|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table S5.** Genes identified as bivalent in the mouse germline | | | | |  |  |  | |  |  |  |
|  |  |  |  |  |  |  |  | |  |  |  |
| **Male E12.5** | **Female E12.5** | **Male E13.5** | **Female E13.5** | **Male E14.5** | **Female E14.5** | **Pachytene spermatocytes** | **Round spermatids** | | | **Fetal, shared across sexes and**  **time points (147 genes)** | **Shared between fetal and meiotic germ cells (92 genes)** |
| 3110047P20Rik | 1110032F04Rik | 0610010B08Rik | 4930512B01Rik | 3110047P20Rik | 1600029O15Rik | 0610038B21Rik | 0610038B21Rik | | | 3110047P20Rik | 9430076C15Rik |
| 4833403I15Rik | 1600029O15Rik | 0610040J01Rik | 9130206I24Rik | 4833403I15Rik | 3110047P20Rik | 0610040J01Rik | 0610040J01Rik | | | 9430076C15Rik | Alx3 |
| 4833424O15Rik | 1700106J16Rik | 1700106J16Rik | 9530036O11Rik | 4833424O15Rik | 4632428C04Rik | 1110032F04Rik | 1110032F04Rik | | | Acan | Aqp5 |
| 4930512B01Rik | 1700112E06Rik | 2810405F15Rik | 9530059O14Rik | 9430021M05Rik | 9130206I24Rik | 1500016L03Rik | 1500009L16Rik | | | Adrb1 | Atoh1 |
| 9130206I24Rik | 2610018G03Rik | 4833403I15Rik | A530032D15Rik | 9430076C15Rik | 9430076C15Rik | 1600029O15Rik | 1500016L03Rik | | | Alx3 | Bai1 |
| 9430021M05Rik | 3110047P20Rik | 4922505E12Rik | Ace | Abhd15 | 9530036O11Rik | 2210417K05Rik | 1600029O15Rik | | | Aqp5 | Bhlhe22 |
| 9430076C15Rik | 4632428C04Rik | 9430076C15Rik | Acot12 | Acan | 9530059O14Rik | 2700081O15Rik | 1810010H24Rik | | | Atoh1 | Caln1 |
| 9530026P05Rik | 4833403I15Rik | 9530036O11Rik | Adcy7 | Ache | Acan | 2810410L24Rik | 1810011O10Rik | | | Atoh7 | Car10 |
| 9530036O11Rik | 4833424O15Rik | 9530059O14Rik | Adra2b | Adcy5 | Ace | 3110047P20Rik | 2210417K05Rik | | | B230319C09Rik | Ccr10 |
| 9530059O14Rik | 4930512B01Rik | Abhd15 | Adrb1 | Adrb1 | Adra1d | 4632428C04Rik | 2310050C09Rik | | | Bai1 | Cdk5r2 |
| A530032D15Rik | 9130206I24Rik | Ablim2 | Agap2 | Agap2 | Adra2a | 4833403I15Rik | 2410012M07Rik | | | BC021891 | Crhr1 |
| Abhd15 | 9430076C15Rik | Acan | Alx3 | Alx3 | Adrb1 | 4833424O15Rik | 2810474O19Rik | | | Bdnf | Cyp26a1 |
| Abtb2 | 9530036O11Rik | Ache | Alx4 | Alx4 | AI118078 | 4930412O13Rik | 2900005J15Rik | | | Bhlhe22 | Dlx2 |
| Acan | 9530059O14Rik | Acr | Apold1 | Aqp5 | Alx3 | 4933427D06Rik | 2900092D14Rik | | | Bmp6 | En1 |
| Ache | 9930014A18Rik | Adamts8 | Aqp5 | Areg | Amotl2 | 5031434O11Rik | 4632428C04Rik | | | C030037D09Rik | Esrrg |
| Adamtsl3 | A530058N18Rik | Adcy4 | Ar | Atoh1 | Apba1 | 5430416O09Rik | 4833403I15Rik | | | Cacna1i | Evx2 |
| Adcy5 | Abcb4 | Adcy7 | Atoh1 | Atoh7 | Aqp5 | 6030419C18Rik | 4833424O15Rik | | | Caln1 | Fam43b |
| Adra1d | Abhd15 | Add2 | Avp | Avp | Arhgap6 | 6330403K07Rik | 4930512B01Rik | | | Car10 | Fat4 |
| Adra2c | Abhd5 | Adra2a | Avpr1a | Bai1 | Atoh1 | 9130206I24Rik | 5031414D18Rik | | | Ccr10 | Fcrlb |
| Adrb1 | Abtb2 | Adra2b | B230319C09Rik | Barx1 | Atoh7 | 9330111N05Rik | 5031434O11Rik | | | Cdk5r2 | Fgf2 |
| Adssl1 | Acan | Adra2c | B3gnt3 | BC021891 | Atp2b3 | 9330182L06Rik | 6030419C18Rik | | | Comp | Fgf4 |
| Aebp1 | Ace | Adrb1 | Barx1 | Bdnf | Bai1 | 9430021M05Rik | 6330403K07Rik | | | Crhr1 | Fgf9 |
| Agap2 | Ache | Agap2 | BC021891 | Bhlhe22 | BC021891 | 9430076C15Rik | 9130206I24Rik | | | Crmp1 | Foxb2 |
| AI836003 | Adamts8 | Ager | Bcan | Bhlhe23 | Bcl11a | 9530026P05Rik | 9330111N05Rik | | | Cyp26a1 | Foxc1 |
| AI854703 | Adamtsl3 | AI836003 | Bdnf | Bmp6 | Bdnf | 9530036O11Rik | 9330182L06Rik | | | Dll4 | Foxc2 |
| Alx3 | Adcy1 | AI854703 | Bhlhe22 | C030037D09Rik | Bhlhe22 | 9530059O14Rik | 9430021M05Rik | | | Dlx2 | Foxd1 |
| Alx4 | Adcy5 | Aire | Bhlhe23 | Cacna1i | Bmp6 | 9930014A18Rik | 9430076C15Rik | | | Drd5 | Foxd3 |
| Amotl2 | Adcy7 | Alx3 | Bmp6 | Caln1 | C030037D09Rik | A230050P20Rik | 9530026P05Rik | | | Egr3 | Foxd4 |
| Aqp5 | Adm | Alx4 | Bmp8b | Car10 | C130060K24Rik | A330050F15Rik | 9530036O11Rik | | | Emx2 | Foxe1 |
| Areg | Adora2a | Ampd3 | Cacna1i | Ccdc40 | Cacna1i | A530058N18Rik | 9530059O14Rik | | | En1 | Foxf2 |
| Arg2 | Adra1b | Ank1 | Caln1 | Ccr10 | Cacnb2 | A930012L18Rik | 9930014A18Rik | | | Esrrg | Foxl2 |
| Atoh1 | Adra1d | Ankrd13b | Car10 | Cd83 | Caln1 | AA387883 | A230050P20Rik | | | Evx2 | Fstl4 |
| Atoh7 | Adra2a | Anks1b | Cbr3 | Cdk5r2 | Car10 | Abcb1b | A530058N18Rik | | | F3 | Gad1 |
| Avp | Adra2c | Apba2 | Ccdc40 | Chn2 | Ccr10 | Abcb4 | A930012L18Rik | | | Fam43b | Gdf6 |
| Avpr1a | Adrb1 | Apbb1ip | Chrdl2 | Chrdl2 | Cd14 | Abhd15 | AA387883 | |  | Fat4 | Gdf7 |
| AW011738 | Adssl1 | Apold1 | Chrm2 | Clic6 | Cdh4 | Acan | Abca4 | |  | Fcrlb | Gdnf |
| B3galt5 | Aebp1 | Arhgef26 | Chst5 | Col4a2 | Cdk5r2 | Acap1 | Abcb1b | |  | Fgf2 | Gm14207 |
| B3gnt3 | Agap2 | Arhgef5 | Cldn23 | Col8a2 | Cebpa | Acbd4 | Abcb4 | |  | Fgf4 | Gm266 |
| B3gnt6 | AI118078 | Arpp21 | Col15a1 | Comp | Chst1 | Acer2 | Abcg1 | |  | Fgf9 | Gnal |
| Bai1 | AI661453 | Arx | Col16a1 | Cpne2 | Chst5 | Ache | Abhd15 | |  | Foxa2 | Gpr150 |
| Barx1 | AI836003 | Ascl1 | Col8a2 | Crhr1 | Cntn1 | Acot12 | Acbd4 | |  | Foxb2 | Gpr50 |
| BC021891 | Alk | Atoh1 | Crhr1 | Crmp1 | Comp | Adam19 | Acer2 | |  | Foxc1 | Grik3 |
| BC030500 | Alx3 | AU018829 | Crmp1 | Cyp26a1 | Cpne7 | Adamts19 | Ache | |  | Foxc2 | Hand2 |
| BC061194 | Alx4 | Avp | Cyp26a1 | Dll4 | Crhr1 | Adamts7 | Aco1 | |  | Foxd1 | Hmx2 |
| Bcorl1 | Amotl2 | B230319C09Rik | Cyp26c1 | Dlx2 | Crmp1 | Adamts8 | Acot12 | |  | Foxd3 | Hmx3 |
| Bdnf | Ampd3 | B3gat2 | Dhh | Dlx3 | Cxxc4 | Adamtsl3 | Acot4 | |  | Foxd4 | Hoxb9 |
| Begain | Ankrd34b | B3gnt6 | Dll4 | Dmrta2 | Cyp26a1 | Adap2 | Adam19 | |  | Foxe1 | Hoxc13 |
| Bhlhe22 | Anks1b | Bace2 | Dlx2 | Dnajc22 | Cyp26c1 | Adcy1 | Adamts19 | |  | Foxf2 | Hoxd11 |
| Bhlhe23 | Apba1 | Bai1 | Dmrta1 | Dpysl4 | Dcst1 | Adcy4 | Adamts6 | |  | Foxi2 | Hoxd13 |
| Bmp2 | Apba2 | Barx1 | Dnahc2 | Drd4 | Ddn | Adcy5 | Adamts8 | |  | Foxl2 | Igf2as |
| Bmp3 | Apold1 | BC021891 | Dock8 | Drd5 | Dll4 | Adm | Adamtsl3 | |  | Foxq1 | Irf4 |
| Bmp6 | Aqp5 | BC048507 | Dok7 | Dusp15 | Dlx2 | Adora2a | Adap2 | |  | Fstl4 | Klhdc8a |
| Bmp8b | Ar | Bdnf | Dpp6 | Dysf | Dnajc6 | Adora2b | Adcy1 | |  | Gabbr1 | Lmx1a |
| Bmper | Areg | Bhlhe22 | Drd4 | Egr3 | Dpp6 | Adra1b | Adcy5 | |  | Gad1 | Lrfn5 |
| Btbd17 | Arg2 | Bmp3 | Drd5 | En1 | Drd5 | Adra1d | Adm | |  | Gdf6 | Mfhas1 |
| C030037D09Rik | Arhgap6 | Bmp6 | Dscaml1 | En2 | Dusp26 | Adra2a | Adora2b | |  | Gdf7 | Mmp24 |
| C1ql2 | Artn | Btbd17 | Duoxa1 | Erbb2 | Ebf1 | Adra2b | Adra2a | |  | Gdnf | Mn1 |
