

Supplementary Table 1: DE genes from the differential expression analysis “IcSSc twins vs. healthy twins”. The significance criteria are q -value < 0.1 , $\log_2FC > 0.6$ for upregulation (red font), and $\log_2FC < -0.6$ for downregulation (blue font). Table is sorted on Symbol in alphabetical order.

Symbol	\log_2FC	q -value
ABCA10	-2.09949	6.09E-05
ABCA4	1.989205	0.003429
ABCB5	-4.69595	0.001741
ABCD2	-3.8332	0.008181
ACPP	2.827108	0.053303
ACSL5	-1.34893	0.092169
ACTC1	-5.47848	1.32E-07
ACTL8	-3.19423	0.073037
ADAM22	-1.66826	0.015377
ADAMTS3	1.676918	0.002707
ADAMTS5	-1.58709	1.24E-05
ADAMTS9-AS2	1.76	0.015224
ADAMTSL1	-1.02021	0.075018
ADD2	-4.15446	0.006307
ADH1A	-3.63636	0.000619
ADH1B	-6.01156	8.11E-07
ADH1C	-2.8374	0.002312
ADIRF	1.524786	0.025319
ADORA1	1.73933	0.044778
ADORA2B	0.718065	0.03489
ADRA1D	2.365012	0.070825
AFAP1L2	2.930014	0.042766
AGTR1	-2.75097	0.00015
AHRR	1.191276	7.60E-08
AIFM3	-0.95963	0.005026
AK4	-1.40114	0.066659
ALDH1A1	2.60167	0.003828
ALDH1A2	-2.8943	0.002271
ALDH1A3	-2.17835	0.000181
ALDH3A1	2.866977	0.002041
ALPL	2.130304	0.065617
ALX1	-7.6235	7.32E-10
ALX3	1.329277	0.000931
AMZ1	3.229289	0.005395
ANGPTL1	-2.03784	0.001165
ANGPTL4	-2.0186	2.04E-05
ANGPTL5	-2.85543	0.001401

ANK1	3.165082	2.22E-07
ANK2	-2.02814	4.39E-05
ANKEF1	-2.10483	0.000567
ANKFN1	-2.28139	0.064567
ANO3	-2.21708	0.009888
ANXA3	-2.10578	0.059326
AP3B2	1.543432	0.013907
APBA2	3.269422	0.000103
APCDD1L	2.703856	1.78E-05
APCDD1L-AS1	3.564174	2.02E-05
APLN	-1.97646	2.04E-07
APOA1	3.134713	0.007089
AQP1	2.221894	0.093049
AQP9	-3.31501	0.002882
AR	-2.88204	0.003727
ARAP3	0.67348	0.009218
ARC	2.446148	0.008502
ARHGAP20	-1.55545	0.020251
ARHGAP23	0.738597	2.25E-07
ARHGAP28	-1.18257	0.000265
ARHGAP29	1.064678	4.36E-05
ARMC4	2.881968	6.43E-15
ARNT2	0.738759	0.010214
ARSB	-0.8129	0.014988
ARSE	2.526753	0.008226
ASPA	-1.59332	4.58E-07
ASPHD1	1.87664	0.005418
ATF5	-1.28769	0.012535
AVPR1A	-10.7529	4.16E-30
B3GALT5	2.885715	0.000105
BACH2	-2.81392	0.006953
BAI1	1.851868	0.095344
BANK1	1.366376	0.012788
BCHE	-2.97894	0.084425
BDNF	1.79149	0.08234
BEGAIN	4.405294	0.000668
BEX1	4.244939	0.033759
BMP2K	-0.748	6.31E-06
BMP6	-1.45847	0.046925
BMP7	-2.68465	0.074235
BOK	0.744851	0.005122

BRSK2	1.571675	0.047671
BVES	-0.69802	0.024078
C10orf105	4.190153	1.46E-06
C10orf54	1.084839	0.07043
C11orf88	1.903562	0.049049
C12orf56	-2.46022	0.014811
C15orf27	1.723993	0.066214
C1orf115	-4.89169	8.55E-16
C1orf233	-0.65176	0.069569
C1QTNF3	-1.85809	0.00594
C21orf88	4.542214	3.00E-11
C2orf88	-1.91139	0.061644
C3orf80	2.363499	0.012535
C6orf132	-0.76279	0.097841
C9orf3	1.323124	0.00526
CACNA2D3	3.418877	0.000688
CACNB4	-2.42643	1.88E-06
CACNG7	2.716266	0.028477
CACNG8	3.707648	0.003828
CADM1	4.098987	1.13E-06
CADM3	-6.45282	0.022253
CASC10	-0.81235	0.066269
CASC2	-0.6283	0.025687
CCDC140	-7.27937	1.43E-11
CCDC71L	0.841887	0.052432
CCL7	2.855257	0.035141
CCNJL	3.862634	0.000745
CCR1	-3.53995	0.068499
CCR10	1.00544	0.069399
CD101	0.997038	0.078995
CD163	-3.5867	2.62E-05
CD200R1	-4.98006	1.62E-05
CD55	-0.96326	3.59E-06
CD70	-7.22794	1.33E-07
CD74	2.437718	0.022014
CD9	2.731948	1.69E-05
CDC42EP5	0.639322	0.000168
CDCA7L	0.677371	0.009495
CDH10	-4.39448	0.000265
CDH13	2.006219	0.007293
CDH20	4.633583	5.98E-07

