

Gene	logFC	adj.P.Val	DEG	Pathway*
CADM3	-10.0769212246182	0.00843245301498783	down	NA
CNTN3	-10.0075320995425	0.000651317326288731	down	NA
PTGFR	-9.37069239988164	0.000651317326288731	down	Pathway
NLGN4X	-8.75409369509799	0.00360046797777663	down	Pathway
ATOH8	-8.74717426003849	0.0116363535575482	down	Pathway
PIK3C2G	-8.6611722206756	0.00102396540561436	down	Pathway
TDRD5	-8.65152316618328	0.00258763172862039	down	NA
DARC	-8.47101963256215	0.00494483479413562	down	NA
GALNT15	-8.45825887290362	0.00178142130125749	down	NA
ZNF22	-8.39469796886022	0.00178142130125749	down	NA
IL1RL1	-8.33700758787499	0.00113925180685624	down	NA
CYP4X1	-8.20024741790453	0.000768858666668757	down	NA
MAGEE1	-8.14111396026603	0.0000455338772482485	down	NA
ZNF880	-8.12751741524047	0.0000957164820963686	down	NA
GGT5	-8.07500230431774	0.0054148113177371	down	Pathway
ESYT3	-7.62540478225012	0.0000615221659977426	down	NA
APOBEC3F	-7.60488533116241	0.0019749530781067	down	NA
ADD2	-7.39358841085771	0.00135340220393029	down	Pathway
SLC6A11	-7.33558128096658	0.00405714344667696	down	NA
KCNQ3	-7.23798264090939	0.00252194956679289	down	NA
MYBPC1	-7.19909708708476	0.0135609845534393	down	Pathway
SRGN	-7.14069728421559	0.004556189885561	down	Pathway
FPR1	-7.12875854689089	0.00227280474998497	down	Pathway
DEPDC7	-7.12874549277296	0.005098243527636	down	NA
CDKN1C	-7.11886535171895	0.010554643572276	down	Pathway
BST2	-7.06815725058892	0.00150823880964305	down	Pathway
RERG	-7.02274993699795	0.00244648580914608	down	Pathway
ADH1B	-7.01971183947436	0.00695131164785899	down	Pathway
SFTPB	-7.00458383313603	0.00896855015239253	down	NA
CES4A	-6.99162761938316	0.010554643572276	down	NA
ZNF883	-6.97364514431225	0.022139039655041	down	NA
SPARC	-6.97125832504797	0.013123721662465	down	Pathway
TCN2	-6.90101534952136	0.0071472086286553	down	NA
SLC16A4	-6.88746115165406	0.000298560501862181	down	NA
EXO5	-6.79574876068121	0.00360046797777663	down	NA
CES1	-6.78053429403356	0.015148327326822	down	Pathway
FAM9B	-6.71251398942241	0.00178142130125749	down	NA
TCIRG1	-6.61143563539239	0.00118647188968779	down	Pathway
RIBC2	-6.52194325885767	0.00178142130125749	down	NA
ZNF287	-6.46222752547173	0.00521287207365194	down	NA
CYP4B1	-6.41980171474149	0.0154004198295072	down	Pathway
TMC5	-6.40051142063544	0.0211252987656376	down	NA
FAM65B	-6.38391732810947	0.0054148113177371	down	NA
PLCB4	-6.36568574657157	0.0086998136871913	down	Pathway
NMNAT3	-6.29780650179915	0.00252194956679289	down	NA
SLCO2A1	-6.25575770547476	0.00265176893220175	down	NA
WIPF1	-6.21318992002155	0.000433169655547905	down	Pathway
NRSN2	-6.19352479787727	0.00517258555667806	down	NA
ABCA6	-6.13924845981803	0.00113925180685624	down	NA
KLRC2	-6.12684128739877	0.00546863024390161	down	NA
ZNF732	-6.10460071159755	0.00252194956679289	down	NA
LAPTM5	-6.08639737887826	0.00308695918387617	down	NA

C10orf10	-6.08425994434404	0.00227280474998497	down	NA
COL8A1	-6.01340068147648	0.00776131275376969	down	Pathway
ACSL5	-5.99282027310203	0.00240061511093794	down	Pathway
PNLIPRP3	-5.98011623686289	0.00302788431548657	down	NA
BBOX1	-5.95367842783029	0.0201799378678864	down	NA
AKR1C1	-5.92839201021625	0.0294494188378723	down	Pathway
CXCR1	-5.85138574473949	0.0147053724716601	down	Pathway
PSCA	-5.84032605193917	0.0122796814813349	down	Pathway
RTN1	-5.78831199827481	0.005098243527636	down	NA
RXFP1	-5.77805024692885	0.0111728595655869	down	Pathway
SULT1E1	-5.74206001232705	0.00426004391502599	down	Pathway
EBF1	-5.69594750219649	0.0267622767466902	down	NA
FMN2	-5.69196895725043	0.0230605480994224	down	Pathway
TMEM100	-5.68321684367156	0.0169765317240416	down	Pathway
AKR1C2	-5.6606962006623	0.0210999421546606	down	Pathway
RNF157	-5.65093268415879	0.00258763172862039	down	Pathway
STAT5A	-5.63360391301583	0.0071472086286553	down	Pathway
AKR1B10	-5.5721820376958	0.00925030815276274	down	Pathway
DCN	-5.56340487756776	0.0128730119818305	down	Pathway
FAM174B	-5.5136385112208	0.00147975674650345	down	NA
ZNF671	-5.49750636086815	0.00144411613966197	down	NA
IL8	-5.49532829394296	0.00182265900362016	down	NA
ABCD2	-5.469314911834	0.000674032279543325	down	Pathway
STAC2	-5.46486908201147	0.015148327326822	down	Pathway
HSD17B2	-5.45914621479473	0.00169541382127618	down	NA
C5orf46	-5.43914412534879	0.0237393482940505	down	NA
VASH1	-5.42517953943667	0.0435818424778398	down	Pathway
ADAM12	-5.38080234544027	0.00142892100222063	down	Pathway
CACNA2D3	-5.35009626279719	0.0086998136871913	down	NA
KCTD8	-5.2917111365642	0.00405714344667696	down	Pathway
IFI44L	-5.23380228513537	0.00272789854482884	down	NA
TNFAIP6	-5.23333534485907	0.0245187619921072	down	Pathway
PPAPDC1A	-5.23298446385275	0.00896855015239253	down	NA
ASRGL1	-5.2305275168271	0.00106261579796104	down	NA
KLRC3	-5.18712066174357	0.00334081127395787	down	NA
IL22RA2	-5.16674528640392	0.0311750959621759	down	Pathway
TMEM156	-5.13932091494979	0.0138941160958012	down	NA
CARD17	-5.13474321824394	0.000255957655179796	down	Pathway
CACNB2	-5.10775179990458	0.00200626005588499	down	Pathway
ANGPT1	-5.08882390251926	0.00144411613966197	down	Pathway
FAM127C	-5.0820399494582	0.0170255390968829	down	NA
TRPV4	-5.05773722929208	0.016330308338876	down	Pathway
IL1R2	-5.03842039174573	0.0400066123929638	down	Pathway
SLC22A18AS	-5.01763793908743	0.00337324148306265	down	NA
ARL9	-5.00105625063694	0.0053996054992121	down	NA
RORC	-4.99078642166687	0.00911536903416098	down	Pathway
ARMC4	-4.97462225715944	0.00386066187299184	down	NA
S1PR3	-4.95389352577834	0.00593830100427534	down	Pathway
S100A8	-4.91935364857387	0.0267622767466902	down	Pathway
SMOC1	-4.9100872172288	0.0282135400546423	down	Pathway
KCNJ2	-4.90700934847716	0.0138967236371032	down	Pathway
CYP4Z1	-4.89175792801591	0.000433169655547905	down	Pathway
SCNN1B	-4.88574730909804	0.0245483411558718	down	Pathway