| Cacna1i | Arx | C130060K24Rik | Dusp15 | Esrrg | Egr3 | Adra2c | Adra2b | |  | Gfra2 | Neurog1 |
| Caln1 | Ascl1 | C1ql2 | Dusp26 | Evx2 | Egr4 | Adrb2 | Adra2c | |  | Gm13889 | Neurog2 |
| Camk2n1 | Atoh1 | Cacna1c | Egr3 | F3 | En1 | Adrb3 | Adrb3 | |  | Gm14207 | Nkx2-5 |
| Car10 | Atoh7 | Cacna1i | Eml1 | Fam43b | Epb4.1l1 | Adssl1 | Aff2 | |  | Gm266 | Nkx2-9 |
| Car7 | Atp2b3 | Caln1 | Emx2 | Fam69c | Esrrg | Aebp1 | Agap2 | |  | Gm5607 | Nmnat2 |
| Cbr3 | Avp | Camk2n1 | En1 | Fam83f | Evx2 | Aff2 | Agpat4 | |  | Gnal | Npas3 |
| Ccdc40 | Avpr1a | Cap2 | Eras | Fat4 | F3 | Afmid | AI467606 | |  | Gpr150 | Olig2 |
| Ccno | B3gat2 | Car10 | Erbb2 | Fcrlb | Fam150b | Agap2 | AI661453 | |  | Gpr50 | Onecut1 |
| Ccr10 | B3gnt3 | Car7 | Esrrg | Fgf2 | Fam181b | AI118078 | AI854703 | |  | Grik3 | Onecut2 |
| Cd109 | B3gnt6 | Ccdc30 | Evx2 | Fgf3 | Fam43b | AI661453 | Aif1l | |  | Hand2 | Osr2 |
| Cd4 | B630019K06Rik | Ccl21b | Eya2 | Fgf4 | Fat4 | AI854703 | Akr1b10 | |  | Hapln2 | Otx1 |
| Cd83 | Bai1 | Ccl21c | Fam150b | Fgf9 | Fcrlb | Aif1l | Aldh1b1 | |  | Hmx2 | Pax2 |
| Cdk5r2 | Barhl2 | Ccl27b | Fam83f | Flnc | Fgf15 | Alpi | Aloxe3 | |  | Hmx3 | Pcdhac2 |
| Cebpa | Barx1 | Ccno | Fat4 | Foxa1 | Fgf16 | Alppl2 | Alx3 | |  | Hnf1b | Pitx3 |
| Celf4 | BC021891 | Ccr10 | Fbll1 | Foxa2 | Fgf4 | Alx3 | Alx4 | |  | Hoxa11as | Pnma2 |
| Chl1 | Bcan | Ccr6 | Fcrlb | Foxb2 | Fgf9 | Alx4 | Amotl2 | |  | Hoxa4 | Pou3f3 |
| Chn2 | Bcar3 | Cd14 | Fev | Foxc1 | Fgfr4 | Amn | Ank | |  | Hoxb9 | Prrxl1 |
| Chrdl2 | Bcl11a | Cd44 | Fgf10 | Foxc2 | Fosl1 | Ampd3 | Ankmy2 | |  | Hoxc13 | Ptf1a |
| Chrm2 | Bcorl1 | Cd83 | Fgf15 | Foxd1 | Foxa2 | Ankmy2 | Ankrd34a | |  | Hoxd11 | Rtn4rl2 |
| Chrm4 | Bdnf | Cdh13 | Fgf16 | Foxd3 | Foxb2 | Ankrd13b | Ankrd34b | |  | Hoxd13 | Scn8a |
| Chst1 | Bhlha9 | Cdk5r2 | Fgf2 | Foxd4 | Foxc1 | Ankrd34a | Anks1b | |  | Hpcal4 | Sftpc |
| Chst11 | Bhlhe22 | Cdx2 | Fgf3 | Foxe1 | Foxc2 | Ankrd34b | Ano9 | |  | Hrk | Sim2 |
| Chst5 | Bhlhe23 | Cebpa | Fgf4 | Foxf2 | Foxd1 | Anks1b | Apcdd1 | |  | Igf2as | Six3 |
| Chsy3 | Bmp2 | Celf2 | Fgfr4 | Foxi2 | Foxd3 | Ano9 | Aqp5 | |  | Irf4 | Slc24a4 |
| Clcf1 | Bmp3 | Celf4 | Foxa2 | Foxi3 | Foxd4 | Apba2 | Ar | |  | Itpkb | Sorcs3 |
| Cldn23 | Bmp6 | Chac1 | Foxb2 | Foxl2 | Foxe1 | Aplnr | Areg | |  | Kbtbd11 | Sox14 |
| Clic6 | Btbd17 | Chn2 | Foxc2 | Foxo6 | Foxe3 | Aqp5 | Arhgap18 | |  | Kcnd3 | Sp7 |
| Cntn1 | Bves | Chrdl2 | Foxd1 | Fstl4 | Foxf2 | Areg | Arhgap26 | |  | Kl | Sp9 |
| Col15a1 | C030037D09Rik | Chrm2 | Foxd3 | Gabbr1 | Foxi2 | Arg2 | Arhgap27 | |  | Klf9 | Syt2 |
| Col4a2 | C130060K24Rik | Chst11 | Foxd4 | Gad1 | Foxl2 | Arhgap27 | Arhgap30 | |  | Klhdc8a | Tacstd2 |
| Col8a2 | C1ql2 | Chst5 | Foxe1 | Gata6 | Foxq1 | Arhgap6 | Arhgap6 | |  | Lbx1 | Tlx2 |
| Comp | Cacna1i | Cidea | Foxf2 | Gdf6 | Fstl4 | Arhgef26 | Arhgef26 | |  | Lemd1 | Tmem132e |
| Cplx2 | Cacnb2 | Cited4 | Foxp2 | Gdf7 | Gabbr1 | Arhgef5 | Arid1b | |  | Lmx1a | Twist2 |
| Cpm | Cacng6 | Cldn10 | Frmpd1 | Gdnf | Gad1 | Arid1b | Arl10 | |  | Lphn3 | Vgll2 |
| Cpne2 | Caln1 | Clic6 | Fstl4 | Gfra2 | Galnt9 | Arl10 | Arl15 | |  | Lrfn5 | Zhx2 |
| Cpne7 | Camk2n1 | Cntn1 | Gabbr1 | Gm13889 | Gdf6 | Arl14 | Arsg | |  | Mfhas1 |  |
| Crhr1 | Car10 | Col27a1 | Galnt9 | Gm14207 | Gdf7 | Arsg | Arx | |  | Mmp24 |  |
| Crmp1 | Car11 | Comp | Gata6 | Gm266 | Gdnf | Arsj | Ascl1 | |  | Mn1 |  |
| Ctdspl | Car4 | Cplx2 | Gcgr | Gm4980 | Gem | Arx | Ascl2 | |  | Neurog1 |  |
| Cyp26a1 | Car7 | Cpm | Gdf6 | Gm5607 | Gfra2 | Asap3 | Ascl4 | |  | Neurog2 |  |
| Dcst1 | Caskin1 | Cpne2 | Gdf7 | Gm581 | Gm13889 | Ascl1 | Ass1 | |  | Nkx2-5 |  |
| Dll4 | Cbln2 | Cpne7 | Gdnf | Gnal | Gm266 | Ascl2 | Asxl3 | |  | Nkx2-9 |  |
| Dlx2 | Cbr3 | Crmp1 | Gfra2 | Gpr150 | Gm5607 | Asxl3 | Atoh1 | |  | Nmnat2 |  |
| Dlx3 | Ccdc40 | Ctnna3 | Gm13889 | Gpr50 | Gm9767 | Atoh1 | Atoh7 | |  | Npas3 |  |
| Dmrta2 | Ccno | Cybrd1 | Gm14207 | Grik3 | Gnal | Atp12a | Atp12a | |  | Nrn1 |  |
| Dnahc2 | Ccr10 | Cyp1a1 | Gm266 | Gsx1 | Gp5 | Avp | AW011738 | |  | Ntn4 |  |
| Dnaja4 | Cd14 | Cyp26a1 | Gm4980 | Hand1 | Gpr150 | Avpr1a | Axin2 | |  | Olig2 |  |
| Dnajc22 | Cd4 | Cyp26c1 | Gm53 | Hand2 | Gpr50 | AW011738 | B230319C09Rik | | | Onecut1 |  |
| Dnajc6 | Cd83 | Dcbld1 | Gm5607 | Hapln2 | Grhl2 | Axin2 | B3galtl | |  | Onecut2 |  |
| Dok7 | Cdh13 | Dclk1 | Gm581 | Hapln4 | Grid1 | B3galt5 | B3gnt6 | |  | Osr2 |  |
| Dpysl4 | Cdh4 | Ddah1 | Gnal | Hmx2 | Grik3 | B3galtl | B3gnt7 | |  | Otx1 |  |
| Drd4 | Cdk5r2 | Dlk2 | Gp5 | Hmx3 | Gsx2 | B3gat2 | B4galt4 | |  | Pax2 |  |
| Drd5 | Cebpa | Dll4 | Gpr162 | Hnf1b | Hand2 | B3gnt3 | B930041F14Rik | | | Pax9 |  |
| Dscaml1 | Celf4 | Dmrt2 | Gpr50 | Hoxa11as | Hapln2 | B3gnt6 | Bace2 | |  | Pcdhac2 |  |
| Duoxa2 | Chic1 | Dmrta2 | Grhl2 | Hoxa4 | Hcn4 | B3gnt7 | Bai1 | |  | Pdx1 |  |
| Dusp15 | Chrd | Dnajc22 | Gria3 | Hoxa6 | Helt | B4galnt4 | Barhl2 | |  | Pitx3 |  |
| Dusp26 | Chrdl2 | Dnajc6 | Grid1 | Hoxb9 | Hhipl1 | B930041F14Rik | Barx1 | |  | Plekhh3 |  |
| Dysf | Chrm2 | Dpp6 | Grid2ip | Hoxc13 | Hmx2 | Bace2 | BC021785 | |  | Pnma2 |  |
| Ebf1 | Chst1 | Drd4 | Gsc | Hoxc9 | Hmx3 | Bai1 | BC021891 | |  | Pou3f3 |  |
| Ebf4 | Chst5 | Dscaml1 | Gsx2 | Hoxd11 | Hnf1b | Barhl2 | BC030500 | |  | Pou4f3 |  |
| Egr3 | Chst7 | Dusp15 | Hand2 | Hoxd13 | Hoxa11as | Barx1 | Bcan | |  | Prrxl1 |  |
| Emx1 | Chsy3 | Dux | Hapln4 | Hpcal4 | Hoxa13 | Batf3 | Bcar3 | |  | Ptf1a |  |
| En1 | Cidea | Dynlt1f | Hes2 | Hrk | Hoxa4 | BC030476 | Bcl7a | |  | Ptprb |  |
| En2 | Clcf1 | Dysf | Heyl | Hs3st2 | Hoxb9 | BC030500 | Bdnf | |  | Rtn4rl2 |  |
| Erbb2 | Cldn23 | Ebf1 | Hhipl1 | Hs6st3 | Hoxc13 | Bcan | Bhlhe22 | |  | Scn8a |  |
| Esrrg | Clic6 | Egr2 | Hmx2 | Igf2as | Hoxd11 | Bcl7a | Bivm | |  | Sftpc |  |
| Evc2 | Cntn1 | Egr3 | Hoxa11as | Irf4 | Hoxd13 | Bdkrb2 | Blvrb | |  | Shisa3 |  |
| Evx2 | Col14a1 | Eml1 | Hoxa4 | Irf5 | Hoxd9 | Bhlhe22 | Bmp2 | |  | Sim2 |  |
| Eya2 | Col15a1 | Emx2 | Hoxb13 | Irx1 | Hpcal4 | Bivm | Bmp3 | |  | Six3 |  |
| F3 | Col27a1 | En1 | Hoxb6 | Irx2 | Hrk | Blvrb | Bmp8b | |  | Six6 |  |
| Fam150b | Col4a2 | En2 | Hoxb7 | Irx4 | Igf2as | Bmp2 | Bmper | |  | Slc24a4 |  |
| Fam187b | Col8a2 | Epb4.1l1 | Hoxb8 | Irx5 | Ildr2 | Bmp3 | Bok | |  | Slc44a5 |  |
| Fam20c | Comp | Erbb2 | Hoxc13 | Jph3 | Insrr | Bmp6 | Btbd11 | |  | Sorcs3 |  |
| Fam43b | Cpm | Esrrg | Hoxd1 | Kbtbd11 | Irf4 | Bmp8b | Btbd17 | |  | Sost |  |
| Fam69c | Cpne7 | Evx2 | Hoxd11 | Kcnd3 | Irx6 | Bmper | Btbd19 | |  | Sox14 |  |
