

Supplementary Table 3: 308 validated DE genes in lcSSc twins. These DE genes are in the intersect of the venn comparison of the DE genes in “lcSSc twins vs. healthy twins” and “lcSSc twins vs. unrelated controls”. 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	log2FC	q-value
ACSL5	-1.20761	0.028384
ACTC1	-2.07248	0.051989
ADAMTS5	-1.76353	2.00E-08
ADAMTSL1	-0.84953	0.093589
ADORA2B	0.659763	0.029643
ADRA1D	1.919368	0.002362
AFAP1L2	3.99026	0.011043
ALDH1A2	-1.17569	0.00908
ALPL	1.887021	0.014452
AMZ1	2.439024	0.006523
ANGPTL1	-1.49152	0.002208
ANK1	0.988884	0.060926
ANKEF1	-1.32421	0.009784
AP3B2	1.645226	0.002428
APBA2	3.158714	3.99E-06
AR	-2.69266	7.90E-06
ARAP3	1.507451	2.44E-22
ARHGAP20	-1.31487	0.000725
ARHGAP28	-0.68701	0.093415
ARHGAP29	0.953952	1.42E-05
ARMC4	1.158524	0.025806
ARSE	3.912885	0.000439
ATF5	-1.25761	1.48E-07
B3GALT5	1.322114	0.034919
BMP6	-2.46841	1.84E-06
C10orf105	2.548521	0.032054
C3orf80	2.465	0.007113
C6orf132	-1.22391	0.00338
CACNA2D3	2.620529	3.15E-05
CADM1	3.951707	1.93E-08
CASC10	-1.22532	8.18E-07
CCNJL	-1.81427	0.006429
CD70	-4.78671	3.07E-06
CD74	4.375009	5.87E-07
CD9	0.874138	0.078028
CDH20	1.388989	0.047206
CDK18	3.674821	0.002651

CDS1	-1.88121	0.054417
CELSR1	2.065775	4.81E-05
CELSR2	1.319106	0.005823
CHRD1	-4.12362	4.12E-07
CHRM3	6.035139	4.40E-07
CHST1	2.185009	0.077938
CHST15	1.590858	0.04798
CILP2	4.281792	5.25E-05
CLEC14A	3.080884	0.016558
CMKLR1	1.94689	0.07659
CMTM8	1.773725	0.012285
CNKS2	-3.30708	1.81E-06
COL14A1	-1.63293	0.001497
COL23A1	2.858731	0.023644
COL7A1	2.733473	1.50E-06
COL9A3	4.368414	0.000176
CORO2B	0.749026	4.85E-07
CPB1	-2.88356	0.016635
CPNE7	2.729561	4.15E-05
CPXM2	2.079894	0.000674
CRISPLD2	-1.1172	0.042101
CSRP2	0.656829	0.059984
CTD-2201118.1	5.306571	4.73E-06
CTSB	0.795656	0.001612
CXCL1	-3.78209	4.13E-08
CXCL6	-3.65019	6.10E-07
CYB5R2	0.994458	9.69E-06
DAPK2	-0.86936	0.060629
DIO3	4.820731	0.001382
DIRC3	-1.85722	0.04671
DLL4	2.40269	0.02467
DRD1	-2.06214	0.094662
DTNA	1.384481	0.000354
DUSP15	4.788131	0.002965
EBF1	-0.98954	3.58E-05
EDA	-2.24463	1.54E-05
EGR1	2.106427	0.000369
EGR3	1.862029	0.006833
ELFN2	1.599139	0.026892
EMX2	-1.06481	0.004583
EMX2OS	-1.38371	0.000828

EN1	-0.80541	0.006834
EOGT	0.611488	3.21E-08
EPHB2	0.995586	0.000611
EPHX2	-2.05339	3.12E-14
EREG	5.175284	1.74E-13
ESRG	4.535003	0.000344
ETV4	1.466102	6.13E-07
EVA1C	1.173318	0.001531
EXOC6	0.782861	0.071164
EXTL1	3.065156	0.00161
EYA4	-2.23966	0.085666
F2RL1	2.468319	0.012928
F7	1.189356	0.045737
FAIM3	2.336197	0.003283
FAM102B	-0.79125	2.18E-05
FAM13C	-2.17404	2.21E-05
FAM155A	2.900519	2.62E-05
FAM225A	2.361916	0.000126
FAM3C	-0.66708	0.002961
FAM43A	1.090759	0.028205
FAM84B	-2.16228	0.029613
FAM86B3P	0.801218	0.006365
FAP	0.866735	0.006435
FBLN7	0.987373	0.028266
FBN2	1.779799	0.0945
FERMT3	1.062889	0.004423
FGF5	1.156467	4.56E-05
FGL2	-2.97086	0.000943
FOS	1.531807	0.018734
FOXF1	1.343169	0.029643
FOXQ1	2.572855	6.62E-05
FRAS1	-2.52545	1.13E-07
FRMD4B	2.394681	0.000105
FSTL5	7.114925	1.07E-05
GALNT15	1.503446	0.044771
GALNT18	1.682435	0.001926
GCKR	4.066444	0.000206
GFRA2	3.057322	0.001172
GLIS1	1.273382	0.00395
GNAZ	1.301886	0.000974
GOLGA8B	1.807172	7.13E-08