CDK18	2.491447	0.089028
CDKN2C	0.82854	0.024446
CDO1	-1.7379	0.033258
CDS1	-2.19525	7.35E-08
CEBPA-AS1	1.495023	0.029579
CELSR1	2.812503	0.000272
CELSR2	2.4306	0.001874
CEMIP	1.454698	0.06055
CEP128	-0.63786	0.010417
CFL2	-0.65794	0.036822
CGREF1	-2.96392	4.21E-06
CHADL	0.773678	0.070773
CHI3L1	2.756952	0.013097
CHL1	-4.81323	0.000513
CHMP1B2P	3.087606	0.027544
CHN2	-2.46493	0.067533
CHRD1	-3.308	0.008181
CHRD2	-3.20252	0.072655
CHRM3	8.115692	5.16E-14
CHRNA9	-4.45155	0.001574
CHST1	3.226632	0.080062
CHST15	1.581949	0.024446
CILP2	3.628961	0.000749
CLDN11	-1.67551	0.069399
CLEC12A	-4.52143	1.96E-07
CLEC12B	-5.38156	0.000407
CLEC14A	6.877277	7.07E-11
CLEC1B	-4.06579	0.04816
CLEC2A	-7.01146	1.63E-14
CLEC2B	-1.55357	0.019995
CMKLR1	2.993476	0.000426
CMTM8	1.653993	0.054446
CNKS2	-2.51773	0.051605
COL14A1	-1.45945	0.021446
COL23A1	4.023461	4.05E-05
COL24A1	2.405546	9.72E-09
COL26A1	5.322496	0.000157
COL4A5	-2.15607	0.037515
COL5A3	2.663879	0.008181
COL6A3	0.624292	0.057359
COL7A1	2.46782	0.002707

COL9A3	3.673602	0.085915
COMP	4.226567	2.06E-08
CORO2A	2.643831	0.000263
CORO2B	0.759526	0.008226
CPB1	-7.55315	2.71E-12
CPE	-1.21729	0.007881
CPNE7	2.060359	0.006989
CPXM1	-3.55907	0.032378
CPXM2	1.506576	0.036598
CRIP2	1.373154	0.002491
CRISPLD2	-1.79189	0.00397
CRLF1	2.374081	0.002626
CSDC2	2.637191	1.22E-18
CSGALNACT1	-2.44764	5.64E-05
CSRNP3	1.312011	0.069732
CSRP2	1.295542	0.023971
CTD-220I118.1	3.89837	0.00033
CTSB	0.686432	6.65E-05
CTSC	1.037025	0.046767
CTTNBP2	-4.21536	0.005751
CTXN1	1.424571	1.08E-15
CUBN	-1.53756	0.001807
CXCL1	-3.40306	4.13E-08
CXCL2	-1.61817	0.058953
CXCL6	-2.35599	0.004816
CYB5R2	1.281972	2.97E-07
CYTL1	4.603119	0.009924
DAPK2	-1.50829	4.96E-06
DBH	4.054716	0.074692
DBH-AS1	4.093437	8.54E-05
DCLK1	-2.03526	0.007635
DIO3	4.772823	0.000114
DIRAS2	-2.97406	0.002707
DIRC1	-1.87905	0.012581
DIRC3	-1.75325	0.039316
DKFZP586I1420	0.742102	0.04502
DKK1	1.506734	0.012749
DKK2	-3.96482	1.69E-05
DLL4	3.704661	0.004412
DLX2	1.920107	0.069732
DLX3	3.157531	0.0094