| Fam83f | Crhr1 | F3 | Hoxd12 | Kcnj10 | Itga9 | Bmyc | Btnl9 | |  | Sox9 |  |
| Fat4 | Crlf1 | Fam150b | Hoxd13 | Kcnk15 | Itpkb | Btbd11 | Bves | |  | Sp7 |  |
| Fbxl8 | Crmp1 | Fam181b | Hoxd9 | Kl | Kcnd3 | Btbd17 | C1ql2 | |  | Sp9 |  |
| Fcrlb | Cuedc1 | Fam187b | Hpcal4 | Klf9 | Kcnk12 | Btnl9 | C2cd4a | |  | Syt2 |  |
| Fev | Cx3cl1 | Fam43b | Hrk | Klhdc8a | Kcnq1 | Bves | C2cd4d | |  | Tacstd2 |  |
| Fezf2 | Cxcl5 | Fat4 | Hs6st3 | Lad1 | Kif26a | C130060K24Rik | Cacnb2 | |  | Tlx2 |  |
| Fgf15 | Cxxc4 | Fcer2a | Icosl | Lbx1 | Kl | C1ql2 | Cacnb3 | |  | Tmem132e |  |
| Fgf2 | Cybrd1 | Fcrlb | Il10rb | Lemd1 | Klf9 | C2cd4a | Calb1 | |  | Twist2 |  |
| Fgf3 | Cyp1a1 | Fezf2 | Il1rapl2 | Lhx2 | Klhdc8a | C2cd4d | Calml3 | |  | Vav3 |  |
| Fgf4 | Cyp26a1 | Fgf15 | Inf2 | Lmx1a | L3mbtl4 | Cachd1 | Caln1 | |  | Vax1 |  |
| Fgf9 | Cyp26c1 | Fgf16 | Insrr | Lpar3 | Lbx1 | Cacnb2 | Camkk1 | |  | Vax2 |  |
| Flnc | Cyp46a1 | Fgf3 | Irf4 | Lphn3 | Lemd1 | Cacnb3 | Car10 | |  | Vgll2 |  |
| Fos | Dapk2 | Fgf4 | Irf8 | Lrfn5 | Lgi3 | Cadm4 | Car11 | |  | Zfp579 |  |
| Fosl1 | Dcbld1 | Fgf9 | Irx1 | Lrrc10b | Lif | Caln1 | Car7 | |  | Zhx2 |  |
| Foxa1 | Dclk3 | Fgfr4 | Irx4 | Ltb4r2 | Lmx1a | Camk4 | Casp3 | |  | Znrf4 |  |
| Foxa2 | Dcst1 | Flnc | Itga11 | Lypd6b | Lor | Camkk1 | Casp7 | |  |  |  |
| Foxb2 | Ddn | Fos | Itga9 | Megf6 | Lphn3 | Car10 | Casp8 | |  |  |  |
| Foxc1 | Dhh | Foxa1 | Kbtbd11 | Mfhas1 | Lrfn5 | Casr | Cbln2 | |  |  |  |
| Foxc2 | Dip2c | Foxa2 | Kcnc2 | Mgat5b | Lrrn1 | Cav2 | Cbr3 | |  |  |  |
| Foxd1 | Dkk2 | Foxb2 | Kcnd3 | Mir10b | Lrrtm1 | Cbln1 | Ccbl2 | |  |  |  |
| Foxd3 | Dll4 | Foxc1 | Kcne1l | Mir124a-3 | Mab21l1 | Cbln2 | Ccdc3 | |  |  |  |
| Foxd4 | Dlx2 | Foxc2 | Kcnh8 | Mir203 | Map3k14 | Cbr3 | Ccnjl | |  |  |  |
| Foxe1 | Dmrt2 | Foxd1 | Kcnj10 | Mir9-3 | Mfhas1 | Ccdc3 | Ccr10 | |  |  |  |
| Foxe3 | Dmrta2 | Foxd3 | Kcnk12 | Mmp24 | Mir129-2 | Ccdc8 | Cd14 | |  |  |  |
| Foxf2 | Dnahc2 | Foxe1 | Lbx1 | Mn1 | Mir1904 | Ccdc80 | Cd248 | |  |  |  |
| Foxi2 | Dnaja4 | Foxe3 | Lbx2 | Myod1 | Mir1907 | Cckbr | Cd274 | |  |  |  |
| Foxi3 | Dnajc22 | Foxf2 | Lgi3 | Nags | Mir3081 | Ccr10 | Cd4 | |  |  |  |
| Foxl1 | Dnajc6 | Foxi3 | Lif | Neurog1 | Mitf | Ccrl2 | Cdh1 | |  |  |  |
| Foxl2 | Dock8 | Foxl2 | Lonrf3 | Neurog2 | Mmp24 | Cd109 | Cdh10 | |  |  |  |
| Foxo6 | Dok7 | Foxq1 | Lpar3 | Nhlh2 | Mn1 | Cd14 | Cdh20 | |  |  |  |
| Foxp2 | Dpp6 | Fstl4 | Lphn3 | Nkx2-5 | Mst1 | Cd248 | Cdh4 | |  |  |  |
| Frmpd1 | Dpysl4 | Gad1 | Lrfn5 | Nkx2-9 | Myrip | Cd37 | Cdh7 | |  |  |  |
| Fstl4 | Drd4 | Galnt13 | Lrrc23 | Nkx3-2 | Nav2 | Cd4 | Cdk5r2 | |  |  |  |
| Gabbr1 | Drd5 | Galnt9 | Mab21l1 | Nkx6-1 | Nefl | Cd83 | Cdkn1b | |  |  |  |
| Gad1 | Dscaml1 | Galr3 | Mapk11 | Nmnat2 | Nell1 | Cdc42ep1 | Cdr2l | |  |  |  |
| Galnt13 | Dusp15 | Gata6 | Mir10b | Nog | Neto1 | Cdh1 | Cdx2 | |  |  |  |
| Galr3 | Dusp18 | Gcgr | Mir124a-2 | Nol3 | Neurog1 | Cdh20 | Cebpa | |  |  |  |
| Gata6 | Dusp26 | Gdf10 | Mir124a-3 | Npas3 | Neurog2 | Cdh22 | Celsr3 | |  |  |  |
| Gcgr | Dysf | Gdf6 | Mir1907 | Nrn1 | Nhsl2 | Cdh4 | Ch25h | |  |  |  |
| Gdf6 | E130309D14Rik | Gdf7 | Mir3081 | Nt5c1a | Nkx2-3 | Cdh7 | Chrd | |  |  |  |
| Gdf7 | E230019M04Rik | Gdnf | Msi1 | Ntn4 | Nkx2-5 | Cdk5r2 | Chrm5 | |  |  |  |
| Gdnf | Ebf1 | Gfra2 | Myrip | Ntsr1 | Nkx2-9 | Cdx2 | Chst11 | |  |  |  |
| Gem | Ece1 | Ghsr | N28178 | Nxph1 | Nmnat2 | Cebpa | Chst14 | |  |  |  |
| Gfra2 | Edn1 | Gldn | Nav2 | Olig2 | Npas3 | Cebpd | Chst5 | |  |  |  |
| Ghsr | Egr1 | Gm10058 | Neto1 | Onecut1 | Nrn1 | Celsr3 | Chsy3 | |  |  |  |
| Gipc3 | Egr2 | Gm10096 | Neurog1 | Onecut2 | Ntn4 | Ch25h | Cilp2 | |  |  |  |
| Gjd3 | Egr3 | Gm10147 | Nhsl2 | Osr2 | Nxph4 | Chac1 | Clcf1 | |  |  |  |
| Gldn | Egr4 | Gm10230 | Nkpd1 | Otx1 | Olfml2b | Chad | Cldn23 | |  |  |  |
| Glis1 | Ehd3 | Gm10486 | Nkx2-5 | Otx2os1 | Olig2 | Chrd | Clec2l | |  |  |  |
| Gm13889 | Elfn1 | Gm10487 | Nkx2-9 | Pax2 | Onecut1 | Chrm2 | Clic5 | |  |  |  |
| Gm14207 | Elovl7 | Gm10488 | Nkx3-2 | Pax9 | Onecut2 | Chrm4 | Clic6 | |  |  |  |
| Gm266 | Eml1 | Gm10863 | Nmnat2 | Pde10a | Onecut3 | Chrna1 | Cln8 | |  |  |  |
| Gm4980 | En1 | Gm13285 | Nr0b2 | Pdx1 | Osr2 | Chrna5 | Cmtm3 | |  |  |  |
| Gm5607 | En2 | Gm13304 | Nt5c1a | Phospho1 | Otx1 | Chrnb4 | Cnnm1 | |  |  |  |
| Gm581 | Epb4.1l1 | Gm13306 | Nxph1 | Pigz | Pak6 | Chst11 | Cnr1 | |  |  |  |
| Gm8773 | Epn3 | Gm13476 | Nxph4 | Pitx1 | Pax1 | Chst5 | Col11a1 | |  |  |  |
| Gm996 | Eras | Gm13889 | Odf3b | Pitx3 | Pax2 | Chst8 | Col23a1 | |  |  |  |
| Gnal | Erbb2 | Gm14207 | Olfr94 | Plekhh3 | Pax9 | Chsy3 | Col27a1 | |  |  |  |
| Gpr150 | Esrrg | Gm14308 | Olig2 | Pou3f3 | Pcdhac2 | Cilp2 | Col8a2 | |  |  |  |
| Gpr153 | Evc2 | Gm14351 | Onecut1 | Pou4f3 | Pdgfra | Cldn23 | Col9a2 | |  |  |  |
| Gpr158 | Evx2 | Gm14430 | Osr2 | Prdm6 | Pdx1 | Cldn6 | Cpm | |  |  |  |
| Gpr25 | Eya2 | Gm14431 | Otx1 | Prrt1 | Pitx3 | Clec2l | Cpne7 | |  |  |  |
| Gpr26 | F3 | Gm14434 | Pak3 | Prrxl1 | Plekhh3 | Clic5 | Crabp2 | |  |  |  |
| Gpr27 | Fam132b | Gm14819 | Pappa | Ptf1a | Pmaip1 | Clic6 | Crb3 | |  |  |  |
| Gpr50 | Fam134b | Gm15085 | Pard6g | Ptprb | Pnma2 | Cnksr1 | Crh | |  |  |  |
| Gpr6 | Fam150b | Gm15093 | Pax1 | Rbm20 | Pou3f3 | Cnn2 | Crhr1 | |  |  |  |
| Gprin1 | Fam171a2 | Gm16367 | Pax2 | Rfx4 | Pou4f3 | Cnr1 | Crispld2 | |  |  |  |
| Grhl2 | Fam174b | Gm2506 | Pax9 | Rtn4rl2 | Ppp1r3g | Cnrip1 | Crygn | |  |  |  |
| Grid1 | Fam181b | Gm266 | Pcdh17 | Samd14 | Prdm12 | Cntn1 | Ctdspl | |  |  |  |
| Grik3 | Fam187b | Gm3286 | Pcdhac2 | Scn8a | Prhoxnb | Col11a1 | Cxxc4 | |  |  |  |
| Grin2c | Fam20c | Gm4836 | Pde10a | Sema3d | Prkch | Col14a1 | Cybrd1 | |  |  |  |
| Grin2d | Fam43b | Gm5294 | Pdgfra | Sfrp4 | Prrt4 | Col15a1 | Cyp26a1 | |  |  |  |
| Grm7 | Fam69c | Gm5607 | Pik3r5 | Sftpc | Prrxl1 | Col1a2 | Cyp26c1 | |  |  |  |
| Gsx1 | Fam83f | Gm581 | Pitx2 | Shank1 | Ptf1a | Col23a1 | Cyp27a1 | |  |  |  |
| Gsx2 | Fat4 | Gm8898 | Plekhh3 | Shank3 | Ptprb | Col27a1 | Cyp4f17 | |  |  |  |
| Gulp1 | Fbxl16 | Gnal | Pmaip1 | She | Ptx3 | Col4a3 | D030025P21Rik | | |  |  |
| H2-Ab1 | Fbxl8 | Gp5 | Pnma2 | Sim2 | Rbpjl | Col5a1 | D430019H16Rik | | |  |  |
| H2-Q1 | Fbxo17 | Gpr124 | Pou3f3 | Six3 | Rem1 | Col8a2 | D8Ertd82e | |  |  |  |
| H2-Q2 | Fcrlb | Gpr150 | Prdm12 | Six6 | Rgs11 | Col9a2 | D930020B18Rik | | |  |  |
| Hand1 | Fgf10 | Gpr6 | Prkce | Slc18a3 | Rprml | Cpm | D930048N14Rik | | |  |  |
| Hand2 | Fgf15 | Grhl2 | Prrt1 | Slc24a4 | Rtn4rl2 | Cpne2 | Daglb | |  |  |  |