SYN3	-4.87549528860559	0.0238682080454715	down	NA
CDIP1	-4.87272128688214	0.00643719647476864	down	NA
AKR1B15	-4.85915013092891	0.0439328688173528	down	Pathway
IL6	-4.85660764527301	0.0179687117421246	down	Pathway
LAMA4	-4.82939780051801	0.0152705952579538	down	NA
TBL1X	-4.77266222817638	0.0259503018863846	down	NA
ATP8B4	-4.72383950697525	0.0269963322570122	down	NA
AOX1	-4.69980974367011	0.0174970232259838	down	NA
ST18	-4.61729274151051	0.0062306377236223	down	Pathway
WNT3A	-4.60811036597581	0.0124796565780751	down	Pathway
CHI3L2	-4.58456521778898	0.0054148113177371	down	Pathway
LRRN1	-4.56279161946741	0.0193505295868115	down	Pathway
AKR1C3	-4.55231597159733	0.0128702987042865	down	Pathway
CXCL1	-4.52557001629118	0.00144411613966197	down	Pathway
SAMSN1	-4.5016777573781	0.0321381722961886	down	Pathway
METTL7B	-4.49672446090401	0.0380576218383549	down	NA
SLC9A2	-4.47575338172601	0.0194925393212716	down	Pathway
SLC25A18	-4.46569017651924	0.00515269958448667	down	NA
SERPINA5	-4.45591533301858	0.00381572485124622	down	NA
ABCA9	-4.44473460555452	0.015148327326822	down	NA
KLHL4	-4.43873330584292	0.00298509759394963	down	NA
GSDMC	-4.42953756157726	0.018188252251489	down	NA
ABCC2	-4.42285227719579	0.00147975674650345	down	Pathway
CACNA1D	-4.41060631145483	0.0420973154335111	down	Pathway
CXCR4	-4.41049048048176	0.00381572485124622	down	Pathway
PNPLA3	-4.39286367056188	0.0054148113177371	down	Pathway
C12orf39	-4.38280863434205	0.0304605322782198	down	NA
CFH	-4.37913480515151	0.00728949742823313	down	NA
PAOX	-4.3774088485098	0.0352596894579683	down	NA
PLAC8	-4.35170853777466	0.0176519651049434	down	Pathway
ASAP3	-4.33843863024477	0.000651317326288731	down	Pathway
TEK	-4.33680599990967	0.0054148113177371	down	Pathway
ANKRD35	-4.3293994605873	0.00824205122503509	down	NA
VNN3	-4.2917540483228	0.016330308338876	down	NA
NEXN	-4.28724795190354	0.00178142130125749	down	Pathway
HSD11B1	-4.27052345424236	0.0148641268014274	down	NA
SOWAHB	-4.26605770745868	0.0111219906172995	down	NA
PDE7B	-4.25068089415059	0.0035229097927994	down	Pathway
GPR141	-4.22579111216431	0.00182265900362016	down	NA
ABLIM3	-4.1802031782391	0.00102396540561436	down	NA
C2CD4A	-4.15855680294418	0.0431558003872985	down	Pathway
OLAH	-4.14403652760964	0.0287819607414773	down	Pathway
CTSE	-4.12178233130885	0.0196813478636481	down	NA
SULT1B1	-4.11889955014662	0.00728651967850821	down	Pathway
GYS2	-4.10080660386731	0.00178142130125749	down	NA
RSPO2	-4.09525565611273	0.0400720386567861	down	Pathway
LAT2	-4.08765455954097	0.0058845229487207	down	Pathway
AHRR	-4.07036767266042	0.0374113323533681	down	NA
ZG16B	-4.06162036860832	0.00178142130125749	down	Pathway
FIBIN	-4.05117585896073	0.00591289489354877	down	NA
STARD8	-4.04709467016028	0.00357363537533407	down	NA
CCDC28B	-4.02446033080069	0.0251424344181079	down	NA
TENC1	-4.01354926454108	0.00770585223804868	down	NA

VNN2	-4.00455165609079	0.0130391966139351	down	NA
PTPN22	-4.00320638365487	0.0111824216484844	down	Pathway
ZNF32	-3.96931574158628	0.00496606953909166	down	NA
COL24A1	-3.96738947464767	0.0180795351180147	down	Pathway
MCTP1	-3.96122805867111	0.00721317781275581	down	Pathway
NPR3	-3.9414128998595	0.00147975674650345	down	Pathway
DHRS9	-3.91304489361247	0.00517258555667806	down	Pathway
TSPAN1	-3.89622576341669	0.00246457991558625	down	NA
KLRC1	-3.86321633509054	0.0111728595655869	down	NA
ETNK2	-3.8580811396102	0.0054148113177371	down	NA
SRSF12	-3.83358170406834	0.00749532301861601	down	NA
SERPINA1	-3.83118685625967	0.0147308841871448	down	Pathway
LMCD1	-3.82222410425676	0.00178142130125749	down	Pathway
ITGB2	-3.77348855480112	0.00591289489354877	down	Pathway
EVI2A	-3.72071964303897	0.0149974875776845	down	NA
SNED1	-3.71141920170722	0.00777074350823438	down	Pathway
ITGA10	-3.70494853600732	0.0400066123929638	down	Pathway
GLDC	-3.70404763540145	0.0428564414308668	down	Pathway
XKRX	-3.67942065580646	0.00178142130125749	down	NA
ST8SIA1	-3.64689346590561	0.0134270017038353	down	NA
GAS1	-3.64120282641341	0.0104492197841631	down	Pathway
C1S	-3.61344619179263	0.0106259042981105	down	NA
S100A9	-3.60618805887194	0.0483357666963776	down	Pathway
FETUB	-3.60159737359391	0.0132160745645083	down	NA
LYPD3	-3.59161197929005	0.00404689710333156	down	Pathway
SELENBP1	-3.58227099715642	0.0106259042981105	down	NA
AGR2	-3.57597744931816	0.0144140090034824	down	Pathway
SUSD1	-3.53618294678528	0.00178142130125749	down	NA
SEPP1	-3.53315372279056	0.0031672425850628	down	NA
ARID5B	-3.52212691600468	0.00189349418112886	down	Pathway
MILR1	-3.49537296079981	0.0121433833434938	down	NA
ACPP	-3.49371757488574	0.00977426819056698	down	NA
CXCL3	-3.477904071283	0.00507823891194564	down	Pathway
KCNJ15	-3.47709969568016	0.00676515248648476	down	NA
SEMA5A	-3.46374666549465	0.00250674240741419	down	Pathway
KCNK2	-3.458090381502	0.00923052977989724	down	Pathway
PLEKHA6	-3.45530884537139	0.00777074350823438	down	NA
POU5F1	-3.44169431706877	0.0356786735999177	down	Pathway
SIPA1L2	-3.42961493139144	0.0262422747603064	down	NA
IL1R1	-3.42844055020407	0.00531139971143219	down	Pathway
TACC2	-3.4257443499772	0.00227280474998497	down	NA
CXCL2	-3.41735756642211	0.0130498140241582	down	Pathway
CLEC2B	-3.41725323566111	0.0107090702638709	down	NA
PANX2	-3.41274995769234	0.0186597863997083	down	NA
HAPLN3	-3.40339858601798	0.0065222493677266	down	NA
ICAM5	-3.40151325634085	0.0229056489929945	down	NA
C10orf90	-3.39877917871842	0.00113925180685624	down	NA
PRR16	-3.38558512157684	0.0176519651049434	down	Pathway
EYA1	-3.35574755703977	0.00405714344667696	down	Pathway
PAK3	-3.35339773410099	0.0143949538686486	down	Pathway
BCL6	-3.33887601028235	0.00178142130125749	down	Pathway
FADS2	-3.33542002406174	0.00828039871964914	down	Pathway
PAPPA	-3.33125072936095	0.0201810661313687	down	NA