DMRT2	-3.86874	0.001022
DOCK10	0.888772	0.049627
DOCK2	-1.0049	0.033447
DOCK4	-1.22687	0.012925
DOCK9	-0.75063	0.073037
DPT	-1.76165	0.021446
DRD1	3.851873	0.019699
DTNA	-1.98955	0.000253
DTX4	1.852478	0.002562
DUSP15	2.489299	0.041983
EBF1	-0.67857	0.072753
EDA	-1.79134	0.025701
EEF1A2	2.822231	0.014111
EFHD1	3.700176	0.021299
EGLN3	3.572022	0.000656
EGR1	1.861168	0.013259
EGR3	3.334329	1.36E-05
ELFN2	5.663944	2.01E-09
EMCN	-2.88799	0.059432
EML2	0.703618	0.008407
EMP2	0.828892	0.027713
EMX2	-1.05943	0.002726
EMX2OS	-1.27146	0.000145
EN1	-1.50214	0.000121
ENC1	-1.18972	0.086001
ENO4	-0.67861	0.084929
ENPP1	1.486033	0.077036
EOGT	0.72571	0.009015
EPDR1	2.475057	0.047671
EPHB2	1.443556	0.000558
EPHX2	-1.24588	0.014303
ERCC6	0.774225	0.025701
EREG	7.986873	5.48E-18
ERICH5	-1.73066	0.052256
ESRG	4.969921	1.97E-05
ESYT3	1.256917	0.000252
ETV1	0.967917	0.097413
ETV4	1.322666	0.003995
EVA1C	1.185415	0.000833
EXOC6	0.853303	0.005925
EXTL1	2.210867	0.068537

EYA4	-3.00809	1.41E-05
F2R	1.032268	0.017839
F2RL1	2.819069	0.047139
F2RL2	2.083855	0.008079
F7	2.724992	0.00019
FABP7	2.844778	0.034674
FAIM3	1.999894	0.013697
FAM102B	-1.13805	1.67E-05
FAM110B	-0.85187	0.092761
FAM115C	-0.98075	0.005357
FAM129A	-1.12151	0.01154
FAM13C	-2.71676	2.28E-07
FAM155A	1.668612	0.031565
FAM184A	-2.02365	0.076588
FAM198B	-0.86663	2.35E-06
FAM19A2	-4.26084	1.22E-25
FAM19A3	2.785605	0.002707
FAM20C	0.660882	5.51E-05
FAM225A	2.139892	0.08653
FAM3C	-0.70002	0.002518
FAM43A	2.062728	4.97E-07
FAM46A	-0.98597	4.62E-05
FAM46C	2.411662	6.46E-05
FAM63B	-0.8078	0.005488
FAM84B	-3.11557	0.003693
FAM86B3P	0.720347	0.024411
FAM86FP	0.926622	0.053654
FAM86HP	1.22824	4.49E-05
FAM87B	-1.66879	0.042044
FAP	-0.98931	0.024548
FARP1	0.822677	0.002712
FBLN7	1.399855	0.089793
FBN2	3.369165	9.91E-06
FBP1	3.633989	0.047725
FBXL2	0.911702	0.094369
FBXO2	1.521976	0.036081
FCHO1	1.388347	0.055249
FENDRR	6.436641	4.03E-09
FERMT3	1.377552	0.004955
FGF11	-2.15161	0.012165
FGF5	0.809434	0.056866

FGL2	-4.51431	2.00E-06
FHAD1	2.130357	0.008865
FLRT2	-0.67807	0.028704
FLT1	2.807087	0.000579
FMN1	-1.0832	0.018429
FMO2	2.105225	0.02666
FNDC5	-1.63209	0.00128
FOS	1.529932	0.046767
FOXC2	2.465102	0.009731
FOXF1	5.020393	5.93E-19
FOXQ1	2.1037	0.03337
FRAS1	-3.82521	1.65E-17
FRK	-1.97358	0.012259
FRMD4A	1.707797	0.013874
FRMD4B	3.810135	3.58E-05
FRMPD3	-3.36025	0.004412
FRY	1.235171	0.005302
FSD1	1.566838	0.081538
FSTL5	3.472814	0.021765
FTO	-0.70279	2.41E-05
FXYD1	1.747943	0.006848
FYN	-0.60519	0.018835
GABBR2	-3.09265	0.02666
GAL	5.192309	1.09E-05
GALNT12	-1.97278	1.67E-05
GALNT14	2.326836	0.027544
GALNT15	-2.1861	0.001307
GALNT18	4.083552	2.95E-10
GAP43	2.959251	0.004474
GAS1	0.71617	0.085226
GCKR	2.790375	0.002957
GCNT3	-4.04519	0.036798
GFRA2	2.536076	0.056051
GLIS1	0.774342	0.030467
GLUL	0.774881	0.044336
GNAZ	0.798407	0.088835
GOLGA8B	1.068162	0.059637
GPM6B	1.758049	0.002596
GPR133	-1.41164	0.000265
GPR17	2.943572	0.00397
GPR26	3.116345	0.018688