| Hapln2 | Fgf16 | Grid1 | Prrxl1 | Slc6a11 | Scn8a | Cpne7 | Dbp | |  |  |  |
| Hapln4 | Fgf3 | Grid2ip | Prss12 | Slc6a4 | Sema5b | Crabp2 | Dcbld1 | |  |  |  |
| Hcn1 | Fgf4 | Grik3 | Psd2 | Slc9a2 | Sez6 | Crb3 | Ddah1 | |  |  |  |
| Helt | Fgf9 | Grin2d | Ptf1a | Sorcs3 | Sftpc | Crh | Dgkb | |  |  |  |
| Hes2 | Fgfbp3 | Grip1 | Pth2 | Sost | Shisa3 | Crhr1 | Dkk2 | |  |  |  |
| Hhipl1 | Fgfr4 | Grrp1 | Ramp2 | Sox1 | Sim2 | Crim1 | Dlk2 | |  |  |  |
| Hmx1 | Flnc | Gsx1 | Rasip1 | Sox14 | Six3 | Crispld1 | Dll4 | |  |  |  |
| Hmx2 | Fndc5 | Gsx2 | Rax | Sp7 | Six6 | Crmp1 | Dlx2 | |  |  |  |
| Hmx3 | Fos | H2-Ab1 | Rbpjl | Sp8 | Slc24a4 | Crygn | Dlx3 | |  |  |  |
| Hnf1b | Fosl1 | Hand1 | Rem1 | Sp9 | Slc30a10 | Cthrc1 | Dmrt2 | |  |  |  |
| Hoxa11as | Foxa2 | Hand2 | Rfx4 | Spon1 | Slc34a2 | Ctnnd2 | Dmrta1 | |  |  |  |
| Hoxa13 | Foxb2 | Hapln2 | Rprm | Syt2 | Slc44a5 | Cx3cl1 | Dnajc22 | |  |  |  |
| Hoxa4 | Foxc1 | Hes2 | Scn4b | Tacr1 | Slc4a3 | Cxcl5 | Dnajc6 | |  |  |  |
| Hoxa6 | Foxc2 | Hhipl1 | Sema3d | Tacstd2 | Sorcs3 | Cxxc4 | Dnase2a | |  |  |  |
| Hoxb13 | Foxd1 | Hmx1 | Sema5b | Tbx2 | Sost | Cybrd1 | Dock1 | |  |  |  |
| Hoxb2 | Foxd3 | Hmx2 | Sftpc | Tlx1 | Sox14 | Cyp26a1 | Dock4 | |  |  |  |
| Hoxb3 | Foxd4 | Hmx3 | Sgpp2 | Tlx2 | Sox17 | Cyp26c1 | Dock8 | |  |  |  |
| Hoxb9 | Foxe1 | Hnf1b | Shank1 | Tmem132e | Sox7 | Cyp27a1 | Dpyd | |  |  |  |
| Hoxc13 | Foxe3 | Hoxa11as | She | Tnfsf9 | Sox9 | Cyp2s1 | Dpysl4 | |  |  |  |
| Hoxc9 | Foxf2 | Hoxa4 | Sim1 | Tnxb | Sp7 | D030025P21Rik | Drd4 | |  |  |  |
| Hoxd1 | Foxi2 | Hoxa6 | Sim2 | Ttc39a | Sp9 | D430019H16Rik | Dscaml1 | |  |  |  |
| Hoxd11 | Foxi3 | Hoxb13 | Six3 | Twist2 | Syne2 | D630029K05Rik | Dsg2 | |  |  |  |
| Hoxd12 | Foxl1 | Hoxb3 | Six6 | Ucn | Syt2 | D8Ertd82e | Dsp | |  |  |  |
| Hoxd13 | Foxl2 | Hoxb7 | Slc18a3 | Uncx | T | D930020B18Rik | Duoxa1 | |  |  |  |
| Hoxd8 | Foxo6 | Hoxb9 | Slc25a48 | Vax1 | Tacstd2 | D930048N14Rik | Duoxa2 | |  |  |  |
| Hpcal4 | Foxq1 | Hoxc10 | Slc32a1 | Vax2 | Tlx2 | Dapk2 | Dusp6 | |  |  |  |
| Hrh1 | Frmpd1 | Hoxc13 | Slc45a3 | Vgll2 | Tmem132e | Dclk3 | Dusp7 | |  |  |  |
| Hrk | Fstl4 | Hoxc8 | Slc6a4 | Vsx2 | Trerf1 | Dcxr | Dysf | |  |  |  |
| Hs3st2 | Gabbr1 | Hoxd1 | Slitrk2 | Vtn | Trim62 | Ddn | Dzip1l | |  |  |  |
| Hs6st3 | Gabrb1 | Hoxd11 | Sned1 | Zbtb42 | Twist2 | Dgkb | E130012A19Rik | | |  |  |
| Hunk | Gad1 | Hoxd12 | Sorcs3 | Zfp503 | Unc5c | Dgkk | E130309F12Rik | | |  |  |
| Icosl | Galnt13 | Hoxd13 | Sost | Zfp579 | Vav3 | Dkk2 | E2f2 |  | |  |  |
| Igf2as | Galnt9 | Hrh1 | Sox1 | Zhx2 | Vax1 | Dlk2 | Ebf1 |  | |  |  |
| Ildr2 | Galr3 | Hrk | Sox14 | Znrf4 | Vax2 | Dlx2 | Ebf4 |  | |  |  |
| Inf2 | Gata6 | Hs3st2 | Sox21 |  | Vgll2 | Dlx3 | Efemp1 |  | |  |  |
| Insm1 | Gcgr | Hs3st6 | Sox7 |  | Wnt11 | Dmrt2 | Egr2 |  | |  |  |
| Insrr | Gck | Hunk | Sox9 |  | Wnt5a | Dmrt3 | Elovl7 |  | |  |  |
| Irf4 | Gcnt4 | Icosl | Sp7 |  | Wscd2 | Dmrta2 | Emb |  | |  |  |
| Irf5 | Gdf6 | Igf2as | Spon1 |  | Zfp579 | Dnajc22 | Eml1 |  | |  |  |
| Irgc1 | Gdf7 | Il15ra | Synpo |  | Zhx2 | Dnajc6 | Emx1 |  | |  |  |
| Irx1 | Gdnf | Il1r1 | Syt16 |  | Znrf4 | Dock4 | En1 |  | |  |  |
| Irx2 | Gdpd5 | Inf2 | Syt2 |  |  | Drd2 | En2 |  | |  |  |
| Irx4 | Gem | Insm1 | T |  |  | Drd5 | Enc1 |  | |  |  |
| Irx5 | Gfra2 | Insrr | Tac1 |  |  | Dscaml1 | Engase |  | |  |  |
| Irx6 | Ghsr | Iqsec2 | Tacstd2 |  |  | Dsg2 | Entpd7 |  | |  |  |
| Itga7 | Gjd3 | Irf5 | Tbx15 |  |  | Dsp | Ephb3 |  | |  |  |
| Jakmip3 | Gldn | Irx1 | Tbx2 |  |  | Duoxa1 | Erap1 |  | |  |  |
| Jph3 | Gm10789 | Irx4 | Thy1 |  |  | Duoxa2 | Erbb2 |  | |  |  |
| Kbtbd11 | Gm10863 | Irx5 | Tifa |  |  | Dusp26 | Erc2 |  | |  |  |
| Kcna2 | Gm13889 | Irx6 | Tlx1 |  |  | Dusp9 | Esam |  | |  |  |
| Kcna3 | Gm15217 | Itga11 | Tlx2 |  |  | Dysf | Esrrg |  | |  |  |
| Kcnc2 | Gm266 | Itga4 | Tmeff2 |  |  | Dzip1l | Ets2 |  | |  |  |
| Kcnd3 | Gm4980 | Itga7 | Tmem132e |  |  | E130012A19Rik | Evc2 |  | |  |  |
| Kcng2 | Gm5084 | Itpkb | Tnfsf9 |  |  | E130309D14Rik | Evx2 |  | |  |  |
| Kcnj10 | Gm5607 | Jph3 | Tnxb |  |  | E130309F12Rik | Exph5 |  | |  |  |
| Kcnj3 | Gm581 | Kbtbd11 | Trerf1 |  |  | E2f2 | F3 |  | |  |  |
| Kcnk15 | Gm9767 | Kcna2 | Trim62 |  |  | E330021D16Rik | Fam110c |  | |  |  |
| Kcnk4 | Gnal | Kcna3 | Trpm8 |  |  | Ebf1 | Fam129b |  | |  |  |
| Kcnq1 | Gp5 | Kcna7 | Ttbk1 |  |  | Ebf4 | Fam171a2 |  | |  |  |
| Kdelr3 | Gpc5 | Kcnc2 | Twist2 |  |  | Ehd3 | Fam171b |  | |  |  |
| Kl | Gpr146 | Kcnd2 | Ucn |  |  | Elovl6 | Fam181b |  | |  |  |
| Klf15 | Gpr150 | Kcnd3 | Uncx |  |  | Elovl7 | Fam19a5 |  | |  |  |
| Klf9 | Gpr158 | Kcnj12 | Vax1 |  |  | Eltd1 | Fam20c |  | |  |  |
| Klhdc8a | Gpr162 | Kcnj15 | Vax2 |  |  | Eml1 | Fam43a |  | |  |  |
| Klhl10 | Gpr25 | Kcnk15 | Vipr1 |  |  | Emx1 | Fam43b |  | |  |  |
| Lad1 | Gpr50 | Kcnk4 | Wnt11 |  |  | En1 | Fam57a |  | |  |  |
| Lbx1 | Gpr83 | Kcnma1 | Wnt16 |  |  | Entpd2 | Fam64a |  | |  |  |
| Lbx2 | Gprin1 | Kcnq1 | Wnt5a |  |  | Epb4.1l1 | Fam69c |  | |  |  |
| Lemd1 | Grhl2 | Kcnq2 | Wnt6 |  |  | Ephb3 | Fam83f |  | |  |  |
| Lhx2 | Grid1 | Kcnq4 | Wnt9a |  |  | Epn3 | Fam83g |  | |  |  |
| Lhx5 | Grid2ip | Kif3c | Wt1 |  |  | Epor | Farp1 |  | |  |  |
| Lif | Grik3 | Klf1 | Zfhx4 |  |  | Eps8l2 | Fat4 |  | |  |  |
| Limch1 | Grin2d | Klf15 | Zfp579 |  |  | Erbb2 | Fbln7 |  | |  |  |
| Lmx1a | Gsc | Klhdc8a | Zfp804a |  |  | Erc2 | Fbxl8 |  | |  |  |
| Lonrf3 | Gsx1 | Lad1 | Zhx2 |  |  | Esrrb | Fcrlb |  | |  |  |
| Lpar3 | Gsx2 | Lbx1 | Znrf4 |  |  | Esrrg | Ferd3l |  | |  |  |
| Lphn3 | Gxylt2 | Ldb3 |  |  |  | Ethe1 | Fezf1 |  | |  |  |
| Lrfn5 | H2-Ab1 | Lhx2 |  |  |  | Etv1 | Ffar1 |  | |  |  |
| Lrg1 | H2-Q10 | Lhx5 |  |  |  | Etv2 | Fgf10 |  | |  |  |
| Lrrc10b | H2-Q2 | Lif |  |  |  | Evc2 | Fgf15 |  | |  |  |
| Lrrc23 | Hand2 | Lmx1a |  |  |  | Evx1 | Fgf16 |  | |  |  |
| Lrrc38 | Hapln2 | Lmx1b |  |  |  | Evx2 | Fgf17 |  | |  |  |
| Ltb4r2 | Hapln4 | Lpar3 |  |  |  | Fam110c | Fgf2 |  | |  |  |
| Ltbp3 | Hcn4 | Lphn3 |  |  |  | Fam129b | Fgf3 |  | |  |  |
| Lypd6b | Helt | Lrfn5 |  |  |  | Fam132b | Fgf4 |  | |  |  |
| Mab21l1 | Hes3 | Lrrc23 |  |  |  | Fam150a | Fgf9 |  | |  |  |
| Mafa | Heyl | Lrrc38 |  |  |  | Fam150b | Fgfbp3 |  | |  |  |
| Magi2 | Hhipl1 | Lrrn1 |  |  |  | Fam171b | Fhod3 |  | |  |  |
| Mal2 | Hmx1 | Ltb |  |  |  | Fam198b | Fibin |  | |  |  |
| March11 | Hmx2 | Ly6a |  |  |  | Fam19a5 | Fjx1 |  | |  |  |
| Matk | Hmx3 | Magi2 |  |  |  | Fam20c | Flnc |  | |  |  |