TCEA3	-3.31214157734595	0.00478424392890516	down	NA
P2RX6	-3.29683611565857	0.0138941160958012	down	Pathway
ANKS1B	-3.29225669445252	0.0213570845460382	down	NA
PADI4	-3.28608328534351	0.0268024230152425	down	NA
ALDH3A1	-3.28105197025773	0.00144411613966197	down	NA
PLCB1	-3.27964223854134	0.0267325809773597	down	Pathway
IFI44	-3.23694062436466	0.0071472086286553	down	NA
SCNN1G	-3.23681564030817	0.00702066841229523	down	Pathway
CYBA	-3.2280001961561	0.0204810479500326	down	Pathway
PCDH18	-3.22736828121204	0.0102106481651848	down	NA
POLN	-3.2009408126027	0.0102295968756798	down	NA
C4orf19	-3.1963354426263	0.0222504819698704	down	NA
RBPMS2	-3.18041356919321	0.0133137063525308	down	Pathway
ACOT2	-3.17010742969204	0.0054706052525586	down	Pathway
PCDH7	-3.15763460986353	0.0247862496022762	down	NA
PRR15L	-3.14773735839437	0.0262422747603064	down	NA
MPZ	-3.14453742793331	0.0463496604912139	down	NA
IKZF2	-3.1429011432161	0.0053996054992121	down	NA
TM4SF1	-3.14276826026722	0.0124408531882066	down	NA
HIST1H2BN	-3.14223532653703	0.00824205122503509	down	NA
DDC	-3.13874492736003	0.00176517598072332	down	NA
ANXA6	-3.13825860488312	0.00606913744496404	down	Pathway
SP140	-3.12819539372151	0.00979169933051757	down	NA
NFATC4	-3.11746326941695	0.0374596033802236	down	Pathway
HPGD	-3.11117851327996	0.00484852546514122	down	Pathway
KLF15	-3.10927760204747	0.0418967487771853	down	Pathway
ADRA1B	-3.07363922890274	0.0105896693547357	down	Pathway
NBEA	-3.068376909426	0.00184215937779317	down	NA
DYSF	-3.04968111803876	0.0473275296212984	down	NA
WNT5A	-3.04129265651873	0.0226494393819051	down	Pathway
MAP7D2	-3.02560000712188	0.0315493990815156	down	NA
KLHL38	-3.01961509639703	0.033088935669882	down	NA
GLRX	-3.01955642801035	0.005098243527636	down	NA
LYPD5	-3.0113886338427	0.016275865818765	down	NA
GAB3	-3.00917746058268	0.00235306830255325	down	NA
EPHA10	-2.99152801500484	0.0392467988097998	down	Pathway
DSEL	-2.95760713521936	0.0400066123929638	down	Pathway
TNS1	-2.95015552985914	0.00484852546514122	down	NA
KRT80	-2.94122286676619	0.0124408531882066	down	NA
CPM	-2.93261495524312	0.00426004391502599	down	NA
PHACTR3	-2.9292024965973	0.0352596894579683	down	NA
RARRES3	-2.92002351306651	0.0191725614207769	down	NA
EYS	-2.91717949335216	0.00956392481487896	down	NA
GSDMA	-2.90808185699999	0.0175135800028153	down	NA
FIBCD1	-2.88144416277495	0.00782765597435922	down	NA
TAS1R3	-2.87800749361472	0.0321456879645613	down	NA
XKR3	-2.87486904945327	0.0222504819698704	down	NA
TNFSF14	-2.87282750904331	0.0201799378678864	down	Pathway
FGFBP1	-2.86171931511438	0.010554643572276	down	Pathway
HERC5	-2.85920851864778	0.0107090702638709	down	NA
PDE6A	-2.83970224239313	0.00189349418112886	down	Pathway
PADI1	-2.83693395367278	0.010846865278975	down	NA
GPR64	-2.83478895965305	0.0106235251353713	down	NA