GPRC5A	1.727543	0.038576
GPRIN3	-3.42675	0.021859
GREB1L	-6.20746	3.75E-12
GRIA1	3.950427	7.99E-14
GRIN3A	-1.26796	0.089013
GRP	6.617233	0.00091
GSDMC	-3.79473	0.001327
GUCY1A2	-1.68574	4.49E-06
H2AFY2	0.978584	7.28E-07
HAGLR	-7.52591	1.06E-37
HAND2	3.712218	1.15E-12
HAND2-AS1	5.133487	3.10E-08
HAPLN3	1.866847	0.03355
HCG4	-2.86115	0.022412
HCLS1	-3.11465	2.97E-07
HEYL	5.955785	1.60E-06
HFM1	-1.79256	0.017895
HHEX	3.071656	0.000781
HHIPL2	-1.29275	0.055022
HIC2	-0.6042	0.014253
HLA-DQA1	11.43532	0.004533
HMCN1	-1.83503	0.001618
HMGA2	1.590837	0.004474
HOGA1	-1.12641	0.033258
HOTTIP	7.151819	3.23E-26
HOXA1	-2.76931	0.000169
HOXA11	1.56494	4.74E-17
HOXA11-AS	2.532127	1.44E-29
HOXA13	3.654045	5.58E-11
HOXA4	-1.72381	0.02225
HOXB13	9.27469	1.62E-15
HOXB2	-3.4413	2.48E-06
HOXB3	-6.58049	3.36E-37
HOXB4	-7.44662	1.25E-20
HOXB5	-8.48499	3.15E-27
HOXB6	-9.21744	5.27E-28
HOXB7	-6.70838	6.20E-15
HOXB8	-5.39598	2.29E-08
HOXB-AS1	-2.32918	0.001958
HOXB-AS3	-9.94142	4.49E-39
HOXC10	-4.04744	0.001072

HOXC4	-4.27352	9.67E-09
HOXC5	-4.90636	1.07E-15
HOXC6	-4.56928	1.33E-12
HOXC8	-5.59645	2.61E-16
HOXC9	-3.19933	1.91E-05
HOXC-AS1	-2.95421	0.025195
HOXD1	-6.7164	1.12E-09
HOXD10	7.392653	4.21E-18
HOXD11	9.102695	1.38E-24
HOXD13	7.156113	2.67E-13
HOXD3	-6.83386	1.29E-20
HOXD4	-4.60053	3.29E-10
HOXD8	-1.50462	2.25E-07
HOXD9	-1.5047	0.000253
HOXD-AS2	-1.2581	0.008332
HRH2	8.623861	2.97E-11
HS6ST3	-5.49059	0.000968
HSD17B2	3.907241	0.000328
HTRA1	-0.90185	0.065375
HTRA4	5.688275	2.64E-07
ICA1	3.058965	0.028182
ICAM1	-1.0772	0.054594
ICAM2	-2.7107	0.079033
ICAM5	2.690755	0.024548
ID3	-1.73593	0.002824
IFI30	-1.01823	0.001186
IGSF10	-2.03124	0.075771
IGSF9B	4.081277	6.61E-05
IL11	2.715773	0.01497
IL13RA2	-3.84162	0.000247
IL18R1	-2.83222	0.000532
IL1RL1	-4.50419	5.56E-08
IL20RB	-2.08811	0.008181
IL27RA	2.053891	0.08234
IL31RA	-2.71824	0.010456
IL33	-2.76652	0.016544
IL6	1.734079	0.028477
IL7	1.078706	0.074115
IQGAP2	2.425869	0.018835
ISM1	-3.54466	0.001682
ISYNA1	1.155414	2.26E-05

ITGB7	1.266027	0.085618
JAZF1-AS1	1.285972	0.082002
KAL1	7.14811	1.25E-07
KCNA4	-5.1212	0.003813
KCNAB3	1.335786	0.000604
KCND1	1.18515	0.039402
KCNK6	1.42849	0.046767
KCNN4	2.29276	0.01199
KCNQ3	-3.04131	0.001235
KCNS1	1.980928	0.05594
KCNS3	1.555768	0.001095
KIAA1217	0.915392	0.058774
KIAA1456	1.880565	4.92E-05
KIAA1671	1.338096	0.077975
KIAA1958	0.891957	0.057359
KIF26A	5.482749	5.37E-13
KIF5C	4.032283	9.50E-08
KLF5	2.55081	0.000545
KLF8	1.304602	0.010841
KLHL4	3.944784	0.035841
KLRF2	-4.15911	0.00456
KNDC1	1.569297	6.29E-12
KRT15	5.069241	0.002555
KRT16	4.362144	0.086619
KRT18	4.351426	0.032062
KRT19	6.576849	4.02E-09
KRT23	2.168585	0.061349
KRT32	4.409886	0.012535
KRT33B	3.695169	0.009454
KRT34	2.904797	1.65E-06
KRT36	3.490441	0.036043
KRT38	5.900156	2.01E-09
KRT81	4.464582	0.043846
KRTAP1-1	3.825292	2.53E-05
KRTAP1-3	3.450643	0.023644
KRTAP1-5	4.440738	2.77E-09
LICAM	7.00081	8.66E-09
LITD1	4.350063	0.060556
LAMA4	-0.77925	0.017119
LAMC2	-1.56139	0.000242
LAPTM4B	-0.62205	0.000753