| Me3 | Hnf1b | Mapk11 |  |  |  | Fam43a | Fmn2 |  | |  |  |
| Med13l | Hoxa11as | Med13l |  |  |  | Fam43b | Fmnl2 |  | |  |  |
| Megf6 | Hoxa13 | Megf6 |  |  |  | Fam57a | Fosl1 |  | |  |  |
| Mei1 | Hoxa4 | Met |  |  |  | Fam69c | Foxa1 |  | |  |  |
| Mfhas1 | Hoxa6 | Mfhas1 |  |  |  | Fam83f | Foxb2 |  | |  |  |
| Mgat5b | Hoxb13 | Micall1 |  |  |  | Farp1 | Foxc1 |  | |  |  |
| Mir10b | Hoxb7 | Mir10b |  |  |  | Fat4 | Foxc2 |  | |  |  |
| Mir124a-2 | Hoxb9 | Mir124a-2 |  |  |  | Fbll1 | Foxd1 |  | |  |  |
| Mir124a-3 | Hoxc13 | Mir124a-3 |  |  |  | Fbln7 | Foxd3 |  | |  |  |
| Mir129-2 | Hoxc6 | Mir137 |  |  |  | Fbxl16 | Foxd4 |  | |  |  |
| Mir135b | Hoxd1 | Mir203 |  |  |  | Fbxl8 | Foxe1 |  | |  |  |
| Mir137 | Hoxd11 | Mir3083 |  |  |  | Fcgrt | Foxf2 |  | |  |  |
| Mir203 | Hoxd12 | Mir467a-1 |  |  |  | Fcrlb | Foxi3 |  | |  |  |
| Mir804 | Hoxd13 | Mir467a-7 |  |  |  | Fezf2 | Foxj2 |  | |  |  |
| Mir9-3 | Hoxd8 | Mir467a-8 |  |  |  | Ffar1 | Foxl2 |  | |  |  |
| Mmp24 | Hoxd9 | Mir467a-9 |  |  |  | Fgf10 | Foxo6 |  | |  |  |
| Mn1 | Hpcal4 | Mir484 |  |  |  | Fgf15 | Foxp2 |  | |  |  |
| Mnx1 | Hrasls5 | Mir669a-1 |  |  |  | Fgf16 | Foxs1 |  | |  |  |
| Moxd1 | Hrh1 | Mir669a-10 |  |  |  | Fgf17 | Fras1 |  | |  |  |
| Mpzl2 | Hrk | Mir669a-11 |  |  |  | Fgf2 | Frmpd1 |  | |  |  |
| Mrc2 | Hs3st2 | Mir669a-12 |  |  |  | Fgf3 | Frrs1 |  | |  |  |
| Msi1 | Hs3st3a1 | Mir669a-2 |  |  |  | Fgf4 | Fstl1 |  | |  |  |
| Msx3 | Hs6st3 | Mir669a-4 |  |  |  | Fgf9 | Fstl4 |  | |  |  |
| Myod1 | Hsd17b14 | Mir669a-5 |  |  |  | Fgfbp3 | Fzd10 |  | |  |  |
| Nags | Hunk | Mir669a-6 |  |  |  | Fgfr4 | Fzd2 |  | |  |  |
| Nav2 | Icosl | Mir669a-7 |  |  |  | Fgl2 | Fzd4 |  | |  |  |
| Nefl | Igf2as | Mir669a-8 |  |  |  | Fgr | Fzd7 |  | |  |  |
| Neurl1b | Igfbp6 | Mir669a-9 |  |  |  | Fhl3 | Fzd8 |  | |  |  |
| Neurog1 | Ildr2 | Mir804 |  |  |  | Fhod3 | Fzd9 |  | |  |  |
| Neurog2 | Inf2 | Mir9-3 |  |  |  | Fjx1 | G6b |  | |  |  |
| Neurog3 | Insm1 | Mmp24 |  |  |  | Flnc | Gabrb1 |  | |  |  |
| Nhlh2 | Insm2 | Mn1 |  |  |  | Fmn2 | Gabrb2 |  | |  |  |
| Nkpd1 | Insrr | Mst1r |  |  |  | Fosl1 | Gad1 |  | |  |  |
| Nkx2-3 | Iqsec2 | Msx3 |  |  |  | Foxa2 | Gad2 |  | |  |  |
| Nkx2-4 | Irf2 | Mup2 |  |  |  | Foxa3 | Galnt13 |  | |  |  |
| Nkx2-5 | Irf4 | Musk |  |  |  | Foxb2 | Galnt2 |  | |  |  |
| Nkx2-9 | Irgc1 | Nags |  |  |  | Foxc1 | Galr1 |  | |  |  |
| Nkx3-2 | Irx1 | Nav2 |  |  |  | Foxc2 | Galr2 |  | |  |  |
| Nkx6-1 | Irx2 | Nefl |  |  |  | Foxd1 | Galr3 |  | |  |  |
| Nmnat2 | Irx4 | Nell1 |  |  |  | Foxd3 | Galt |  | |  |  |
| Nog | Irx5 | Neto1 |  |  |  | Foxd4 | Gapt |  | |  |  |
| Nol3 | Irx6 | Nfatc1 |  |  |  | Foxe1 | Gas1 |  | |  |  |
| Npas3 | Itga11 | Nhlh1 |  |  |  | Foxf2 | Gatsl3 |  | |  |  |
| Nr3c2 | Itga7 | Nhsl2 |  |  |  | Foxi3 | Gcnt2 |  | |  |  |
| Nrg2 | Itga9 | Nkpd1 |  |  |  | Foxl1 | Gcnt4 |  | |  |  |
| Nrk | Itpkb | Nkx2-3 |  |  |  | Foxl2 | Gdf10 |  | |  |  |
| Nrn1 | Jph3 | Nkx2-4 |  |  |  | Foxp2 | Gdf15 |  | |  |  |
| Nrxn3 | Jph4 | Nkx2-5 |  |  |  | Foxs1 | Gdf5 |  | |  |  |
| Nt5c1a | Jsrp1 | Nkx2-9 |  |  |  | Fras1 | Gdf6 |  | |  |  |
| Nt5e | Jun | Nkx3-2 |  |  |  | Frmd4a | Gdf7 |  | |  |  |
| Ntn4 | Kazald1 | Nmnat2 |  |  |  | Frmpd1 | Gdnf |  | |  |  |
| Ntsr1 | Kcna2 | Npas3 |  |  |  | Fstl4 | Gfpt2 |  | |  |  |
| Nudt18 | Kcnc2 | Nrg2 |  |  |  | Fzd10 | Ghsr |  | |  |  |
| Nxph1 | Kcnc3 | Nrp2 |  |  |  | Fzd2 | Gipc2 |  | |  |  |
| Nxph4 | Kcnd2 | Nrxn3 |  |  |  | Fzd4 | Gldn |  | |  |  |
| Olig2 | Kcnd3 | Nt5c1a |  |  |  | Fzd7 | Gli3 |  | |  |  |
| Onecut1 | Kcng2 | Ntn4 |  |  |  | Fzd8 | Glis1 |  | |  |  |
| Onecut2 | Kcnh8 | Nudt18 |  |  |  | G0s2 | Glis2 |  | |  |  |
| Onecut3 | Kcnj10 | Nxph1 |  |  |  | Gabbr2 | Glra3 |  | |  |  |
| Opcml | Kcnj2 | Oasl1 |  |  |  | Gabrb1 | Gls2 |  | |  |  |
| Osr2 | Kcnk12 | Obscn |  |  |  | Gabrb2 | Gm10584 |  | |  |  |
| Otp | Kcnk4 | Odf3b |  |  |  | Gabrq | Gm10789 |  | |  |  |
| Otx1 | Kcnq1 | Olig2 |  |  |  | Gad1 | Gm11529 |  | |  |  |
| Otx2os1 | Kcnt1 | Onecut1 |  |  |  | Gad2 | Gm11961 |  | |  |  |
| Oxt | Kdelr3 | Onecut2 |  |  |  | Galnt12 | Gm13375 |  | |  |  |
| Panx2 | Kdm6b | Onecut3 |  |  |  | Galnt13 | Gm13476 |  | |  |  |
| Paqr9 | Kif26a | Opcml |  |  |  | Galnt9 | Gm14164 |  | |  |  |
| Pax1 | Kif5c | Osr1 |  |  |  | Galr1 | Gm14207 |  | |  |  |
| Pax2 | Kiss1r | Otp |  |  |  | Galr2 | Gm16532 |  | |  |  |
| Pax9 | Kl | Ott |  |  |  | Galr3 | Gm266 |  | |  |  |
| Pcdhgc4 | Klf15 | Otx1 |  |  |  | Gapt | Gm4349 |  | |  |  |
| Pde10a | Klf9 | Otx2os1 |  |  |  | Gas1 | Gm4980 |  | |  |  |
| Pde1b | Klhdc8a | Oxt |  |  |  | Gck | Gm5294 |  | |  |  |
| Pdx1 | Kremen2 | Pak3 |  |  |  | Gckr | Gm5464 |  | |  |  |
| Phospho1 | Ky | Pappa |  |  |  | Gcnt2 | Gm5468 |  | |  |  |
| Pigz | L3mbtl4 | Papss2 |  |  |  | Gcnt4 | Gm6406 |  | |  |  |
| Pitx1 | Lad1 | Paqr9 |  |  |  | Gdf10 | Gm7337 |  | |  |  |
| Pitx3 | Lama1 | Parvb |  |  |  | Gdf5 | Gm8773 |  | |  |  |
| Plekhg6 | Lama3 | Pax1 |  |  |  | Gdf6 | Gm9767 |  | |  |  |
| Plekhh3 | Lbx1 | Pax2 |  |  |  | Gdf7 | Gm996 |  | |  |  |
| Plscr4 | Lbx2 | Pax9 |  |  |  | Gdnf | Gna14 |  | |  |  |
| Pnmal2 | Lemd1 | Pcdh15 |  |  |  | Gfpt2 | Gnal |  | |  |  |
| Popdc3 | Lgi3 | Pcdhac2 |  |  |  | Ghsr | Gng4 |  | |  |  |
| Pou3f3 | Lgr6 | Pde10a |  |  |  | Gldn | Gp5 |  | |  |  |
| Pou4f3 | Lif | Pde1b |  |  |  | Gli3 | Gpatch1 |  | |  |  |
| Prdm12 | Limch1 | Pde1c |  |  |  | Glipr2 | Gpc5 |  | |  |  |
| Prdm6 | Lims2 | Pde5a |  |  |  | Glis1 | Gpr124 |  | |  |  |
| Prlhr | Lmtk3 | Pdzrn4 |  |  |  | Glis2 | Gpr135 |  | |  |  |
| Prrt1 | Lmx1a | Pglyrp2 |  |  |  | Gltpd2 | Gpr150 |  | |  |  |
| Prrxl1 | Lonrf3 | Phactr1 |  |  |  | Gltscr1 | Gpr156 |  | |  |  |
| Ptf1a | Lor | Phox2b |  |  |  | Gm10584 | Gpr157 |  | |  |  |
| Ptpn13 | Lpar3 | Pik3r5 |  |  |  | Gm10789 | Gpr158 |  | |  |  |
| Ptprb | Lphn3 | Pitx1 |  |  |  | Gm11529 | Gpr182 |  | |  |  |
| Ptprz1 | Lrfn2 | Pitx3 |  |  |  | Gm12 | Gpr25 |  | |  |  |
| Ptx3 | Lrfn5 | Pkib |  |  |  | Gm12830 | Gpr27 |  | |  |  |
| Pvrl1 | Lrig3 | Plec |  |  |  | Gm13375 | Gpr50 |  | |  |  |
| Rab37 | Lrrc10b | Plekhh2 |  |  |  | Gm13476 | Gpr6 |  | |  |  |
| Rasal3 | Lrrc23 | Pnma2 |  |  |  | Gm14207 | Gprin1 |  | |  |  |
| Rasip1 | Lrrn1 | Pnmal2 |  |  |  | Gm266 | Gpt2 |  | |  |  |
| Rbfox1 | Lrrtm1 | Pou3f3 |  |  |  | Gm5294 | Grasp |  | |  |  |
| Rbm20 | Ltb4r2 | Pou4f3 |  |  |  | Gm5468 | Greb1l |  | |  |  |
| Rem1 | Ltbp1 | Pparg |  |  |  | Gm5868 | Grhl2 |  | |  |  |