SERPINE2	-2.81670895300662	0.0182216278626592	down	Pathway
CHST6	-2.81111803878256	0.00591289489354877	down	Pathway
MAB21L3	-2.7895545327976	0.010554643572276	down	NA
TMEM92	-2.78898605783004	0.0132160745645083	down	NA
GBP2	-2.77857864349472	0.00113925180685624	down	NA
UBE2L6	-2.77296064831407	0.00500099367069865	down	NA
ACSF2	-2.77108978146178	0.00178142130125749	down	Pathway
FAT4	-2.76428089853214	0.0216151761529874	down	NA
LINC00087	-2.76176894943265	0.00113925180685624	down	NA
ADRB2	-2.7481891198717	0.0053996054992121	down	Pathway
AK7	-2.74818801173301	0.00807750674119537	down	NA
OVCH1	-2.74361295752132	0.0122640526852166	down	NA
THBS1	-2.71183420247972	0.00165808241694114	down	Pathway
CAPN8	-2.69455791161197	0.0216603737210304	down	NA
BTBD16	-2.69420775788434	0.0483525873183295	down	NA
ZEB2	-2.68707162136257	0.00654637280781179	down	Pathway
RNF165	-2.68140340372184	0.0214058597012822	down	Pathway
PDK4	-2.67199964991104	0.0109209797785481	down	Pathway
ATP6V0A4	-2.67147179185494	0.045389458846911	down	Pathway
NAV3	-2.66341581750932	0.0156376081715616	down	NA
GPM6B	-2.66215733948199	0.00200253059330313	down	Pathway
ATP1B1	-2.65730562643278	0.00196838376763342	down	Pathway
MGAT5B	-2.64985907541065	0.00751072730065212	down	NA
TNIP3	-2.64825017088986	0.0253573488752213	down	Pathway
EVA1A	-2.64551013174725	0.00843499908287437	down	NA
SHROOM2	-2.64487391068103	0.0148641268014274	down	Pathway
APOBR	-2.6411456197207	0.0288722112538373	down	Pathway
EHF	-2.6211363590428	0.044450112293341	down	Pathway
ABLM2	-2.6150940154245	0.0362774417492569	down	NA
IRAK2	-2.60613429158804	0.0130391966139351	down	Pathway
CHADL	-2.606053522805	0.0499850218635955	down	Pathway
COL16A1	-2.59784882678571	0.0258824603631041	down	Pathway
PHEX	-2.57290465264704	0.0258682839732607	down	NA
ARHGAP29	-2.56728052500938	0.0120131837342731	down	NA
SULT1A2	-2.56648950684192	0.00381572485124622	down	Pathway
C3orf18	-2.5607752535623	0.0211252987656376	down	NA
SLC45A1	-2.55935385010352	0.0242532429594263	down	NA
CYP39A1	-2.54898740303625	0.0130498140241582	down	Pathway
C5AR1	-2.54261712586456	0.0253740510953186	down	Pathway
GOLT1A	-2.54213754959566	0.0189719132259805	down	NA
SLC7A2	-2.5350093684124	0.00843245301498783	down	Pathway
NFKBIZ	-2.52754149739335	0.0467726086929653	down	NA
MAP3K8	-2.52646092424234	0.0333731272492139	down	NA
MLPH	-2.5242682472131	0.0144526470266525	down	NA
TNFAIP2	-2.50939984180351	0.0239516473700319	down	NA
HPD	-2.50850949368972	0.0148205349578936	down	NA
PROM2	-2.50210262071385	0.0199465653162187	down	NA
LPIN1	-2.49402693791024	0.00102396540561436	down	Pathway
PPAP2B	-2.4893377761031	0.0331790410698035	down	NA
ST3GAL5	-2.48848758249687	0.0040765885132371	down	NA
OSGIN1	-2.48829476829703	0.0104492197841631	down	Pathway
COL13A1	-2.48803665841247	0.0365507866500216	down	Pathway
CDH2	-2.47391088430983	0.0141322061675459	down	Pathway

SOD2	-2.4733853599522	0.0277647033898298	down	Pathway
VWA5A	-2.46856796756716	0.00934617699878462	down	NA
CPPED1	-2.46423931302883	0.00910729534474426	down	NA
FGF5	-2.43601263036684	0.0387244156283981	down	Pathway
C3	-2.42718690387025	0.0213570845460382	down	Pathway
FCHO1	-2.42311241910122	0.0112334062705262	down	NA
GCNT2	-2.40928635784101	0.0488543966375156	down	Pathway
MMP19	-2.40613997917646	0.025389981851985	down	Pathway
BEAN1	-2.39751029212169	0.0420973154335111	down	NA
SNCG	-2.39595627074911	0.0078380861499063	down	Pathway
PTX3	-2.3922046438315	0.00500099367069865	down	Pathway
ALDH1L1	-2.38966712894157	0.0430014060922334	down	NA
HYAL1	-2.38586072616896	0.019520871963596	down	Pathway
ERRFI1	-2.38442455606618	0.0096274444680014	down	Pathway
PLSCR4	-2.38354902713834	0.00702066841229523	down	Pathway
C15orf62	-2.38354052986661	0.00546863024390161	down	Pathway
PIK3R3	-2.37493518614131	0.0102106481651848	down	Pathway
SPSB1	-2.37402510698613	0.00778937934344466	down	NA
IQCD	-2.37174978217299	0.0333455930308587	down	NA
CEACAM19	-2.36764110252446	0.0392467988097998	down	NA
PTGER4	-2.36405099246591	0.00749532301861601	down	Pathway
GLIS2	-2.36319138587381	0.0424202879380085	down	NA
SLC26A2	-2.35006977463642	0.00308695918387617	down	Pathway
TGFBR3	-2.34737523821035	0.00606913744496404	down	Pathway
SYT12	-2.34708137067009	0.0445792339514482	down	NA
DPYD	-2.32644981909286	0.00598193964559136	down	NA
PDGFRL	-2.32132403993271	0.00178142130125749	down	NA
GMPR	-2.31638262406424	0.0230948034985204	down	NA
ABCC3	-2.31583471089037	0.004556189885561	down	Pathway
ACSL1	-2.29929139793535	0.00843499908287437	down	Pathway
SPOCK1	-2.29066040729576	0.0234847752774467	down	Pathway
TNFSF13	-2.2888715649924	0.0272971111673572	down	NA
ZNF285	-2.26574021209546	0.0122716776209058	down	NA
DNAJB4	-2.26559925461207	0.00484852546514122	down	NA
PLLP	-2.26407778173342	0.033927613893117	down	NA
LURAP1L	-2.24428654011536	0.0275994272677768	down	NA
GPRC5C	-2.23759785560294	0.0435818424778398	down	NA
ENTPD2	-2.23731426785559	0.0367990281061773	down	Pathway
GBP1	-2.2329945049602	0.0106546715302698	down	Pathway
SLC26A7	-2.23225562948774	0.0459841737280008	down	NA
GCLC	-2.22841640094057	0.0482482911547309	down	Pathway
NCR3LG1	-2.22604055632574	0.0138967236371032	down	NA
PIK3IP1	-2.21829714383733	0.0315175207440936	down	Pathway
RAB30	-2.21444226283941	0.0054706052525586	down	NA
CTF1	-2.21085904558607	0.0367187431476375	down	Pathway
ARRB1	-2.20291384758641	0.0111728595655869	down	Pathway
NABP1	-2.20280448999705	0.00178142130125749	down	NA
SLC35E4	-2.20073990483268	0.00734849165405664	down	NA
C9orf84	-2.19911039634548	0.0147308841871448	down	NA
MYEOV	-2.18755542115678	0.0323190626882029	down	NA
SFMBT2	-2.18597837930002	0.0212024004701557	down	NA
COL18A1	-2.18513762160105	0.0344113680692851	down	Pathway
GHR	-2.15944166731983	0.0472721070917943	down	Pathway