LARGE	-0.82593	0.024209
LAT	0.65396	0.008354
LAYN	0.739783	0.023777
LBX2	0.818945	0.087872
LBX2-AS1	0.618034	0.08653
LCNL1	0.941141	0.000422
LEKR1	1.371708	0.060939
LEP	-4.06775	0.018835
LETM2	0.731112	0.064963
LFNG	2.350011	0.004708
LGI2	-2.53518	0.019473
LGI4	1.972594	0.06148
LGR5	-6.40578	5.79E-14
LHFPL3	4.771379	0.008209
LHX2	3.132298	1.59E-09
LIF	2.446614	0.018347
LIMS2	1.522252	0.000337
LINC00086	2.464118	0.006848
LINC00304	1.629169	0.004493
LINC00525	4.143716	0.003319
LINC00900	3.458567	4.37E-06
LINC00982	3.179211	0.001695
LINC01085	3.621382	0.065459
LINC01094	-1.27181	0.002774
LINC01106	1.857429	0.08653
LINC01116	-4.9414	2.89E-13
LINC01123	1.674418	0.008181
LINC01139	6.02067	6.84E-06
LINC01152	1.669873	0.018438
LINC01168	3.113753	0.010456
LINC01176	1.425073	0.013874
LINC01358	-1.45181	0.06313
LIPC	-1.89593	0.011366
LMX1B	9.723413	7.52E-25
LOC100128239	1.073517	0.069473
LOC100240734	-4.83591	0.000224
LOC100240735	-7.62206	1.09E-23
LOC100506124	0.942224	0.084531
LOC100506159	-4.61229	0.024217
LOC100506178	2.412996	0.023971
LOC100506834	0.724062	0.028369

LOC100507195	-2.6504	0.002712
LOC101927587	2.04087	0.032236
LOC101927901	1.960996	0.042504
LOC101927905	1.009781	0.001606
LOC101928731	3.896231	1.88E-06
LOC101929086	2.705693	0.020288
LOC102724224	-2.89191	5.91E-06
LOC102724246	1.006694	0.078375
LOC102800310	-6.28784	7.03E-08
LOC388849	1.727474	0.058953
LOC400043	-2.61106	6.15E-11
LOC441204	-4.03086	0.000664
LOC729950	1.715376	0.086488
LOXL3	2.317706	0.012581
LOXL4	1.264674	0.000489
LPAR6	0.85321	0.028477
LPHN2	-0.61772	0.0372
LPP-AS2	-0.63864	0.003097
LPPR4	2.941164	0.000153
LRFN5	3.362704	3.60E-09
LRP4	-1.2042	9.37E-14
LRP5	0.920946	0.006021
LRRC1	0.949612	0.00419
LRRC38	3.740742	0.009019
LRRN2	3.611348	0.000342
LSAMP	-2.15579	6.31E-06
LURAP1L	-0.71711	0.05861
LYL1	1.598837	0.068462
MAB21L1	4.467106	4.61E-16
MACROD2	-1.28597	0.010758
MAFF	0.779672	0.005895
MALL	1.649724	0.057251
MAN1C1	-2.29942	3.13E-09
MAN2A1	-0.68112	1.12E-05
MAOA	-2.76595	7.08E-13
MAP1LC3C	-1.35641	0.09594
MAP3K5	0.881895	0.080659
MAP3K7CL	-0.81229	0.003188
MAP7D2	-2.10961	0.002391
MAPK13	-0.75149	0.022393
MARCH3	-0.98115	0.042766

MARCO	-3.63402	0.000442
MBOAT2	-0.62188	0.074235
MC4R	-6.15653	8.69E-09
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MCTP1	2.358968	0.006717
MEDAG	-1.604	0.080113
MEOX1	4.039999	0.002195
MGAT5B	1.27348	0.077586
MIR10B	-2.87632	0.058953
MIR1247	4.301179	0.015682
MIR23B	2.378425	0.053341
MIR27B	2.185522	0.014119
MIR4697HG	4.170264	5.89E-07
MKX	1.483681	0.000164
MMP10	-2.5628	1.13E-06
MMP12	-5.22594	0.007909
MMP17	0.644857	0.064381
MMP27	-2.30817	0.045604
MMP3	-2.75936	0.004412
MMP8	-2.91713	0.002726
MOB3B	-3.70877	0.00038
MPHOSPH6	0.640056	0.042504
MPP7	2.359416	0.001468
MPZL1	-0.72312	0.002195
MSR1	-3.65745	0.000402
MST1R	1.9712	0.019875
MST4	0.831302	0.065375
MSX2	2.020481	0.00012
MTMR10	0.714327	0.039095
MTUS2	-1.65093	0.064043
MYCBPAP	0.975733	0.020288
MYO10	0.926151	0.069399
MYO15A	0.97501	0.01618
MYO1H	1.900628	0.000246
MYO7B	2.995879	0.000242
MYRIP	2.439881	0.000472
MYZAP	4.329291	0.000893
NCAM2	-1.75122	0.020205
NDRG4	1.672641	0.044364
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NEFL	3.347982	0.000188

