RNASE1), mRNA  
0.1193 Homo sapiens calsequestrin 2 (cardiac muscle) (CASQ2), nuclear gene encod  
0.1185 Homo sapiens dehydrogenase/reductase (SDR family) member 11 (DHRS11)  
0.1179 Homo sapiens calpain 9 (CAPN9), mRNA.  
0.1178 Homo sapiens filamin A, alpha (FLNA), mRNA.  
0.1173 Homo sapiens peripherin (PRPH), mRNA.  
0.1172 Homo sapiens heart and neural crest derivatives expressed 1 (HAND1), mRNA  
0.117 Homo sapiens insulin-like growth factor binding protein 6 (IGFBP6), mRNA.

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0.117 Homo sapiens syndecan binding protein (syntenin) 2 (SDCBP2), mRNA.  
 0.1167 Homo sapiens FBJ murine osteosarcoma viral oncogene homolog B (FOSB), r  
 0.1163 Homo sapiens pregnancy up-regulated non-ubiquitously expressed CaM kina  
 0.1159 Homo sapiens cytochrome c oxidase subunit VIIa polypeptide 1 (muscle) (CC  
 0.1156 Homo sapiens L1 cell adhesion molecule (L1CAM), mRNA.  
 0.1148 Homo sapiens RNA binding protein with multiple splicing 2 (RBPM5), mRNA  
 0.1135 Homo sapiens metallothionein 1A (MT1A), mRNA.  
 0.1129 Homo sapiens MAM domain containing 2 (MAMDC2), mRNA.  
 0.1121 Homo sapiens breast carcinoma amplified sequence 1 (BCAS1), mRNA.  
 0.1116 Homo sapiens transmembrane protein 35 (TMEM35), mRNA.  
 0.1104 Homo sapiens heat shock 70kDa protein 2 (HSPA2), mRNA.  
 0.109 Homo sapiens integral membrane protein 2C (ITM2C), mRNA.  
 0.1087 Homo sapiens glucosaminyl (N-acetyl) transferase 3, mucin type (GCNT3), r  
 0.1079 Homo sapiens solute carrier family 26 (sulfate transporter), member 2 (SLC2  
 0.1077 Homo sapiens regulator of G-protein signaling 2, 24kDa (RGS2), mRNA.  
 0.1074 Homo sapiens carboxylesterase 1 (CES1), mRNA.  
 0.1072 Homo sapiens tryptase alpha/beta 1 (TPSAB1), mRNA.  
 0.1066 Homo sapiens metallothionein 2A (MT2A), mRNA.  
 0.106 Homo sapiens ribosomal protein S4, Y-linked 1 (RPS4Y1), mRNA.  
 0.1057 Homo sapiens neuronatin (NNAT), mRNA.  
 0.1051 Homo sapiens SAM pointed domain containing ets transcription factor (SPDE  
 0.1047 Homo sapiens LIM and senescent cell antigen-like domains 2 (LIMS2), mRNA  
 0.1045 Homo sapiens tetraspanin 7 (TSPAN7), mRNA.  