ACOX2	-2.15875629122349	0.0113258262475813	down	Pathway
GPLD1	-2.15195571592288	0.00189349418112886	down	Pathway
TNFAIP8L3	-2.12980703568241	0.0111646381833105	down	Pathway
PDCD1LG2	-2.1287470756759	0.0345026198173697	down	Pathway
ZNF608	-2.12499544090566	0.00734849165405664	down	NA
KIAA1683	-2.10434937602039	0.045389458846911	down	NA
PDGFB	-2.09445760163709	0.00910729534474426	down	Pathway
FLVCR2	-2.09367424557246	0.0347137603169297	down	NA
LINC00961	-2.08468812442111	0.0277523049848282	down	NA
ADAMTS1	-2.07457220692292	0.0201750048585462	down	Pathway
GLUL	-2.06910885707242	0.0053996054992121	down	Pathway
TRPV3	-2.06833370509147	0.033088935669882	down	NA
PPARGC1A	-2.06324208870936	0.0104492197841631	down	Pathway
KYNU	-2.0574625941896	0.00200626005588499	down	Pathway
GVQW1	-2.04964262900557	0.00645724017769797	down	NA
S100A4	-2.04627088234322	0.00447116000598364	down	Pathway
NWD1	-2.04143074130351	0.0143949538686486	down	NA
LRIG1	-2.04113194559935	0.0054148113177371	down	Pathway
ZNF140	-2.04001825107405	0.00273170545121021	down	NA
CFI	-2.03664748142653	0.016130762944312	down	NA
BEST2	-2.03430776172745	0.0320257136017401	down	NA
METTL7A	-2.03337034616659	0.00252194956679289	down	NA
RGCC	-2.03172762333376	0.0146228523478505	down	Pathway
G6PD	-2.02740755834384	0.0130498140241582	down	Pathway
LEPR	-2.01490189016982	0.0307656843123698	down	Pathway
TDRD6	-2.00614363291672	0.033927613893117	down	NA
TOX2	-1.99866810784007	0.0238682080454715	down	NA
TMEM2	-1.99689162081945	0.00144411613966197	down	NA
CHN2	-1.98347096563066	0.00702066841229523	down	NA
EGF	-1.98173969182649	0.0130498140241582	down	Pathway
CD99L2	-1.98064256360459	0.0137416567035548	down	Pathway
TSC22D3	-1.97614888249614	0.0115451559763567	down	NA
FAXDC2	-1.97494486978331	0.0138941160958012	down	NA
DUSP5	-1.97228054152274	0.00154021253051307	down	Pathway
CTGF	-1.96922560176924	0.0307086016026121	down	NA
EVI2B	-1.9686410201414	0.00687763451878185	down	NA
KDR	-1.96566640084641	0.0222504819698704	down	Pathway
S1PR1	-1.95941053373089	0.0403142608678876	down	Pathway
TBXAS1	-1.95053408622542	0.00246457991558625	down	Pathway
PSD4	-1.94306732356667	0.0124408531882066	down	NA
IL6R	-1.94086633772377	0.00843245301498783	down	Pathway
NUP210	-1.93060179732407	0.00624317365825117	down	NA
SQRDL	-1.92403471513223	0.00178142130125749	down	NA
FBLN1	-1.91713140121349	0.00778937934344466	down	Pathway
NRCAM	-1.91480635132426	0.0311651363263454	down	Pathway
ELFN2	-1.91062112173957	0.00484852546514122	down	NA
ZEB1	-1.90694388982459	0.0253740510953186	down	Pathway
CBLN3	-1.90258178087191	0.0108434289526	down	Pathway
TMTC1	-1.89998430136756	0.0157457400676371	down	NA
CARD16	-1.89633909098668	0.0268805994466039	down	Pathway
NALCN	-1.89052373282431	0.0355292297896454	down	NA
DUSP10	-1.89002682727801	0.0352596894579683	down	Pathway
CORIN	-1.88958792347061	0.0355292297896454	down	Pathway

NCOA7	-1.88197039269448	0.0333455930308587	down	NA
ARHGAP24	-1.88120340272534	0.005098243527636	down	Pathway
ANXA9	-1.87970579353244	0.00950911307403478	down	NA
BTG1	-1.8790745330628	0.00337324148306265	down	Pathway
IFNGR1	-1.87782077244719	0.005098243527636	down	Pathway
PLXNC1	-1.87714370490105	0.0362981021104693	down	Pathway
NRP1	-1.87463161096705	0.0405759606948465	down	Pathway
ARHGDIB	-1.86518167109416	0.0231195994191715	down	Pathway
KLF9	-1.86426441234149	0.0246029301731497	down	Pathway
NAMPT	-1.86351051487368	0.0282646904660126	down	NA
MFSD2A	-1.84577291287313	0.0118528227912586	down	Pathway
FGFR1	-1.83725465742417	0.020321185017871	down	Pathway
ACPL2	-1.83583931448804	0.0463496604912139	down	NA
CLDN1	-1.82025055318413	0.00252194956679289	down	Pathway
SDPR	-1.81785102289455	0.00934617699878462	down	NA
IL18R1	-1.81569465237602	0.0122071261074245	down	NA
PBLD	-1.80647291224383	0.00734849165405664	down	Pathway
KIAA0319	-1.80367052416425	0.0230934876660662	down	Pathway
LPAR1	-1.80094481498405	0.0428564414308668	down	Pathway
DENND3	-1.78969754303401	0.0173389359340561	down	NA
PPARG	-1.77290161223229	0.0111555943002799	down	Pathway
LPXN	-1.77002784982689	0.035902780740593	down	Pathway
CCDC149	-1.76922113088419	0.00178142130125749	down	NA
CSF1R	-1.76056128757959	0.0291693300805134	down	Pathway
MYOM1	-1.7595275225616	0.0367187431476375	down	Pathway
SGK1	-1.75937806816457	0.00824205122503509	down	Pathway
GABRA2	-1.75274457527744	0.0416514378514478	down	Pathway
ERC2	-1.74928545450506	0.0152636611117527	down	Pathway
EPS8	-1.74839546733414	0.0096274444680014	down	Pathway
KRT8	-1.74602921232848	0.0147053724716601	down	NA
ACOT1	-1.7425334403336	0.0294613574555184	down	Pathway
C1RL	-1.74146046111781	0.0116655741495269	down	NA
PNRC1	-1.73818321052469	0.0121135876833331	down	NA
PRKD1	-1.72373086335577	0.0108082132007718	down	Pathway
KIAA0513	-1.72154903675032	0.0296230124526444	down	NA
IFIT3	-1.71945698834821	0.0176519651049434	down	NA
TFPI	-1.71413057353098	0.0147657330463027	down	Pathway
GRAMD2	-1.71039441980636	0.0174970232259838	down	NA
BTN3A3	-1.70156039141806	0.00933842120625558	down	NA
PIGZ	-1.69964199387693	0.0203221355260243	down	NA
SLC16A5	-1.69612152590791	0.0262422747603064	down	NA
BASP1	-1.69544756044847	0.0201810661313687	down	Pathway
ERICH2	-1.6879993991793	0.0479428131353168	down	NA
CCBE1	-1.6811610035329	0.0217206551740143	down	Pathway
CUBN	-1.6647516507586	0.020321185017871	down	Pathway
OPN3	-1.66219857599509	0.0122640526852166	down	NA
BLNK	-1.66205992990849	0.0086998136871913	down	NA
PRDM8	-1.65942898305794	0.0223802245837849	down	Pathway
NFIL3	-1.65528478017036	0.0411587988695176	down	NA
SPTSSA	-1.64927885555657	0.0133552152128459	down	Pathway
MEGF9	-1.64520163860567	0.00531139971143219	down	Pathway
F2R	-1.64439211816467	0.0147053724716601	down	Pathway
AIF1L	-1.63977065741369	0.0081017485417304	down	Pathway