NEFM	4.735406	9.73E-06
NES	3.514556	2.69E-05
NET1	0.602647	0.053294
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NFIB	-2.76075	0.000663
NKX2-6	-3.06146	0.049627
NKX3-2	-3.478	0.000485
NLRP10	3.463207	0.003214
NMUR1	-3.43604	0.032912
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NPR1	-3.00116	0.002712
NPW	1.946846	0.000643
NR3C2	-1.88036	0.00101
NTHL1	0.632669	8.09E-11
NTM	2.235841	0.068336
NTNG1	1.439957	0.056653
NTRK2	-2.0661	0.023328
NTSR1	3.749089	0.000886
OGN	-1.98705	0.000448
OLFM2	2.501519	5.05E-06
OSBPL10	2.170837	0.003828
P2RY1	-2.28575	5.57E-08
P2RY14	-5.81681	0.00043
P4HA3	-1.28381	0.045319
PABPC4L	-2.25748	6.48E-06
PAPL	-2.05878	0.016544
PAPPA	-1.22744	0.044647
PAX3	-6.71715	5.23E-14
PAX9	-2.25382	0.01558
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PCDH9	-1.38778	0.01613
PCDHA4	1.574205	0.087005
PCDHB13	-0.83038	0.036598
PCDHB2	-1.28555	0.012165
PCDP1	-4.31719	0.000664
PCOLCE2	2.028395	0.011868
PCSK1	2.356493	1.48E-06
PCSK5	-1.04114	0.073246
PDCD1LG2	-0.69753	0.012535
PDE1A	-1.51541	0.00475
PDE7A	-0.60914	0.064019

PDGFB	3.159371	0.073084
PDGFC	0.884353	0.063661
PDGFRL	-1.22989	0.065375
PENK	-1.80537	0.002824
PGM5P2	0.948926	0.08653
PHYHIPL	-2.09116	0.055022
PITX1	3.538194	3.45E-05
PKDIL1	1.443349	0.025319
PKDCC	-0.97901	0.005706
PKP3	1.176238	0.030516
PLAC9	-0.92526	0.013249
PLAG1	0.7686	0.01097
PLCE1	1.303789	0.064385
PLD5	-3.73612	0.052839
PLEKHA7	-1.50578	0.006483
PNLIPRP3	-6.05856	0.032765
PNP	-0.69409	0.053444
PODXL	-1.63488	0.020686
POM121L9P	3.464959	0.001735
POPDC2	-0.80799	0.039402
PP12613	-2.43226	0.043206
PPAP2A	-1.58697	7.99E-14
PPAP2B	-1.14002	0.023466
PPAPDC3	1.303299	0.005706
PPARG	-1.44982	0.085834
PPMIK	-0.63251	0.043321
PPMIL	-2.16051	0.07979
PPP1R14C	3.507176	4.66E-06
PPP1R3C	-1.05544	0.025319
PPP1R9A	-2.3981	0.005751
PPP2R2B	4.513221	3.65E-10
PRAC2	5.62248	0.019503
PRDM16	2.878672	7.69E-06
PRDM6	1.704102	0.011735
PREB	-0.85608	0.003338
PRG4	-2.6737	0.063525
PRKAG2	-0.72682	0.08653
PRKCA	1.267144	0.005488
PRLR	-2.6462	0.009162
PROCR	-0.68952	0.000535
PROSER2	2.196303	0.004139

PRPS1	-1.05379	0.08234
PRRG4	-2.21261	0.075771
PRSS3	4.445262	6.98E-08
PRUNE2	-2.54594	0.002676
PSD	1.56589	0.008079
PSG2	-1.70284	0.053888
PTGDR	-3.60366	0.041222
PTGER2	-1.71029	0.000169
PTGES	-1.81444	0.057569
PTGFR	-1.73196	0.006602
PTPRD	3.946473	0.000247
PTPRO	1.766121	0.042504
PTPRZ1	2.984589	0.069161
RAB11FIP2	-0.99473	0.002502
RAB38	3.253909	4.66E-08
RAI2	-3.25956	0.003448
RAMP1	3.128555	2.64E-07
RANBP17	-0.99417	0.090862
RANBP3L	-4.41569	1.27E-06
RAP1GAP	3.641127	0.000252
RASA4	1.083689	0.005942
RASA4B	1.063609	0.014988
RASGRF1	2.317347	0.05594
RASL10B	1.592776	3.23E-08
RASL11A	1.715262	0.021446
RASSF7	1.341273	0.061386
RBPMS2	-1.70031	0.027542
REEP2	0.954561	0.056027
RELL1	-0.749	0.025701
RFPL4B	-2.94502	0.022683
RFTN1	-0.6368	0.019381
RGCC	2.321843	1.94E-06
RGS9	-1.68235	0.007909
RIMS2	-1.51285	0.012925
RNF175	1.581971	0.072454
RNF182	-1.45547	0.036496
ROBO2	3.097159	0.00112
ROPN1L	-1.76019	0.036598
ROR2	-2.06243	0.022393
ROS1	3.104609	0.03355
RPGRIP1L	-0.62619	0.000576