 0.104 Homo sapiens carboxylesterase 3 (CES3), mRNA.  
 0.104 Homo sapiens brain cytoplasmic RNA 1 (BCYRN1), non-coding RNA.  
 0.1036 Homo sapiens polymeric immunoglobulin receptor (PIGR), mRNA.  
 0.1024 Homo sapiens ectonucleoside triphosphate diphosphohydrolase 8 (ENTPD8),  
 0.1012 Homo sapiens alcohol dehydrogenase 1B (class I), beta polypeptide (ADH1B),  
 0.1012 Homo sapiens CD177 molecule (CD177), mRNA.  
 0.0999 Homo sapiens tryptase gamma 1 (TPSG1), mRNA.  
 0.0998 Homo sapiens ethylmalonic encephalopathy 1 (ETHE1), nuclear gene encodir  
 0.0984 Homo sapiens cDNA FLJ30827 fis, clone FEBRA2001745.  
 0.0976 Homo sapiens chromosome 19 open reading frame 33 (C19orf33), mRNA.  
 0.0967 Homo sapiens FXD domain containing ion transport regulator 6 (FXD6), m  
 0.0964 Homo sapiens leucine rich repeat containing 26 (LRRC26), mRNA.  
 0.0935 Homo sapiens MAS-related GPR, member F (MRGPRF), mRNA.  
 0.0927 Homo sapiens lactate dehydrogenase D (LDHD), nuclear gene encoding mito  
 0.0927 Homo sapiens filamin C, gamma (FLNC), mRNA.  
 0.0919 Homo sapiens RNA binding protein, fox-1 homolog (C. elegans) 3 (RBFOX3),  
 0.0918 Homo sapiens four and a half LIM domains 1 (FHL1), non-coding RNA.  
 0.0917 Homo sapiens cathepsin G (CTSG), mRNA.  
 0.0913 Homo sapiens serine peptidase inhibitor, Kazal type 4 (SPINK4), mRNA.  
 0.0906 Homo sapiens chloride channel accessory 4 (CLCA4), non-coding RNA.  
 0.0904 Homo sapiens proline rich membrane anchor 1 (PRIMA1), mRNA.  
 0.0889 Homo sapiens secretory leukocyte peptidase inhibitor (SLPI), mRNA.  
 0.0886 Homo sapiens CDC42 effector protein (Rho GTPase binding) 5 (CDC42EP5), r  
 0.0881 Homo sapiens Spi-B transcription factor (Spi-1/PU.1 related) (SPIB), mRNA.  
 0.0879 Homo sapiens coiled-coil domain containing 69 (CCDC69), mRNA.  
 0.0876 Homo sapiens potassium large conductance calcium-activated channel, subfa  
 0.0869 Homo sapiens hydroxysteroid (11-beta) dehydrogenase 2 (HSD11B2), mRNA  
 0.0868 Homo sapiens heart and neural crest derivatives expressed 2 (HAND2), mRN  
 0.0856 Homo sapiens Purkinje cell protein 4 (PCP4), mRNA.  
 0.0856 Homo sapiens tropomyosin 2 (beta) (TPM2), mRNA.