| Rfx4 | Ltbp3 | Ppp2r2c |  |  |  | Gm694 | Grid2 |  | |  |  |
| Rhcg | Lypd3 | Prdm12 |  |  |  | Gm806 | Grik3 |  | |  |  |
| Rln3 | Mab21l1 | Prom1 |  |  |  | Gm9767 | Grin2c |  | |  |  |
| Rprml | Mafa | Prr15 |  |  |  | Gm996 | Grp |  | |  |  |
| Rspo4 | Magee1 | Prrt1 |  |  |  | Gm9962 | Grrp1 |  | |  |  |
| Rtn4rl2 | Magel2 | Prrxl1 |  |  |  | Gna14 | Gsto1 |  | |  |  |
| Rxrg | Magi2 | Ptf1a |  |  |  | Gnal | Gsx1 |  | |  |  |
| S1pr4 | Mal2 | Ptprz1 |  |  |  | Gnat1 | Gtpbp3 |  | |  |  |
| S1pr5 | Map3k14 | Pyy |  |  |  | Gng4 | Gucy1a2 |  | |  |  |
| Samd14 | Mapk11 | Rasip1 |  |  |  | Gng8 | Gulp1 |  | |  |  |
| Scarf2 | Matk | Rbm20 |  |  |  | Golga7b | H2-M3 |  | |  |  |
| Scn4b | Matn3 | Rbms3 |  |  |  | Gp5 | H2-Q1 |  | |  |  |
| Scn8a | Med13l | Rbpjl |  |  |  | Gpc5 | H2-Q2 |  | |  |  |
| Sema3d | Megf6 | Rhcg |  |  |  | Gpr124 | Hand1 |  | |  |  |
| Sema5b | Mei1 | Rn4.5s |  |  |  | Gpr135 | Hand2 |  | |  |  |
| Sez6 | Mertk | Rnf39 |  |  |  | Gpr150 | Hapln4 |  | |  |  |
| Sfrp4 | Mesp1 | Rprml |  |  |  | Gpr153 | Has1 |  | |  |  |
| Sftpc | Mfhas1 | Runx2 |  |  |  | Gpr156 | Has3 |  | |  |  |
| Sgip1 | Mgat3 | S1pr5 |  |  |  | Gpr158 | Hcn1 |  | |  |  |
| Sh2d5 | Mgat5b | Samd14 |  |  |  | Gpr182 | Hcn2 |  | |  |  |
| Shank1 | Micall1 | Scn4b |  |  |  | Gpr25 | Hcn4 |  | |  |  |
| Shank3 | Mir10b | Scn8a |  |  |  | Gpr26 | Hcrt |  | |  |  |
| She | Mir124a-2 | Scrt1 |  |  |  | Gpr27 | Hes2 |  | |  |  |
| Shh | Mir124a-3 | Sdk1 |  |  |  | Gpr39 | Hes5 |  | |  |  |
| Shox2 | Mir129-2 | Sept3 |  |  |  | Gpr45 | Hes7 |  | |  |  |
| Sim2 | Mir137 | Sftpc |  |  |  | Gpr50 | Hist1h1b |  | |  |  |
| Six3 | Mir1904 | Sgip1 |  |  |  | Gpr6 | Hist1h1c |  | |  |  |
| Six6 | Mir1907 | Shank1 |  |  |  | Gprin1 | Hist1h1d |  | |  |  |
| Slc12a5 | Mir193 | Shank3 |  |  |  | Grb7 | Hist1h2bm |  | |  |  |
| Slc17a7 | Mir203 | She |  |  |  | Greb1l | Hist1h3e |  | |  |  |
| Slc18a3 | Mir3081 | Shisa3 |  |  |  | Gria3 | Hist2h4 |  | |  |  |
| Slc1a2 | Mir3083 | Sim2 |  |  |  | Grid1 | Hist3h2ba |  | |  |  |
| Slc1a6 | Mir346 | Six3 |  |  |  | Grid2 | Hivep2 |  | |  |  |
| Slc24a4 | Mir804 | Six3os1 |  |  |  | Grik3 | Hivep3 |  | |  |  |
| Slc34a2 | Mir9-3 | Six6 |  |  |  | Grik4 | Hlx |  | |  |  |
| Slc45a3 | Mitf | Slc18a3 |  |  |  | Grin2b | Hmgcll1 |  | |  |  |
| Slc4a3 | Mmp24 | Slc1a2 |  |  |  | Grin2c | Hmx2 |  | |  |  |
| Slc6a11 | Mmp9 | Slc24a4 |  |  |  | Grm6 | Hmx3 |  | |  |  |
| Slc6a4 | Mn1 | Slc25a48 |  |  |  | Grm7 | Hoxa11 |  | |  |  |
| Slc9a2 | Mnx1 | Slc32a1 |  |  |  | Grp | Hoxa13 |  | |  |  |
| Slc9a5 | Moxd1 | Slc44a5 |  |  |  | Gsto1 | Hoxa6 |  | |  |  |
| Smad9 | Mpzl2 | Slc4a10 |  |  |  | Gsx1 | Hoxa7 |  | |  |  |
| Snai1 | Msi1 | Slc5a1 |  |  |  | Gsx2 | Hoxb2 |  | |  |  |
| Sorcs3 | Mst1 | Slc5a8 |  |  |  | Guca1a | Hoxb5 |  | |  |  |
| Sost | Msx3 | Slc6a11 |  |  |  | Gucy1a2 | Hoxb7 |  | |  |  |
| Sox1 | Mtus2 | Slc6a18 |  |  |  | Gulp1 | Hoxb9 |  | |  |  |
| Sox14 | Myod1 | Slc6a3 |  |  |  | Gxylt2 | Hoxc10 |  | |  |  |
| Sox17 | Myrip | Slc7a10 |  |  |  | H2-Q1 | Hoxc11 |  | |  |  |
| Sox21 | Nags | Slc9a2 |  |  |  | Hand1 | Hoxc12 |  | |  |  |
| Sox7 | Nav2 | Slc9a3 |  |  |  | Hand2 | Hoxc13 |  | |  |  |
| Sp7 | Ncs1 | Slitrk5 |  |  |  | Hapln1 | Hoxd1 |  | |  |  |
| Sp8 | Nedd4l | Snord116 |  |  |  | Hapln4 | Hoxd11 |  | |  |  |
| Sp9 | Nefl | Snord116l2 |  |  |  | Hcn1 | Hoxd13 |  | |  |  |
| Spon1 | Nell1 | Sorcs3 |  |  |  | Hcn4 | Hoxd3 |  | |  |  |
| Sqrdl | Neto1 | Sost |  |  |  | Helt | Hoxd9 |  | |  |  |
| Sstr4 | Neurl1b | Sox1 |  |  |  | Hes2 | Hpdl |  | |  |  |
| Syt16 | Neurog1 | Sox14 |  |  |  | Hes3 | Hpgd |  | |  |  |
| Syt2 | Neurog2 | Sox17 |  |  |  | Hes5 | Hps6 |  | |  |  |
| Tac1 | Neurog3 | Sox21 |  |  |  | Hes7 | Hrc |  | |  |  |
| Tacr1 | Nf1 | Sox6 |  |  |  | Hhipl1 | Hrh1 |  | |  |  |
| Tacstd2 | Nfkbie | Sox7 |  |  |  | Hist1h1b | Hs3st2 |  | |  |  |
| Tap2 | Nhlh2 | Sox9 |  |  |  | Hist1h1e | Hs3st3a1 |  | |  |  |
| Tbr1 | Nhsl2 | Sp7 |  |  |  | Hist2h4 | Hs3st6 |  | |  |  |
| Tbx15 | Nipal1 | Sp8 |  |  |  | Hivep2 | Hs6st1 |  | |  |  |
| Tbx2 | Nkx1-2 | Sp9 |  |  |  | Hivep3 | Hs6st3 |  | |  |  |
| Thbs1 | Nkx2-3 | Spata18 |  |  |  | Hlx | Hspb3 |  | |  |  |
| Thy1 | Nkx2-4 | Speer7-ps1 |  |  |  | Hmgcll1 | Htr1a |  | |  |  |
| Tlx1 | Nkx2-5 | Sstr1 |  |  |  | Hmx2 | Htr2c |  | |  |  |
| Tlx2 | Nkx2-9 | Synpo |  |  |  | Hmx3 | Icam4 |  | |  |  |
| Tmem132e | Nkx3-2 | Syt16 |  |  |  | Hoxa11as | Icosl |  | |  |  |
| Tmem178 | Nmnat2 | Syt2 |  |  |  | Hoxa13 | Id1 |  | |  |  |
| Tmem59l | Nog | Syt6 |  |  |  | Hoxa2 | Iffo2 |  | |  |  |
| Tnfsf9 | Nol3 | Tacstd2 |  |  |  | Hoxa6 | Igdcc3 |  | |  |  |
| Tnxb | Npas2 | Tbr1 |  |  |  | Hoxa7 | Igdcc4 |  | |  |  |
| Trerf1 | Npas3 | Tbx1 |  |  |  | Hoxb1 | Igf2as |  | |  |  |
| Trim62 | Nr3c2 | Tbx15 |  |  |  | Hoxb13 | Igfbp5 |  | |  |  |
| Trp53i11 | Nrg2 | Tcf7l2 |  |  |  | Hoxb2 | Il10rb |  | |  |  |
| Tsnaxip1 | Nrgn | Thsd7b |  |  |  | Hoxb4 | Il1rapl2 |  | |  |  |
| Ttc39a | Nrk | Thy1 |  |  |  | Hoxb5 | Il4ra |  | |  |  |
| Ttll10 | Nrn1 | Tlx1 |  |  |  | Hoxb6 | Ildr1 |  | |  |  |
| Tub | Nrxn3 | Tlx2 |  |  |  | Hoxb7 | Ildr2 |  | |  |  |
| Tuba8 | Nt5c1a | Tmem132c |  |  |  | Hoxb9 | Ina |  | |  |  |
| Twist2 | Ntn4 | Tmem132e |  |  |  | Hoxc10 | Inf2 |  | |  |  |
| Ucn | Ntsr1 | Tmem145 |  |  |  | Hoxc11 | Insm1 |  | |  |  |
| Unc5a | Nudt18 | Tmod1 |  |  |  | Hoxc12 | Insm2 |  | |  |  |
| Uncx | Nxph1 | Tnfsf9 |  |  |  | Hoxc13 | Insrr |  | |  |  |
| Vax1 | Nxph4 | Tnnt2 |  |  |  | Hoxc4 | Iqgap3 |  | |  |  |
| Vax2 | Odf3b | Tnnt3 |  |  |  | Hoxc6 | Irf4 |  | |  |  |
| Vgll2 | Olfml2b | Trank1 |  |  |  | Hoxc8 | Irf5 |  | |  |  |
| Vipr1 | Olfr94 | Trim62 |  |  |  | Hoxc9 | Irgq |  | |  |  |
| Vipr2 | Olig2 | Trp63 |  |  |  | Hoxd1 | Irx2 |  | |  |  |
| Vsx2 | Onecut1 | Trpc6 |  |  |  | Hoxd10 | Isg15 |  | |  |  |
| Vtn | Onecut2 | Trpm3 |  |  |  | Hoxd11 | Isl2 |  | |  |  |
| Wnk4 | Onecut3 | Trpm8 |  |  |  | Hoxd12 | Ism1 |  | |  |  |
| Wnt10b | Osr1 | Tshz2 |  |  |  | Hoxd13 | Isoc2b |  | |  |  |
| Wnt11 | Osr2 | Tub |  |  |  | Hoxd3 | Itga11 |  | |  |  |
| Wnt9a | Otp | Twist2 |  |  |  | Hoxd9 | Itgav |  | |  |  |
| Wscd2 | Otx1 | Ucn |  |  |  | Hpdl | Itgb3 |  | |  |  |
| Zbtb42 | Oxt | Uncx |  |  |  | Hpgd | Itih5 |  | |  |  |
| Zfhx3 | Pak6 | Vav3 |  |  |  | Hr | Jakmip3 |  | |  |  |
| Zfp503 | Palm2 | Vax1 |  |  |  | Hrc | Jam2 |  | |  |  |
| Zfp579 | Panx2 | Vax2 |  |  |  | Hrh1 | Jsrp1 |  | |  |  |
| Zfp804a | Pappa | Vgll2 |  |  |  | Hrk | Kank1 |  | |  |  |