GDPD3	-1.63847089791954	0.0395186687480931	down	Pathway
EPGN	-1.63616812900671	0.0170233078156277	down	Pathway
C1orf21	-1.6179607158412	0.00749532301861601	down	NA
TMEM139	-1.61406899088515	0.0400066123929638	down	NA
MFGE8	-1.6097888632034	0.0458038100332125	down	NA
C3orf55	-1.60807417984038	0.0413751768823673	down	NA
EMP3	-1.60503722255139	0.0495460136912076	down	NA
ARMC12	-1.60126894504496	0.0304059231674357	down	Pathway
ZBED2	-1.60007467935654	0.0213557792211214	down	Pathway
MMD	-1.59815042401767	0.00343450619497383	down	Pathway
ELAVL2	-1.59646044399569	0.0428564414308668	down	NA
VNN1	-1.58910602163286	0.0296404297305883	down	NA
ABHD5	-1.5878293757438	0.0106546715302698	down	Pathway
GPR37	-1.58104579462665	0.0418967487771853	down	NA
TMEM171	-1.57942700771782	0.0483525873183295	down	NA
GNE	-1.57731219752451	0.0115451559763567	down	NA
COL12A1	-1.57500497998156	0.0407325428536912	down	Pathway
SERPINF2	-1.56882387486446	0.0474776341741952	down	Pathway
ARRDC3	-1.56752247634379	0.0305049395736605	down	Pathway
FOXF2	-1.56338501636205	0.0156832778778444	down	Pathway
C12orf55	-1.55859541882309	0.0354553594021197	down	NA
GK5	-1.55271502107824	0.00979169933051757	down	Pathway
MTHFD2L	-1.55093414651196	0.0185302032146686	down	Pathway
SQSTM1	-1.54865573372781	0.0176519651049434	down	NA
RHCE	-1.54522484961405	0.0152871043929697	down	Pathway
TNIK	-1.54286715774992	0.00283367842044329	down	Pathway
PDLIM2	-1.54043451914192	0.0461192758143927	down	NA
CXXC5	-1.53843475667468	0.0362981021104693	down	NA
MXD4	-1.53716146254266	0.0201750048585462	down	NA
RASL11B	-1.53596429378793	0.0307412992125011	down	Pathway
SVEP1	-1.53311616389069	0.0417854019048567	down	NA
HYPK	-1.52947244130942	0.0333455930308587	down	NA
GRHL3	-1.52475184114589	0.00702066841229523	down	Pathway
PKP2	-1.52215180937134	0.00575191630450542	down	Pathway
SLC22A23	-1.51719897038609	0.0203221355260243	down	NA
ADM	-1.50726568316134	0.0344113680692851	down	Pathway
TFAP2C	-1.50045088044781	0.0176519651049434	down	NA
PNKP	1.50410979243787	0.018188252251489	up	NA
CORO2A	1.50728807342785	0.0215564972815284	up	NA
FBXO24	1.51204499444072	0.0361207566281088	up	NA
MARC1	1.51687530016793	0.0387244156283981	up	NA
HOXA9	1.51954436221579	0.00445986866069448	up	Pathway
CDKN2D	1.54384268137695	0.0133552152128459	up	Pathway
CHD7	1.54504988145161	0.00591289489354877	up	Pathway
DPF1	1.54707531393634	0.00777074350823438	up	NA
S100P	1.54874375510821	0.00778937934344466	up	Pathway
ASIC1	1.55319287714883	0.0326778073702989	up	NA
DIP2C	1.55343852872653	0.0253573488752213	up	NA
ACVR1C	1.55930293783424	0.0226915804630063	up	Pathway
DLX1	1.55953323846319	0.0147657330463027	up	Pathway
SLITRK5	1.56191808488437	0.0215096637229127	up	Pathway
UBE2S	1.56266135597323	0.0457186412007819	up	NA
RTN2	1.56974007162677	0.0449693831571452	up	NA

CAPN5	1.57368570878507	0.0358770664997914	up	NA
HOXC5	1.57658877666766	0.0456952115225833	up	Pathway
MFAP5	1.57920527803465	0.0453305002744757	up	Pathway
HECW1	1.58619392950615	0.00789561487621582	up	Pathway
EGR2	1.58653861492125	0.0251424344181079	up	Pathway
KAZN	1.5910863801269	0.0237923779921136	up	NA
ZNF382	1.60250101490696	0.0139180203012815	up	NA
KDELC2	1.60634304721551	0.0108434289526	up	NA
CD3EAP	1.60920845703608	0.0260852286893381	up	NA
ONECUT2	1.61585999399463	0.042575469587858	up	Pathway
LINGO2	1.62713509673622	0.0497002842683898	up	Pathway
AP1M2	1.63683619888376	0.0174970232259838	up	NA
SOX9	1.64596668204803	0.0434350860308345	up	Pathway
TMEM150C	1.6515194692314	0.0176728714069161	up	NA
RND2	1.65400500214745	0.0138967236371032	up	Pathway
TUBB2B	1.65765568416471	0.0383727100135226	up	Pathway
STAP2	1.66607490110829	0.0191725614207769	up	NA
FAM43A	1.67037625736452	0.00827020212835214	up	NA
ZNF726	1.68680849352484	0.0162053198162007	up	NA
AMN1	1.6927256561861	0.031000309837461	up	NA
DUOX1	1.70003102600758	0.0162389203409003	up	Pathway
PLA2G4C	1.70438939543828	0.0182216278626592	up	Pathway
MAN1A1	1.70924048591687	0.0062306377236223	up	NA
RARRES1	1.74088205579501	0.0231445034793347	up	NA
B4GALNT3	1.74171083996537	0.0180795351180147	up	NA
PRDM5	1.74339890675768	0.038877877511596	up	Pathway
RIMS3	1.7542339957991	0.0262422747603064	up	NA
HOXA4	1.76311599233231	0.0367187431476375	up	Pathway
DGKG	1.78938180958211	0.019520871963596	up	Pathway
TMEM169	1.81201775330409	0.0207380072336541	up	NA
PMP22	1.8161688167926	0.013123721662465	up	Pathway
ZNF570	1.83126352517518	0.0182775772887824	up	NA
ZNF736	1.84605997523405	0.00484852546514122	up	NA
PKN3	1.84669349560363	0.0431340318024439	up	Pathway
MAN1C1	1.84729076979827	0.0231886035049557	up	NA
C14orf37	1.85246366941902	0.0258575048667508	up	NA
HOXB2	1.85869385157628	0.015148327326822	up	Pathway
ZFP69	1.88016700337596	0.00546863024390161	up	NA
LAD1	1.88263848575406	0.0443500696802338	up	NA
IRF5	1.89818977323317	0.0210188309491636	up	Pathway
CNFN	1.91280607821432	0.0221097626779986	up	NA
CRAT	1.91611489819772	0.0440114424695586	up	Pathway
POF1B	1.92554569444853	0.0198658427915667	up	Pathway
PITX2	1.93639174113406	0.010554643572276	up	Pathway
KLC3	1.93859929834466	0.00498453710201918	up	NA
ZNF85	1.94238255252242	0.018188252251489	up	NA
CHRNA2	1.95368320534814	0.0230605480994224	up	Pathway
C2CD4C	1.96147975472164	0.030603444527413	up	NA
ALDH1A3	1.96279474149	0.0250861591912763	up	Pathway
PPM1J	1.96581974762857	0.0245274541092311	up	NA
GUCY2D	1.96645726047907	0.0122716776209058	up	Pathway
ILDR1	1.98112918802895	0.0105896693547357	up	Pathway
SCN8A	1.98615563013751	0.0231886035049557	up	NA