Table S1

0.0853 Homo sapiens matrix metalloproteinase 28 (MMP28), mRNA.  
 0.085 Homo sapiens hemoglobin, alpha 1 (HBA1), mRNA.  
 0.0849 Homo sapiens ATPase, Na<sup>+</sup>/K<sup>+</sup> transporting, alpha 2 polypeptide (ATP1A2),  
 0.0845 Homo sapiens solute carrier family 28 (sodium-coupled nucleoside transport)  
 0.0845 Homo sapiens secretoglobin, family 2A, member 1 (SCGB2A1), mRNA.  
 0.0843 Homo sapiens defensin, beta 1 (DEFB1), mRNA.  
 0.0836 Homo sapiens nudE nuclear distribution E homolog 1 (A. nidulans) (NDE1), r  
 0.0827 Homo sapiens placenta-specific 8 (PLAC8), mRNA.  
 0.082 Homo sapiens butyrylcholinesterase (BCHE), mRNA.  
 0.0817 Homo sapiens lymphatic vessel endothelial hyaluronan receptor 1 (LYVE1), n  
 0.0812 Homo sapiens hemoglobin, beta (HBB), mRNA.  
 0.0809 Homo sapiens prostaglandin-endoperoxide synthase 1 (prostaglandin G/H sy  
 0.08 Homo sapiens transmembrane protein 171 (TMEM171), mRNA.  
 0.0798 Homo sapiens chromosome 10 open reading frame 99 (C10orf99), mRNA.  
 0.0798 Homo sapiens PGM5 antisense RNA 1 (PGM5-AS1), non-coding RNA.  
 0.0794 Homo sapiens hemoglobin, alpha 2 (HBA2), mRNA.  
 0.0792 Homo sapiens UDP glucuronosyltransferase 2 family, polypeptide B15 (UGT2  
 0.0791 Homo sapiens transmembrane and immunoglobulin domain containing 1 (TM  
 0.0789 Homo sapiens aldo-keto reductase family 1, member B10 (aldose reductase)  
 0.0786 Homo sapiens pleckstrin and Sec7 domain containing (PSD), non-coding RNA  
 0.078 Homo sapiens transgelin (TAGLN), mRNA.  
 0.0774 Homo sapiens major facilitator superfamily domain containing 4 (MFSD4), m  
 0.0774 Homo sapiens complement factor D (adipsin) (CFD), mRNA.  
 0.0768 Homo sapiens phosphoenolpyruvate carboxykinase 1 (soluble) (PCK1), mRNA  
 0.0755 Homo sapiens protein phosphatase 1, regulatory (inhibitor) subunit 14A (PPF  
 0.0755 Homo sapiens cDNA FLJ32612 fis, clone STOMA2000088, highly similar to IG  
 0.0745 Homo sapiens immunoglobulin lambda-like polypeptide 5 (IGLL5), mRNA.  
 0.0744 Homo sapiens leiomodulin 1 (smooth muscle) (LMOD1), mRNA.  
 0.0743 Homo sapiens chromosome 21 open reading frame 88 (C21orf88), non-codin  
 0.0724 Homo sapiens mab-21-like 2 (C. elegans) (MAB21L2), mRNA.  
 0.0723 Homo sapiens scavenger receptor class A, member 5 (putative) (SCARA5), n  
 0.0719 Homo sapiens FXYD domain containing ion transport regulator 3 (FXYD3), m  
 0.0704 Homo sapiens lectin, galactoside-binding, soluble, 4 (LGALS4), mRNA.  
 0.0686 Homo sapiens bestrophin 4 (BEST4), mRNA.  
 0.0684 Homo sapiens hydroxysteroid (17-beta) dehydrogenase 2 (HSD17B2), mRNA  
 0.0683 Homo sapiens calcineurin-like EF-hand protein 2 (CHP2), mRNA.  
 0.0673 Homo sapiens carbohydrate (N-acetylglucosamine 6-O) sulfotransferase 5 (C  
 0.0663 Homo sapiens phospholipase A2, group IIA (platelets, synovial fluid) (PLA2G  
 0.0657 Homo sapiens deoxyribonuclease I-like 3 (DNASE1L3), mRNA.  
 0.065 Homo sapiens synemin, intermediate filament protein (SYNM), mRNA.  
 0.0638 Homo sapiens FXYD domain containing ion transport regulator 1 (FXYD1), m  
 0.0637 Homo sapiens heat shock 22kDa protein 8 (HSPB8), mRNA.  
 0.0635 Homo sapiens solute carrier family 51, beta subunit (SLC51B), mRNA.  
 0.0626 Homo sapiens creatine kinase, brain (CKB), mRNA.  
 0.0624 Homo sapiens ST6 (alpha-N-acetyl-neuraminyl-2,3-beta-galactosyl-1, 3)-N-ε  
 0.062 Homo sapiens solute carrier family 26, member 3 (SLC26A3), mRNA.  
 0.0611 Homo sapiens chromosome 2 open reading frame 40 (C2orf40), mRNA.  
 0.0609 Homo sapiens peptidase inhibitor 3, skin-derived (PI3), mRNA.  
 0.0608 Homo sapiens homeobox B13 (HOXB13), mRNA.  
 0.0607 Homo sapiens neurexophilin and PC-esterase domain family, member 1 (NXF  
 0.0576 Homo sapiens phosphoglucomutase 5 (PGM5), mRNA.  
 0.0572 Homo sapiens desmin (DES), mRNA.  
 0.0571 Homo sapiens mannosyl (alpha-1,3-)-glycoprotein beta-1,4-N-acetylglucosar