GPM6B	1.668568	0.011824
GPR133	-1.02156	0.073309
GPR17	2.848483	1.36E-06
HAND2	-0.98172	8.87E-05
HAND2-AS1	-1.17357	0.000176
HAPLN3	-1.3086	0.027411
HCLS1	-3.67925	0.000359
HEYL	1.920617	0.049908
HHEX	2.198813	0.017785
HLA-DQA1	7.007703	0.003544
HMGA2	1.287334	6.70E-07
HOTTIP	2.080035	1.28E-06
HOXB13	-1.47137	0.087051
HOXB3	3.276882	0.02684
HOXB7	5.169471	0.003136
HOXB8	4.975351	0.0512
HOXC10	4.237071	0.010232
HOXD10	-2.13363	6.43E-05
HOXD11	-2.03317	1.41E-05
HOXD13	-1.93638	0.000127
HOXD3	-1.69241	0.021121
HOXD9	-1.53951	0.000285
HOXD-AS2	-2.13007	1.27E-05
HRH2	2.460089	0.07758
ID3	-3.42315	4.51E-11
IGSF9B	1.889645	0.008607
IL11	2.066798	0.002251
IL6	2.422252	1.87E-07
ISYNA1	0.678742	0.041174
ITGB7	1.153276	0.079941
KAL1	1.653573	0.065442
KCNAB3	3.343516	4.70E-11
KCNN4	2.218929	0.004306
KIAA1217	1.305079	3.64E-05
KIF5C	2.044672	0.004349
KLF5	0.980214	0.060629
KLF8	1.059817	0.004053
KNDC1	1.423665	0.000271
KRT18	2.727355	0.042971
KRT19	2.386853	0.003535
KRT23	3.001808	0.067911

KRT36	2.483251	0.027397
KRT38	2.84808	0.026094
KRTAP1-1	2.838887	0.000249
KRTAP1-5	1.916266	0.000212
LICAM	3.925234	7.15E-07
LAT	2.389111	0.003826
LCNL1	5.131464	7.01E-23
LETM2	0.70222	0.001987
LGR5	-7.16055	4.60E-13
LHFPL3	6.696352	5.19E-10
LIF	4.180109	3.80E-05
LINC00900	1.393489	0.025347
LINC01085	-2.85666	0.087928
LINC01123	1.822998	0.016372
LIPC	-1.6231	0.000275
LOXL3	1.118608	0.048034
LOXL4	1.629457	2.08E-06
LPHN2	-0.95761	0.005576
LRFN5	1.549868	0.022159
LSAMP	-0.91566	0.085153
MAB21L1	-0.7881	0.01199
MAN1C1	-1.32475	1.36E-05
MAN2A1	-0.70709	2.14E-06
MAOA	-2.26299	3.69E-07
MAP1LC3C	-1.22204	0.060747
MBOAT2	-1.03307	0.000299
MCTP1	2.067893	0.004027
MGAT5B	1.436174	0.055932
MMP10	-3.88198	0.001218
MOB3B	-3.5976	0.007791
MSR1	1.654722	0.079315
MST1R	3.021876	8.32E-07
MTUS2	-1.78551	0.012557
MYO1H	1.329058	0.005294
NEFM	1.612091	0.049532
NES	2.571815	4.32E-06
NFE2L3	1.163468	0.029065
NFIB	-2.25113	0.012751
NKX3-2	-3.82389	7.97E-05
NLRP10	1.923443	0.017143
NOTCH3	1.043994	0.067092