RPS6KA1	1.458741	4.85E-13
RSPH9	1.070302	0.025189
RSPO1	1.715256	0.087778
RSPO3	-2.9537	0.012518
RSPO4	1.347004	0.005026
RTN1	-2.49771	0.047725
RUNX3	3.354327	1.60E-07
S1PR3	1.262663	0.091952
S1PR5	4.678146	0.05587
SAMD12	2.611964	1.43E-05
SAMD5	3.931213	9.52E-09
SARDH	3.222613	0.012749
SBF2-AS1	1.37769	0.000565
SBK3	3.118296	0.002086
SCARA5	-5.15693	0.059071
SCN1A	3.06261	1.89E-07
SCN5A	2.47517	0.014654
SDC4	1.046901	0.059237
SEL1L2	-3.35128	0.061703
SEMA3A	-2.57591	0.00594
SEMA3C	-0.77687	0.004139
SEMA3E	-2.03563	0.089845
SEMA6D	-0.86666	1.95E-05
SEPP1	-2.0857	0.049627
SERAC1	-1.02957	0.005747
SERPINB7	3.826796	0.00101
SERPINE2	-1.33778	0.00034
SERTAD4-AS1	2.169839	0.064567
SEZ6L2	2.426857	0.009754
SFMBT2	3.914665	1.00E-08
SFRP1	-4.43843	7.90E-08
SGCA	-3.71012	1.69E-05
SGK1	-1.13431	0.01618
SGK223	2.426344	0.005239
SH2D4A	-1.22594	2.46E-05
SH3BP1	1.326864	0.002165
SH3TC1	3.248175	0.006791
SHANK1	0.818688	1.81E-05
SHANK2	2.769211	0.046767
SHF	0.795915	0.001229
SHROOM1	0.766462	0.093626

SHROOM2	6.269872	1.78E-05
SIGIRR	0.613834	0.066303
SIT1	2.099541	0.005122
SKAP2	-1.02746	0.004712
SLC14A1	5.992939	3.94E-21
SLC16A2	0.805393	0.008959
SLC16A5	0.676216	0.012981
SLC17A7	-2.84201	0.002901
SLC19A2	-0.79818	0.008396
SLC19A3	-3.56954	0.000765
SLC25A45	-0.77601	3.78E-05
SLC27A6	4.073588	8.33E-05
SLC30A4	1.23513	0.061346
SLC35E3	-0.62745	0.03551
SLC35F2	-0.75249	0.008274
SLC38A11	3.056489	0.036081
SLC40A1	-2.12991	0.077036
SLC44A3	-1.074	0.009084
SLC45A1	1.254775	0.022096
SLC6A12	-2.86607	0.087353
SLC6A15	-2.76304	0.014314
SLC6A17	2.111927	0.003026
SLC9A3	1.124803	0.004186
SLC9A3R2	1.910694	0.000398
SLCO4A1	1.913211	0.006799
SMAGP	0.859966	0.049627
SMCR9	-2.05122	0.048397
SMOC1	-3.04912	0.085233
SOBP	1.387387	0.024237
SOCS2	2.152723	2.60E-08
SOCS2-AS1	2.509012	8.33E-05
SOX10	4.334262	0.04896
SOX11	3.968521	8.56E-07
SOX8	5.090375	2.83E-10
SPESP1	-3.55519	0.000277
SPON1	-1.6542	0.065038
SPRY4	0.918716	5.21E-06
SRPX2	-0.75167	0.002195
SSC5D	1.660591	0.08974
ST6GALNAC2	1.602511	0.008274
ST8SIA4	-1.97659	0.057322