Table S1

0.0567 Homo sapiens heat shock protein, alpha-crystallin-related, B6 (HSPB6), mRNA  
 0.0565 Homo sapiens calponin 1, basic, smooth muscle (CNN1), mRNA.  
 0.0555 Homo sapiens carcinoembryonic antigen-related cell adhesion molecule 7 (CEACAM7), mRNA.  
 0.0554 Homo sapiens cDNA FLJ33867 fis, clone CTONG2006568.  
 0.055 Homo sapiens myosin, light chain 9, regulatory (MYL9), mRNA.  
 0.0548 Homo sapiens ADAM-like, decysin 1 (ADAMDEC1), mRNA.  
 0.0531 Homo sapiens V-set and immunoglobulin domain containing 2 (VSIG2), mRNA.  
 0.0515 Homo sapiens C-type lectin domain family 3, member B (CLEC3B), mRNA.  
 0.0504 Homo sapiens myosin, heavy chain 11, smooth muscle (MYH11), mRNA.  
 0.0502 Homo sapiens tetraspanin 1 (TSPAN1), mRNA.  
 0.05 Homo sapiens peptidyl arginine deiminase, type II (PADI2), mRNA.  
 0.0499 Homo sapiens tachykinin receptor 2 (TACR2), mRNA.  
 0.0491 Homo sapiens claudin 8 (CLDN8), mRNA.  
 0.0481 Homo sapiens bestrophin 2 (BEST2), mRNA.  
 0.0468 Homo sapiens lectin, galactoside-binding, soluble, 2 (LGALS2), mRNA.  
 0.0456 Homo sapiens interleukin 1 receptor, type II (IL1R2), non-coding RNA.  
 0.0448 Ig alpha 1- alpha 2m=immunoglobulin A1-A2 lambda hybrid GAU heavy chain  
 0.0447 Homo sapiens metallothionein 1X (MT1X), mRNA.  
 0.0433 Homo sapiens serine peptidase inhibitor, Kazal type 1 (SPINK1), mRNA.  
 0.0418 Homo sapiens LY6/PLAUR domain containing 8 (LYPD8), mRNA.  
 0.0415 Homo sapiens actin, gamma 2, smooth muscle, enteric (ACTG2), mRNA.  
 0.0409 Homo sapiens fatty acid binding protein 1, liver (FABP1), mRNA.  
 0.0405 Homo sapiens RAB15 effector protein (REP15), mRNA.  
 0.0392 Homo sapiens dermatopontin (DPT), mRNA.  
 0.034 Homo sapiens carbonic anhydrase VII (CA7), mRNA.  
 0.0328 Homo sapiens HEPACAM family member 2 (HEPACAM2), mRNA.  
 0.0293 Homo sapiens mucin 2, oligomeric mucus/gel-forming (MUC2), mRNA.  
 0.0274 Homo sapiens metallothionein 1H (MT1H), mRNA.  
 0.0273 Homo sapiens neurexophilin and PC-esterase domain family, member 4 (NXF1), mRNA.  
 0.0272 Homo sapiens metallothionein 1F (MT1F), mRNA.  
 0.0269 Homo sapiens guanylate cyclase activator 2B (uroguanylin) (GUCA2B), mRNA.  
 0.024 Homo sapiens alcohol dehydrogenase 1C (class I), gamma polypeptide (ADH1C), mRNA.  
 0.0234 Homo sapiens metallothionein 1M (MT1M), mRNA.  
 0.0227 Homo sapiens cDNA FLJ41315 fis, clone BRAMY2043069.  
 0.022 Homo sapiens immunoglobulin J polypeptide, linker protein for immunoglobulin J chain  
 0.0218 Homo sapiens membrane-spanning 4-domains, subfamily A, member 12 (MS4D4), mRNA.  
 0.0209 Homo sapiens carbonic anhydrase IV (CA4), mRNA.  
 0.0201 Homo sapiens chromogranin A (parathyroid secretory protein 1) (CHGA), mRNA.  
 0.0185 Homo sapiens ST6 (alpha-N-acetyl-neuraminyl-2,3-beta-galactosyl-1, 3)-N-ε-sialosyltransferase 6 (ST6GALNAC2), mRNA.  
 0.0174 Homo sapiens metallothionein 1E (MT1E), mRNA.  
 0.0168 Homo sapiens aquaporin 8 (AQP8), mRNA.  
 0.0164 Homo sapiens Fc fragment of IgG binding protein (FCGBP), mRNA.  
 0.0144 Homo sapiens UDP glucuronosyltransferase 2 family, polypeptide B17 (UGT2B17), mRNA.  
 0.0136 Homo sapiens carbonic anhydrase II (CA2), mRNA.  
 0.0132 Homo sapiens UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 2 (UGT2B17), mRNA.  
 0.0127 Homo sapiens glucagon (GCG), mRNA.  
 0.0123 Homo sapiens guanylate cyclase activator 2A (guanylin) (GUCA2A), mRNA.  
 0.0106 Homo sapiens insulin-like 5 (INSL5), mRNA.  
 0.0095 Homo sapiens intelectin 1 (galactofuranose binding) (ITLN1), mRNA.  
 0.0086 Homo sapiens cDNA FLJ33052 fis, clone TRACH1000074, highly similar to Ig heavy chain constant region 1  
 0.0084 Homo sapiens peptide YY (PYY), mRNA.  
 0.0081 Homo sapiens metallothionein 1G (MT1G), mRNA.  
 0.0072 Homo sapiens somatostatin (SST), mRNA.