ZNF738	1.99729931731016	0.00527703435214645	up	NA
CSF3	2.00224071679486	0.0147053724716601	up	Pathway
HNF4G	2.00891534718149	0.00200626005588499	up	NA
NAPSA	2.00992512967087	0.0136296663580451	up	Pathway
LEF1	2.01107564524578	0.00165808241694114	up	Pathway
MCF2	2.01982400664569	0.0366936404727024	up	Pathway
PNMAL1	2.02020078469744	0.0197443936746592	up	NA
STOX2	2.02839415189789	0.0228523296583246	up	NA
FGF12	2.03723777773883	0.00888234694118875	up	Pathway
GNG4	2.04118727083542	0.0201799378678864	up	Pathway
CA2	2.04856185118612	0.0402452542329434	up	Pathway
ACKR3	2.04902973248934	0.00517258555667806	up	Pathway
SEPT3	2.07301596537564	0.00405714344667696	up	NA
S1PR2	2.08906983555846	0.0221603263711135	up	Pathway
SBSN	2.12458553044432	0.00782765597435922	up	NA
MT1F	2.12813431976606	0.0297909624468199	up	Pathway
DMC1	2.13401638169462	0.00734849165405664	up	NA
C7orf31	2.13432300199142	0.0188202094513492	up	NA
LY6D	2.13766933845014	0.0223784739433146	up	NA
ARID3A	2.17786609517234	0.0152871043929697	up	NA
TMOD2	2.19739599012135	0.00910729534474426	up	Pathway
TMEM121	2.20758571928776	0.0311617985964184	up	NA
RASIP1	2.21080616935792	0.00734849165405664	up	NA
HOXA3	2.22624054288561	0.0254006500509984	up	Pathway
MPO	2.23068031833919	0.0254006500509984	up	Pathway
KIF5C	2.27063656742454	0.00896855015239253	up	Pathway
ZNF790	2.27837745665157	0.0362981021104693	up	NA
HOXB6	2.27848872211882	0.00240061511093794	up	Pathway
CACNB4	2.30118095348005	0.0112429120342136	up	Pathway
SCAMP5	2.30188997932893	0.00135340220393029	up	NA
IL11	2.32439257056052	0.0197443936746592	up	Pathway
WNT9A	2.33109319343344	0.00546863024390161	up	Pathway
CERCAM	2.33231034263902	0.020321185017871	up	NA
KIF26B	2.35183503044323	0.00888234694118875	up	NA
SMARCA1	2.36873365948593	0.0362511271953595	up	NA
FUT1	2.374236427726	0.0277523049848282	up	Pathway
FAM49A	2.38494109055686	0.0271497464282466	up	NA
TCF7	2.39336983203155	0.0139993108938463	up	NA
TMEM74	2.39701095895352	0.0173294107278013	up	NA
PMEPA1	2.40745620657191	0.00104973959334669	up	Pathway
ATP6V1B1	2.42016803942517	0.0253740510953186	up	Pathway
NTNG1	2.42323867933844	0.0273428427535571	up	Pathway
FAM20C	2.4259979057931	0.0139776732228738	up	NA
GAL3ST4	2.48059386044945	0.0167337516259899	up	Pathway
CCDC74B	2.48704670123546	0.0106259042981105	up	NA
REEP2	2.48895084228683	0.0472685879694989	up	NA
TMEM145	2.49074414981529	0.0162389203409003	up	NA
BCL11B	2.49935834746551	0.0103245757363459	up	Pathway
DENND1C	2.52023357727887	0.0203221355260243	up	NA
ISYNA1	2.52755837461445	0.0483357666963776	up	Pathway
FN3K	2.53753476710101	0.0227171426497814	up	NA
RUNDC3A	2.54436832648417	0.0201457704981271	up	Pathway
IGFBP6	2.54497480834999	0.0125442401271443	up	NA

SEMA5B	2.60300063807701	0.0397000040828547	up	Pathway
DDN	2.62813550096078	0.0114511616058178	up	NA
ADAP2	2.64601624069951	0.0305049395736605	up	Pathway
CCDC74A	2.6921475562264	0.00500099367069865	up	NA
MACC1	2.69586234758879	0.0379518318008679	up	NA
WNT10A	2.71162080313761	0.00910729534474426	up	Pathway
TMEM54	2.71818719739216	0.0128082261076923	up	NA
MAPK4	2.73069766438104	0.0337855529672982	up	NA
NKX6-1	2.73491670319605	0.0291693300805134	up	Pathway
ZBTB46	2.73811292207235	0.0118528227912586	up	NA
HOXB3	2.75981680963186	0.0430808655473894	up	Pathway
SYT11	2.76320713416538	0.015148327326822	up	NA
MAPT	2.7704825088656	0.00860208157094257	up	Pathway
IGDCC4	2.79317022835875	0.00224714602281571	up	NA
CYP4F2	2.79769319136304	0.0454652501932256	up	Pathway
MEIS3	2.8225686267687	0.00676515248648476	up	Pathway
FAM124A	2.83447760573776	0.0053996054992121	up	NA
UNC13D	2.87965410184515	0.00191992729452257	up	Pathway
ANKRD6	2.9000666591975	0.0444233195990525	up	NA
LYPD6B	2.90341667215587	0.0201799378678864	up	NA
MYL9	2.90501203659934	0.0139993108938463	up	Pathway
BMP6	2.91171718937032	0.019520871963596	up	Pathway
GOLGA7B	2.91669983223161	0.0204810479500326	up	NA
APBB1	2.93502545969685	0.00381572485124622	up	Pathway
BARX2	2.94358957650831	0.00871732607004357	up	Pathway
GATA2	2.95225153798948	0.0122640526852166	up	Pathway
B3GNT8	2.96018383092207	0.0420973154335111	up	Pathway
C2orf70	2.98240063020513	0.00405714344667696	up	NA
ILDR2	3.00314904008401	0.0400066123929638	up	Pathway
COL5A3	3.00715992039817	0.005098243527636	up	Pathway
GNAZ	3.02869241504876	0.0042211714376257	up	NA
SUSD4	3.03888826453616	0.00979169933051757	up	NA
NOSTRIN	3.04512456755733	0.00624317365825117	up	NA
CTD-2303H24.2	3.04678837439348	0.0062760062540132	up	NA
PAPPA2	3.09649591006573	0.0376869821208327	up	Pathway
COX6B2	3.12975300629497	0.0212024004701557	up	NA
DYNC111	3.13030596561342	0.0106259042981105	up	NA
TMEM74B	3.1710320938747	0.0416187654679112	up	NA
BSN	3.17725441398464	0.0096274444680014	up	Pathway
LMX1B	3.2404575597649	0.00428685517651297	up	NA
DNAH3	3.25394045860248	0.00517258555667806	up	NA
CCDC170	3.27528149517691	0.0102295968756798	up	NA
B3GAT2	3.28491931761414	0.040755288029091	up	NA
C15orf48	3.28948169891221	0.0300282042013176	up	NA
MAK	3.29738441471838	0.0053996054992121	up	Pathway
SOX18	3.30195625329366	0.0425872288408441	up	Pathway
CAMK4	3.32634540061397	0.0489481001743869	up	NA
LRRC16B	3.32712181161162	0.0297909624468199	up	NA
SLC44A2	3.36850196182657	0.0054706052525586	up	NA
MYO1G	3.40897607286603	0.00189349418112886	up	Pathway
ISL1	3.43800505747927	0.0457186412007819	up	Pathway
RAB39B	3.52285282846834	0.0210188309491636	up	Pathway
STK32A	3.53126687085302	0.000566246025402591	up	NA