| Zhx2 | Papss2 | Vipr1 |  |  |  | Hs3st3a1 | Kazald1 |  | |  |  |
| Zic2 | Paqr9 | Vmn1r107 |  |  |  | Hs3st6 | Kcna2 |  | |  |  |
| Zmynd15 | Pard6g | Vmn1r137 |  |  |  | Hs6st3 | Kcna3 |  | |  |  |
| Znrf4 | Parm1 | Vmn1r165 |  |  |  | Hsd11b2 | Kcna7 |  | |  |  |
|  | Pax1 | Vsx2 |  |  |  | Hspb3 | Kcnc2 |  | |  |  |
|  | Pax2 | Vtn |  |  |  | Htr1a | Kcnc3 |  | |  |  |
|  | Pax9 | Vwc2 |  |  |  | Htr1d | Kcnd2 |  | |  |  |
|  | Pcdhac2 | Wnk4 |  |  |  | Htr2a | Kcnd3 |  | |  |  |
|  | Pcdhga11 | Wnt11 |  |  |  | Htr5a | Kcnh3 |  | |  |  |
|  | Pcdhga12 | Wnt16 |  |  |  | Icosl | Kcnj3 |  | |  |  |
|  | Pde10a | Wnt9a |  |  |  | Iffo2 | Kcnk1 |  | |  |  |
|  | Pde1b | Zfhx4 |  |  |  | Igdcc3 | Kcnk12 |  | |  |  |
|  | Pdgfra | Zfp579 |  |  |  | Igf2as | Kcnk4 |  | |  |  |
|  | Pdx1 | Zmynd15 |  |  |  | Igfbp5 | Kcnn1 |  | |  |  |
|  | Pdzrn4 | Znrf4 |  |  |  | Il11 | Kcnn2 |  | |  |  |
|  | Peli2 |  |  |  |  | Il1rapl2 | Kcnq1 |  | |  |  |
|  | Phox2b |  |  |  |  | Ildr1 | Kcnt1 |  | |  |  |
|  | Pigz |  |  |  |  | Ildr2 | Kdelc2 |  | |  |  |
|  | Pin1-ps1 |  |  |  |  | Ina | Kdelr3 |  | |  |  |
|  | Pitx2 |  |  |  |  | Inf2 | Kdr |  | |  |  |
|  | Pitx3 |  |  |  |  | Insm1 | Kif26a |  | |  |  |
|  | Plau |  |  |  |  | Insm2 | Kif26b |  | |  |  |
|  | Pld2 |  |  |  |  | Insrr | Kif3c |  | |  |  |
|  | Plekhg6 |  |  |  |  | Irf4 | Kitl |  | |  |  |
|  | Plekhh3 |  |  |  |  | Irf5 | Klf15 |  | |  |  |
|  | Plk5 |  |  |  |  | Irf8 | Klf3 |  | |  |  |
|  | Pmaip1 |  |  |  |  | Irx1 | Klf6 |  | |  |  |
|  | Pnma2 |  |  |  |  | Isl2 | Klhdc8a |  | |  |  |
|  | Pnmal2 |  |  |  |  | Ism1 | Klhl23 |  | |  |  |
|  | Pou3f3 |  |  |  |  | Isoc2b | Klhl36 |  | |  |  |
|  | Pou4f3 |  |  |  |  | Itga11 | Kremen2 |  | |  |  |
|  | Ppp1r1b |  |  |  |  | Itga9 | Krt77 |  | |  |  |
|  | Ppp1r3b |  |  |  |  | Ivl | L1td1 |  | |  |  |
|  | Ppp1r3g |  |  |  |  | Jakmip3 | Lad1 |  | |  |  |
|  | Ppp4r1l-ps |  |  |  |  | Jph4 | Lag3 |  | |  |  |
|  | Prdm12 |  |  |  |  | Kazald1 | Lama3 |  | |  |  |
|  | Prdm13 |  |  |  |  | Kcna2 | Lbh |  | |  |  |
|  | Prdm6 |  |  |  |  | Kcna3 | Lbx2 |  | |  |  |
|  | Prhoxnb |  |  |  |  | Kcna4 | Lfng |  | |  |  |
|  | Prkcdbp |  |  |  |  | Kcna5 | Lhfp |  | |  |  |
|  | Prkch |  |  |  |  | Kcna7 | Lhfpl2 |  | |  |  |
|  | Prlhr |  |  |  |  | Kcnb2 | Lhx1 |  | |  |  |
|  | Prlr |  |  |  |  | Kcnc2 | Lmtk3 |  | |  |  |
|  | Prrt1 |  |  |  |  | Kcnc3 | Lmx1a |  | |  |  |
|  | Prrt4 |  |  |  |  | Kcnd2 | Lor |  | |  |  |
|  | Prrxl1 |  |  |  |  | Kcnh3 | Loxl2 |  | |  |  |
|  | Prune2 |  |  |  |  | Kcnh8 | Loxl3 |  | |  |  |
|  | Psmb8 |  |  |  |  | Kcnj10 | Lpcat1 |  | |  |  |
|  | Ptchd3 |  |  |  |  | Kcnj12 | Lpcat2 |  | |  |  |
|  | Ptf1a |  |  |  |  | Kcnj3 | Lpl |  | |  |  |
|  | Ptpn13 |  |  |  |  | Kcnk1 | Lrfn5 |  | |  |  |
|  | Ptprb |  |  |  |  | Kcnk15 | Lrg1 |  | |  |  |
|  | Ptprz1 |  |  |  |  | Kcnk3 | Lrig3 |  | |  |  |
|  | Ptx3 |  |  |  |  | Kcnk4 | Lrrc10 |  | |  |  |
|  | Pvrl1 |  |  |  |  | Kcnk9 | Lrrc16b |  | |  |  |
|  | Qpct |  |  |  |  | Kcnn2 | Lrrc4c |  | |  |  |
|  | Rab33a |  |  |  |  | Kcnq1 | Lrrfip1 |  | |  |  |
|  | Raet1a |  |  |  |  | Kcnq4 | Lrrn1 |  | |  |  |
|  | Rapgefl1 |  |  |  |  | Kcnt1 | Lrrtm1 |  | |  |  |
|  | Rasal1 |  |  |  |  | Kcnt2 | Ltb |  | |  |  |
|  | Rasgef1c |  |  |  |  | Kdelr3 | Ltb4r2 |  | |  |  |
|  | Rasip1 |  |  |  |  | Kdr | Ltbp3 |  | |  |  |
|  | Rassf10 |  |  |  |  | Khdrbs2 | Ltc4s |  | |  |  |
|  | Raver2 |  |  |  |  | Kif26b | Ly86 |  | |  |  |
|  | Rax |  |  |  |  | Kif3c | Lypd3 |  | |  |  |
|  | Rbpjl |  |  |  |  | Kiss1r | Lypd6b |  | |  |  |
|  | Rem1 |  |  |  |  | Klf15 | Lysmd2 |  | |  |  |
|  | Rfx4 |  |  |  |  | Klf3 | Mab21l1 |  | |  |  |
|  | Rgs11 |  |  |  |  | Klhdc8a | Mab21l2 |  | |  |  |
|  | Rgs6 |  |  |  |  | Kndc1 | Mafa |  | |  |  |
|  | Rhov |  |  |  |  | Kremen2 | Maff |  | |  |  |
|  | Ripply2 |  |  |  |  | Krt1 | Mal2 |  | |  |  |
|  | Rln3 |  |  |  |  | Krt77 | Mamstr |  | |  |  |
|  | Rnf150 |  |  |  |  | Ksr2 | Map3k6 |  | |  |  |
|  | Rprml |  |  |  |  | Ky | Mapk13 |  | |  |  |
|  | Rspo1 |  |  |  |  | Lad1 | Marveld1 |  | |  |  |
|  | Rspo4 |  |  |  |  | Lama3 | Mast1 |  | |  |  |
|  | Rtbdn |  |  |  |  | Lamc3 | Matn2 |  | |  |  |
|  | Rtn4rl2 |  |  |  |  | Lbh | Mblac2 |  | |  |  |
|  | Rxrg |  |  |  |  | Lbx1 | Mc3r |  | |  |  |
|  | S1pr3 |  |  |  |  | Lbx2 | Mctp1 |  | |  |  |
|  | S1pr4 |  |  |  |  | Lfng | Mdfic |  | |  |  |
|  | S1pr5 |  |  |  |  | Lgals7 | Med12l |  | |  |  |
|  | Sall1 |  |  |  |  | Lhfpl2 | Megf6 |  | |  |  |
|  | Samd14 |  |  |  |  | Lhx1 | Mertk |  | |  |  |
|  | Scarf2 |  |  |  |  | Lhx2 | Met |  | |  |  |
|  | Scn4b |  |  |  |  | Lhx5 | Mettl7a1 |  | |  |  |
|  | Scn8a |  |  |  |  | Lif | Mfhas1 |  | |  |  |
|  | Scrt2 |  |  |  |  | Lingo1 | Mgat5b |  | |  |  |
|  | Sdk1 |  |  |  |  | Lingo3 | Mir1199 |  | |  |  |
|  | Sema3d |  |  |  |  | Lmo7 | Mir124a-3 |  | |  |  |
|  | Sema5b |  |  |  |  | Lmod1 | Mir129-2 |  | |  |  |
|  | Sez6 |  |  |  |  | Lmtk3 | Mir137 |  | |  |  |
|  | Sfrp4 |  |  |  |  | Lmx1a | Mir1895 |  | |  |  |
|  | Sftpc |  |  |  |  | Lor | Mir1904 |  | |  |  |
|  | Sgpp2 |  |  |  |  | Loxl2 | Mir1907 |  | |  |  |
|  | Shank1 |  |  |  |  | Loxl3 | Mir193 |  | |  |  |
|  | Shank3 |  |  |  |  | Lpcat2 | Mir1966 |  | |  |  |
|  | She |  |  |  |  | Lphn3 | Mir212 |  | |  |  |
|  | Shh |  |  |  |  | Lpl | Mir219-2 |  | |  |  |
|  | Shisa3 |  |  |  |  | Lrfn2 | Mir3081 |  | |  |  |
|  | Shox2 |  |  |  |  | Lrfn5 | Mir615 |  | |  |  |
|  | Sim2 |  |  |  |  | Lrg1 | Mir688 |  | |  |  |
|  | Six3 |  |  |  |  | Lrig3 | Mir7-2 |  | |  |  |
|  | Six6 |  |  |  |  | Lrrc10 | Mir9-3 |  | |  |  |
|  | Slc12a5 |  |  |  |  | Lrrc16b | Mlxipl |  | |  |  |
|  | Slc16a2 |  |  |  |  | Lrrc33 | Mmd |  | |  |  |
|  | Slc17a7 |  |  |  |  | Lrrc38 | Mme |  | |  |  |
|  | Slc18a3 |  |  |  |  | Lrrc4c | Mmgt2 |  | |  |  |
|  | Slc1a1 |  |  |  |  | Lrrfip1 | Mmp15 |  | |  |  |
|  | Slc1a2 |  |  |  |  | Lrrn1 | Mmp17 |  | |  |  |
|  | Slc1a6 |  |  |  |  | Lrrn2 | Mmp24 |  | |  |  |
|  | Slc24a4 |  |  |  |  | Lrrtm1 | Mn1 |  | |  |  |
|  | Slc26a10 |  |  |  |  | Ltb | Mnx1 |  | |  |  |
|  | Slc26a9 |  |  |  |  | Ltb4r2 | Mocos |  | |  |  |
|  | Slc30a10 |  |  |  |  | Ltbp3 | Mpnd |  | |  |  |
|  | Slc34a2 |  |  |  |  | Ltc4s | Mpped2 |  | |  |  |
|  | Slc44a5 |  |  |  |  | Lypd3 | Mrc2 |  | |  |  |
|  | Slc45a3 |  |  |  |  | Lypd6b | Mst1 |  | |  |  |
|  | Slc47a1 |  |  |  |  | Lysmd2 | Mst1r |  | |  |  |
|  | Slc4a3 |  |  |  |  | Mab21l1 | Mtap |  | |  |  |