NPR1	-3.55668	2.74E-05
NTM	1.767952	0.042884
NTRK2	-2.38253	0.010892
NTSR1	2.024345	0.00372
OGN	-1.18686	0.086665
PCOLCE2	-1.16527	0.05402
PCSK5	-0.79435	0.057332
PDGFB	2.780919	0.087165
PENK	-2.6546	3.43E-05
PITX1	2.87217	0.008671
PKDCC	-0.90512	0.01049
PLAC9	-1.135	0.000123
PLAG1	1.507122	6.65E-17
PLCE1	-0.91536	0.065951
PODXL	-3.30694	1.43E-08
PPAP2A	-1.02458	1.53E-05
PPAP2B	-1.61182	1.26E-06
PPP1R3C	-1.09018	1.55E-05
PRAC2	-1.94022	0.006415
PRDM6	-1.05475	0.002108
PRG4	-4.59616	0.000212
PROCR	-0.81218	0.010224
PSD	0.955667	0.011938
PTGER2	-1.51751	0.004948
PTPRD	-2.31117	0.051247
PTPRZ1	4.371507	0.006768
RAB11FIP2	-0.79473	0.003663
RAB38	1.642636	0.021378
RAI2	-2.25356	0.004731
REEP2	1.518267	0.000154
RFTN1	-1.49601	1.29E-21
RGCC	1.450629	0.009875
RNF175	1.361042	0.045348
ROS1	3.241266	0.056661
RPS6KA1	1.394392	0.001358
RSPO1	1.87078	0.010129
RTN1	-3.91502	0.000115
RUNX3	2.732634	7.13E-08
SAMD12	-0.75346	0.071236
SAMD5	2.930945	8.08E-06
SCARA5	-6.73061	1.06E-08

SCN1A	1.677507	0.07105
SEMA3C	-0.88995	0.004737
SEMA3E	-2.91201	0.00121
SGK223	1.81228	0.002953
SH2D4A	-1.19822	0.008109
SHANK1	1.02353	0.000249
SHF	0.695678	0.084305
SHROOM1	1.401936	9.06E-08
SHROOM2	4.059023	0.000248
SLC14A1	1.270045	0.05402
SLC16A2	1.035566	3.36E-08
SLC16A5	0.601569	0.018789
SLC17A7	-2.36672	0.002019
SLC27A6	3.686078	0.009405
SLC35F2	-0.89169	0.007173
SLC44A3	0.946558	0.04071
SLC9A3	1.637074	0.000669
SLC9A3R2	0.839993	0.006833
SOBP	-1.08234	0.007765
SOX10	5.407624	0.000603
SOX8	3.06911	2.22E-06
SPESP1	-1.9814	0.059429
SPRY4	0.658237	0.015721
SRPX2	0.674028	0.002681
ST6GALNAC2	1.633897	0.004184
STARD8	1.646541	0.003175
STMN3	1.358452	0.00203
STX1B	1.191392	0.005794
SYT7	2.182372	6.94E-09
SYTL2	1.428898	5.25E-05
TACSTD2	-2.54901	0.070523
TBX15	-0.89667	2.54E-06
TBX2	0.721338	0.00823
TBX3	1.420806	1.29E-19
TDRD9	-3.72506	0.012705
TFAP2A	1.314054	0.002681
TFAP2B	4.811384	7.27E-08
TGFB3	-1.91345	6.17E-08
THBS4	5.615882	1.77E-06
TLR3	-1.22783	0.000478
TMEM100	-2.04321	0.069154

TMEM132D	4.226129	0.038
TMEM155	-1.61604	0.028934
TMEM178A	2.118237	0.004975
TMEM37	-2.92539	3.55E-05
TOR4A	1.997538	5.16E-08
TRHDE	3.193878	0.001179
TRHDE-AS1	2.802468	0.027688
TRIM58	4.606229	0.008695
TRPM3	3.424224	3.36E-07
TSHR	-2.47344	0.015899
TSPAN12	-1.1663	0.029896
TSPAN18	-2.02982	0.0007
UBE2QL1	3.065725	0.000114
UCN2	2.766483	0.004562
UGT8	5.760852	0.000199
USH2A	4.708036	3.46E-11
VASH1	0.702834	0.000613
VSTM4	-0.92304	0.006569
WFDC1	1.746395	0.005097
WISP1	1.540102	0.000747
WNT5A	1.15627	0.060977
XXYLT1-AS2	2.193662	0.023382
ZDHHC15	-4.08263	8.56E-09
ZFPM2	-1.36341	0.010227
ZNF396	-0.85932	0.075902