ARTN	3.57916258387679	0.0152705952579538	up	Pathway
STMN3	3.60955201502082	0.0134270017038353	up	NA
PTPRB	3.63319374803193	0.00113925180685624	up	NA
ARHGAP9	3.65689966355647	0.0202559703011228	up	NA
KRTCAP3	3.71538040437006	0.00503074927760451	up	NA
COPZ2	3.7473983250838	0.00200626005588499	up	NA
SLC16A9	3.75151369682845	0.0435818424778398	up	NA
SMIM17	3.77861052804065	0.0089536451107292	up	NA
KCNMB3	3.79552829486219	0.025389981851985	up	NA
ATP2C2	3.7978154098254	0.0152871043929697	up	NA
SLC52A3	3.81027715746352	0.0106259042981105	up	NA
VILL	3.86980970898178	0.0131470809572953	up	Pathway
GIPR	3.88303822436617	0.0267622767466902	up	Pathway
A2ML1	3.88768072071325	0.013626546440128	up	NA
ADRA2C	3.92964026309317	0.0143949538686486	up	Pathway
CRYBA2	3.95157106616437	0.00210684384260289	up	Pathway
CDKL2	4.07605795705377	0.00144411613966197	up	NA
CCDC106	4.07657308154538	0.0211111240347148	up	NA
RGL3	4.10730843198005	0.0139776732228738	up	NA
NES	4.10956726759073	0.00595640055506055	up	Pathway
KLK6	4.13573873911957	0.00431734994257802	up	Pathway
TMEM176B	4.16640457989916	0.0405759606948465	up	NA
HRASLS	4.17276982064808	0.0291693300805134	up	NA
ELMOD1	4.3212031886277	0.0152636611117527	up	NA
SLC2A6	4.32225750610165	0.0492499585613165	up	NA
RNF128	4.36804657004704	0.0258824603631041	up	NA
GPR63	4.37527387824218	0.0165514063897871	up	NA
LZTS1	4.37983067420727	0.00265176893220175	up	Pathway
SULT2B1	4.39937353954524	0.0147308841871448	up	Pathway
EBF4	4.56950432649132	0.0119744930114424	up	NA
PRKG2	4.65762229827064	0.00896855015239253	up	Pathway
ACP5	4.74331668174934	0.00910729534474426	up	Pathway
RHCG	4.79047000054141	0.0453297049187041	up	Pathway
LY75	4.94496721558681	0.00273170545121021	up	NA
OVOL1	5.02132692186817	0.0170233078156277	up	NA
ATAD3C	5.04424578041965	0.0400066123929638	up	NA
CDH8	5.11613145969445	0.0250861591912763	up	Pathway
NUDT11	5.11781093793545	0.0352596894579683	up	Pathway
FABP6	5.12873212750697	0.0277523049848282	up	NA
TINCR	5.14817045464318	0.0179687117421246	up	NA
SATB1	5.16021534335003	0.0362981021104693	up	NA
BRSK2	5.1882327309153	0.00749532301861601	up	Pathway
DTNA	5.2449164109858	0.0173294107278013	up	Pathway
ZNF501	5.36482863873611	0.0022065719328289	up	NA
ARL11	5.39536121590824	0.0405415370308813	up	NA
SPRR1B	5.42545388024377	0.0230605480994224	up	NA
ADAM22	5.52214711004794	0.0210999421546606	up	NA
KLK11	5.53324899328983	0.00106875874786922	up	NA
TBX20	5.55510567672913	0.00012760111491141	up	Pathway
TMEM216	5.69059514494095	0.0053996054992121	up	NA
PARVB	5.76552021059124	0.00144411613966197	up	Pathway
CNTN1	5.76939255575019	0.000259361393150236	up	Pathway
FAM129A	5.89112561454683	0.0211252987656376	up	NA

TLR2	5.90790145086905	0.0453864161294708	up	Pathway
NAP1L5	6.21700529708365	0.0213570845460382	up	NA
AOC1	6.25129675651158	0.00469637367881301	up	NA
KLK8	6.30833645387338	0.001597350253811	up	Pathway
SEMA3E	6.31131166411311	0.0350822106932278	up	Pathway
KLK5	6.34715091015079	0.00517258555667806	up	Pathway
DHRS2	6.38505916622061	0.0267622767466902	up	Pathway
RIPPLY2	6.45088131404535	0.00142892100222063	up	Pathway
KLK7	6.4655497068858	0.0245483411558718	up	Pathway
RUNDC3B	6.66234293758365	0.000651317326288731	up	NA
HEY2	6.77905678428081	0.000137900118880927	up	Pathway
SBSPON	6.84177013749781	0.00102396540561436	up	NA
DLX6	6.8794482937516	0.0000615221659977426	up	Pathway
KRT13	7.00160685512286	0.000827483118042297	up	NA
NME5	7.08877943114356	0.000433169655547905	up	NA
SLCO1B3	7.21939253292425	0.00360046797777663	up	NA
AKR1E2	7.2231052762594	0.00178142130125749	up	NA
CD302	7.24904823675022	0.00776131275376969	up	NA
TENM1	7.34142169266763	0.00189349418112886	up	Pathway
NPM2	7.36582567425246	0.00702066841229523	up	NA
SLC47A1	7.57842070339323	0.00405714344667696	up	NA
CSRNP3	7.61153033123016	0.00360996867394443	up	NA
GALNT12	7.61482313938681	0.00734849165405664	up	NA
ERBB4	7.69009424371806	0.00113925180685624	up	Pathway
BAIAP2L2	7.79310293801417	0.0054148113177371	up	Pathway
PDE3B	7.81217782542374	0.00254626552489978	up	Pathway
ZNF256	7.89607916469048	0.00734849165405664	up	NA
ZNF681	8.14051191375033	0.0000455338772482485	up	NA
LRRC3	8.30221502517773	0.00147975674650345	up	NA
ZNF506	8.40673203175828	0.00254626552489978	up	NA
PCLO	8.4690865689218	0.0231640718401788	up	Pathway
WFDC2	8.56359831702183	0.0204810479500326	up	NA
CDC42EP5	8.58450033049152	0.0259150270319065	up	Pathway
ENPP4	8.81644981081593	0.0103069519864546	up	Pathway
KANK4	8.9222651974298	0.00178142130125749	up	Pathway
ZNF711	9.6603101649764	0.0120736455545121	up	NA
MYH14	9.87232565011336	0.00240061511093794	up	Pathway
KLK10	9.98500202500899	0.00210185778327598	up	NA
SLAIN1	10.5517171918516	0.0000455338772482485	up	NA
NELL2	10.7911671366455	0.00113925180685624	up	Pathway

*Genes used in the GO enrichment analysis in Fig 4 are indicated as "Pathway" if not they are listed as NA, not applicable