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0.0022 Homo sapiens chloride channel accessory 1 (CLCA1), mRNA.  
0.002 Homo sapiens zymogen granule protein 16 (ZG16), mRNA.  
0.0017 Homo sapiens carbonic anhydrase I (CA1), mRNA.



## Table S1

nRNA.

n-specific cross reacting antigen) (CEACAM6), mRNA.  
(GPT2), mRNA.

GR5), mRNA.

serine esterase 1) (GZMB), mRNA.  
36), mRNA.  
rRNA.

..

l), mRNA.

.

to VASCULAR ENDOTHELIAL GROWTH FACTOR PRECURSOR.  
, member 6 (SLC6A6), non-coding RNA.

Table S1

3CB1), mRNA.

JA.

Jing RNA.

λ.

mRNA.

(CE2), mRNA.

RNA.

nRNA.

1), mRNA.

retained intron.

ES3), mRNA.

rRNA.

ptide translocator), member 4 (SLC25A4), nuclear gene encoding mitochondrial protein  
RNA.

mRNA.

111), mRNA.

5kDa (NDUFA1), nuclear gene encoding mitochondrial protein, mRNA.

Table S1

rRNA.

rRNA.

9), mRNA.

rRNA.

TH5), mRNA.

4), mRNA.

in, secreted, (semaphorin) 3B (SEMA3B), mRNA.

ing RNA.

5), mRNA.

3), mRNA.

7), mRNA.

), non-coding RNA.

amily M, alpha member 1 (KCNMA1), mRNA.

VA.

(HSPB7), mRNA.

VA.

8), mRNA.

nRNA.

y-terminal domain, 2 (CITED2), mRNA.

D10), mRNA.

P1R14D), mRNA.

clear gene encoding mitochondrial protein, mRNA.

ig activity polypeptide O (GNAO1), mRNA.

iRNA.

Table S1

08-11-02-F.

to Immunoglobulin lambda light chain.

VH43), mRNA.

..  
JA.

24), mRNA.

08-11-02-F.

3L), mRNA.  
GPT), mRNA.

RNA.

λ.  
coding mitochondrial protein, mRNA.  
, mRNA.

A.

Table S1

rRNA.  
se (PNCK), mRNA.  
X7A1), nuclear gene encoding mitochondrial protein, mRNA.

..

rRNA.  
6A2), mRNA.

F), mRNA.  
v.

mRNA.  
, mRNA.

g mitochondrial protein, mRNA.

RNA.

chondrial protein, mRNA.

mRNA.

rRNA.

amily M, beta member 1 (KCNMB1), mRNA.

v.

A.

## Table S1

mRNA.

er), member 2 (SLC28A2), mRNA.

nRNA.

nRNA.

nthase and cyclooxygenase) (PTGS1), mRNA.

B15), mRNA.

1IGD1), mRNA.

(AKR1B10), mRNA.

λ.

RNA.

A.

ρ1R14A), mRNA.

ι LAMBDA CHAIN C REGIONS.

ig RNA.

γRNA.

RNA.

λ.

:HST5), mRNA.

2A), mRNA.

RNA.

acetylgalactosaminide alpha-2,6-sialyltransferase 6 (ST6GALNAC6), mRNA.

ρE1), mRNA.

minyltransferase, isozyme B (MGAT4B), mRNA.

Table S1

IA.

EACAM7), mRNA.

IA.

in {membrane exon} [human, myeloma, mRNA Partial, 360 nt].

PE4), mRNA.

A.  
1C), mRNA.

ilin alpha and mu polypeptides (IGJ), mRNA.  
34A12), mRNA.

NA.  
acetylgalactosaminide alpha-2,6-sialyltransferase 1 (ST6GALNAC1), mRNA.

B17), mRNA.

e 7 (B3GNT7), mRNA.

delta chain.

Table S1



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Table S1

, mRNA.