STARD8	1.231265	0.017839
STEAP3	1.247337	0.010138
STK32B	1.781532	7.46E-09
STMN3	2.175381	8.82E-06
STX11	1.657081	6.12E-09
STX1B	1.235121	0.012788
SULT1B1	-3.47323	0.000199
SUSD2	3.20049	0.000553
SUSD3	4.017495	0.008079
SYBU	-1.63135	0.014147
SYNGR2	1.463636	3.51E-05
SYNPO	2.54355	0.012518
SYT1	2.390064	0.055842
SYT12	3.881733	0.000465
SYT7	2.243249	8.33E-05
SYTL2	-1.72601	1.05E-05
TACSTD2	-3.5737	4.77E-05
TBC1D2	1.206423	0.001441
TBX15	-1.378	5.95E-24
TBX18	1.346598	3.86E-05
TBX2	2.65663	2.81E-22
TBX20	-6.23054	3.78E-05
TBX3	1.254659	1.70E-07
TBX4	7.410198	3.36E-37
TBX5	1.83053	5.29E-12
TBX5-AS1	1.342627	2.48E-06
TBXA2R	-0.91397	0.000981
TCF21	-5.13545	0.000145
TDRD9	-3.63975	0.029922
TENM2	-2.77965	0.014988
TFAP2A	4.040804	1.51E-18
TFAP2A-AS1	3.079813	2.08E-08
TFAP2B	7.43892	2.65E-07
TGFB3	-0.85705	0.042257
TGFBR3L	1.486278	2.14E-05
TGM2	3.918066	7.54E-05
THBS4	4.518234	0.009968
THRB	-1.47101	0.000393
THSD7B	4.708969	0.047655
TIAM2	1.265862	0.00019
TIMP4	-1.57596	0.035048

TIPARP	1.513407	0.002491
TJP2	2.362825	2.59E-06
TLR3	-1.32057	0.001606
TLR4	1.550722	0.009968
TM4SF1	4.385836	4.00E-11
TMC1	3.172707	8.80E-05
TMEM100	-2.26151	0.025701
TMEM132B	1.959385	0.009968
TMEM132D	6.685789	0.001243
TMEM154	-1.6857	0.010538
TMEM155	-3.15631	1.23E-06
TMEM176A	-6.12424	0.000198
TMEM176B	-5.81177	5.92E-05
TMEM178A	1.230584	0.063665
TMEM184A	3.119149	9.03E-08
TMEM190	2.521087	0.085154
TMEM37	-3.69977	0.063664
TMEM59L	2.264081	0.023971
TMOD1	-3.31872	0.037668
TMTC2	0.733486	0.002427
TNFSF9	-1.66299	0.047382
TNS3	1.452125	0.014269
TNS4	3.506347	0.042257
TOR4A	2.353154	1.17E-12
TOX	2.386261	0.000101
TPRG1	-2.45865	0.054901
TRHDE	2.50646	4.25E-05
TRHDE-AS1	2.62504	3.50E-05
TRIM14	1.15767	0.067987
TRIM58	4.870818	0.046767
TRIML2	1.864254	0.092326
TRNP1	0.849984	0.07043
TRPC6	-2.52657	0.010841
TRPM3	4.301033	7.51E-10
TSHR	-5.87645	5.58E-11
TSHZ1	0.760864	0.0029
TSPAN12	-1.32827	0.009022
TSPAN18	-2.43166	0.01579
TSPAN33	2.867974	0.071764
TSPAN8	-4.21009	0.006039
TSPYL5	-0.66159	0.003876

TTC39C	0.871451	0.007357
TLL7	-0.81217	0.078995
UBE2QL1	2.834004	0.077438
UBL4B	7.408688	6.19E-37
UCN2	2.545579	0.012158
UGP2	-0.673	4.62E-09
UGT8	3.806439	0.093408
UNC5B	2.162403	0.003828
UNC5B-AS1	1.760884	0.014269
USH2A	3.604326	0.000407
USP2	0.989243	0.042766
VASH1	0.932052	0.000985
VNN2	-4.98479	0.001058
VSTM4	-0.97593	0.011936
VWA7	2.119756	0.093297
WDFY1	-0.68162	5.10E-05
WFDC1	3.673923	0.005183
WISP1	-0.97799	0.093013
WNT10B	4.338919	0.01437
WNT11	3.099864	2.68E-07
WNT4	3.116858	0.001303
WNT5A	3.431591	0.000922
XDH	1.790732	0.086671
XXYLT1-AS2	3.482111	3.36E-05
ZADH2	0.705451	2.05E-06
ZBTB46	1.276984	0.003719
ZDHHC15	-3.76332	5.19E-08
ZFHX3	0.693692	0.004623
ZFHX4	0.87235	0.015525
ZFHX4-AS1	2.349223	1.64E-10
ZFPM2	-2.69707	3.64E-07
ZMYND15	1.244997	0.060607
ZNF280B	-2.27247	0.007348
ZNF295-AS1	1.47552	0.098377
ZNF396	-1.70443	0.003319
ZNF423	1.979548	1.59E-06
ZNF521	0.951365	0.008123
ZNF556	-3.37447	0.056698
ZNRF2	0.902132	0.000465
ZPLD1	-4.98707	1.71E-05