|  | Slc4a8 |  |  |  |  | Mab21l2 | Mtrf1l |  | |  |  |
|  | Slc6a2 |  |  |  |  | Mafa | Mtus2 |  | |  |  |
|  | Slc6a3 |  |  |  |  | Magel2 | Mycl1 |  | |  |  |
|  | Slc7a10 |  |  |  |  | Mal2 | Mylip |  | |  |  |
|  | Slc9a3 |  |  |  |  | Map3k5 | Myo3a |  | |  |  |
|  | Snai1 |  |  |  |  | Mapk13 | Myod1 |  | |  |  |
|  | Sned1 |  |  |  |  | Mast1 | Myrip |  | |  |  |
|  | Snx20 |  |  |  |  | Matn2 | N28178 |  | |  |  |
|  | Socs3 |  |  |  |  | Mboat1 | Nags |  | |  |  |
|  | Sorcs3 |  |  |  |  | Mc3r | Nanos1 |  | |  |  |
|  | Sost |  |  |  |  | Mctp1 | Nap1l5 |  | |  |  |
|  | Sox1 |  |  |  |  | Mdfic | Nat8l |  | |  |  |
|  | Sox14 |  |  |  |  | Megf10 | Nceh1 |  | |  |  |
|  | Sox17 |  |  |  |  | Megf6 | Nedd4l |  | |  |  |
|  | Sox18 |  |  |  |  | Meis3 | Nefl |  | |  |  |
|  | Sox21 |  |  |  |  | Meox2 | Nes |  | |  |  |
|  | Sox3 |  |  |  |  | Met | Neto1 |  | |  |  |
|  | Sox7 |  |  |  |  | Metrnl | Neurl1b |  | |  |  |
|  | Sox9 |  |  |  |  | Mfhas1 | Neurog1 |  | |  |  |
|  | Sp7 |  |  |  |  | Mgat3 | Neurog2 |  | |  |  |
|  | Sp9 |  |  |  |  | Mgat5b | Nfe2l3 |  | |  |  |
|  | Spats2l |  |  |  |  | Mir1199 | Nfkbid |  | |  |  |
|  | Spint1 |  |  |  |  | Mir124a-3 | Nfkbie |  | |  |  |
|  | Spon1 |  |  |  |  | Mir129-2 | Nhlh1 |  | |  |  |
|  | Sstr1 |  |  |  |  | Mir1895 | Nhlrc1 |  | |  |  |
|  | Stat6 |  |  |  |  | Mir1904 | Nipal1 |  | |  |  |
|  | Stbd1 |  |  |  |  | Mir1907 | Nipsnap1 |  | |  |  |
|  | Stx1a |  |  |  |  | Mir193 | Nkd1 |  | |  |  |
|  | Susd5 |  |  |  |  | Mir1932 | Nkx2-3 |  | |  |  |
|  | Syne2 |  |  |  |  | Mir203 | Nkx2-5 |  | |  |  |
|  | Syt16 |  |  |  |  | Mir219-2 | Nkx2-9 |  | |  |  |
|  | Syt2 |  |  |  |  | Mir3081 | Nkx3-1 |  | |  |  |
|  | T |  |  |  |  | Mir449c | Nlrp4f |  | |  |  |
|  | Tacr1 |  |  |  |  | Mir709 | Nmnat2 |  | |  |  |
|  | Tacstd2 |  |  |  |  | Mir9-3 | Nodal |  | |  |  |
|  | Tap2 |  |  |  |  | Mme | Nog |  | |  |  |
|  | Tbr1 |  |  |  |  | Mmgt2 | Npas2 |  | |  |  |
|  | Tbx15 |  |  |  |  | Mmp15 | Npas3 |  | |  |  |
|  | Tbx2 |  |  |  |  | Mmp16 | Npffr1 |  | |  |  |
|  | Thbs1 |  |  |  |  | Mmp17 | Npr2 |  | |  |  |
|  | Tifa |  |  |  |  | Mmp24 | Npw |  | |  |  |
|  | Tlx1 |  |  |  |  | Mmp9 | Npy1r |  | |  |  |
|  | Tlx2 |  |  |  |  | Mn1 | Nr3c2 |  | |  |  |
|  | Tm6sf1 |  |  |  |  | Mnx1 | Nrip1 |  | |  |  |
|  | Tmc5 |  |  |  |  | Mocos | Nt5c1a |  | |  |  |
|  | Tmeff2 |  |  |  |  | Mos | Nt5e |  | |  |  |
|  | Tmem132b |  |  |  |  | Moxd1 | Ntf5 |  | |  |  |
|  | Tmem132c |  |  |  |  | Mpped2 | Nxnl2 |  | |  |  |
|  | Tmem132e |  |  |  |  | Mrc2 | Nxph1 |  | |  |  |
|  | Tmem178 |  |  |  |  | Msc | Nxph4 |  | |  |  |
|  | Tmem28 |  |  |  |  | Mst1r | Odf3l2 |  | |  |  |
|  | Tmod1 |  |  |  |  | Mt3 | Olfml2b |  | |  |  |
|  | Tnfaip2 |  |  |  |  | Mtrf1l | Olfr279 |  | |  |  |
|  | Tnfrsf11a |  |  |  |  | Mtus2 | Olfr282 |  | |  |  |
|  | Tnxb |  |  |  |  | Muc20 | Olfr315 |  | |  |  |
|  | Tppp |  |  |  |  | Mycl1 | Olfr750 |  | |  |  |
|  | Trerf1 |  |  |  |  | Mylip | Olfr94 |  | |  |  |
|  | Trim62 |  |  |  |  | Myo1e | Olig1 |  | |  |  |
|  | Trim67 |  |  |  |  | Myo5c | Olig2 |  | |  |  |
|  | Trim8 |  |  |  |  | Myod1 | Onecut1 |  | |  |  |
|  | Trp53i11 |  |  |  |  | Myrip | Onecut2 |  | |  |  |
|  | Tspan11 |  |  |  |  | Nat8l | Osbpl6 |  | |  |  |
|  | Ttc39a |  |  |  |  | Nccrp1 | Osr1 |  | |  |  |
|  | Ttc9 |  |  |  |  | Ndn | Osr2 |  | |  |  |
|  | Tub |  |  |  |  | Nedd4l | Otx1 |  | |  |  |
|  | Twist2 |  |  |  |  | Nefl | P2ry1 |  | |  |  |
|  | Ucn |  |  |  |  | Nell1 | Padi2 |  | |  |  |
|  | Unc5c |  |  |  |  | Nes | Pak6 |  | |  |  |
|  | Unc80 |  |  |  |  | Neto1 | Palm2 |  | |  |  |
|  | Vash1 |  |  |  |  | Neurl1b | Panx2 |  | |  |  |
|  | Vav3 |  |  |  |  | Neurog1 | Papss2 |  | |  |  |
|  | Vax1 |  |  |  |  | Neurog2 | Pard3b |  | |  |  |
|  | Vax2 |  |  |  |  | Nfe2l3 | Parm1 |  | |  |  |
|  | Vgll2 |  |  |  |  | Nfil3 | Parp16 |  | |  |  |
|  | Vipr1 |  |  |  |  | Nfkbid | Parp9 |  | |  |  |
|  | Vsx2 |  |  |  |  | Nhlh1 | Parvb |  | |  |  |
|  | Vtn |  |  |  |  | Nhsl2 | Pax2 |  | |  |  |
|  | Vwa2 |  |  |  |  | Nipal1 | Pcdh17 |  | |  |  |
|  | Vwc2 |  |  |  |  | Nkd1 | Pcdha1 |  | |  |  |
|  | Wnk4 |  |  |  |  | Nkx1-2 | Pcdha12 |  | |  |  |
|  | Wnt11 |  |  |  |  | Nkx2-2 | Pcdha3 |  | |  |  |
|  | Wnt16 |  |  |  |  | Nkx2-3 | Pcdhac2 |  | |  |  |
|  | Wnt5a |  |  |  |  | Nkx2-5 | Pcdhb1 |  | |  |  |
|  | Wnt8a |  |  |  |  | Nkx2-9 | Pcdhb12 |  | |  |  |
|  | Wnt9a |  |  |  |  | Nkx3-1 | Pcdhga10 |  | |  |  |
|  | Wscd2 |  |  |  |  | Nkx3-2 | Pcdhga11 |  | |  |  |
|  | Xkr7 |  |  |  |  | Nkx6-1 | Pcdhga5 |  | |  |  |
|  | Zfhx2as |  |  |  |  | Nmnat2 | Pcdhgb4 |  | |  |  |
|  | Zfhx3 |  |  |  |  | Nod2 | Pcdhgb6 |  | |  |  |
|  | Zfhx4 |  |  |  |  | Nodal | Pcdhgb7 |  | |  |  |
|  | Zfp423 |  |  |  |  | Nog | Pcdhgb8 |  | |  |  |
|  | Zfp579 |  |  |  |  | Nova2 | Pcdhgc3 |  | |  |  |
|  | Zfp804a |  |  |  |  | Nox4 | Pcsk2 |  | |  |  |
|  | Zhx2 |  |  |  |  | Npas1 | Pcsk6 |  | |  |  |
|  | Zic2 |  |  |  |  | Npas2 | Pcyox1l |  | |  |  |
|  | Zmynd15 |  |  |  |  | Npas3 | Pde3a |  | |  |  |
|  | Znrf4 |  |  |  |  | Npr2 | Pde5a |  | |  |  |
|  |  |  |  |  |  | Npw | Pdgfra |  | |  |  |
|  |  |  |  |  |  | Npy | Pdk1 |  | |  |  |
|  |  |  |  |  |  | Nr3c2 | Perp |  | |  |  |
|  |  |  |  |  |  | Nr4a3 | Pgm1 |  | |  |  |
|  |  |  |  |  |  | Nrarp | Pgr |  | |  |  |
|  |  |  |  |  |  | Nrgn | Phlda1 |  | |  |  |
|  |  |  |  |  |  | Nrip1 | Phlda2 |  | |  |  |
|  |  |  |  |  |  | Nrn1 | Phlda3 |  | |  |  |
|  |  |  |  |  |  | Nt5c1a | Phldb3 |  | |  |  |
|  |  |  |  |  |  | Ntf5 | Phox2b |  | |  |  |
|  |  |  |  |  |  | Ntsr1 | Phyh |  | |  |  |
|  |  |  |  |  |  | Ntsr2 | Pif1 |  | |  |  |
|  |  |  |  |  |  | Nxnl1 | Pigz |  | |  |  |
|  |  |  |  |  |  | Nxph1 | Pik3c2b |  | |  |  |
|  |  |  |  |  |  | Nxph4 | Pitx3 |  | |  |  |
|  |  |  |  |  |  | Nynrin | Pkdcc |  | |  |  |
|  |  |  |  |  |  | Odf3l2 | Pkia |  | |  |  |
|  |  |  |  |  |  | Olfml2a | Pkn3 |  | |  |  |
|  |  |  |  |  |  | Olfr315 | Pkp2 |  | |  |  |
|  |  |  |  |  |  | Olfr323 | Plagl1 |  | |  |  |
|  |  |  |  |  |  | Olfr94 | Plcl1 |  | |  |  |
|  |  |  |  |  |  | Olig1 | Plcxd3 |  | |  |  |
|  |  |  |  |  |  | Olig2 | Pld1 |  | |  |  |
|  |  |  |  |  |  | Olig3 | Plekha2 |  | |  |  |
|  |  |  |  |  |  | Onecut1 | Plekhh1 |  | |  |  |
|  |  |  |  |  |  | Onecut2 | Plk5 |  | |  |  |
|  |  |  |  |  |  | Onecut3 | Plscr1 |  | |  |  |
|  |  |  |  |  |  | Osbpl6 | Plscr4 |  | |  |  |
|  |  |  |  |  |  | Osr1 | Plxdc2 |  | |  |  |
|  |  |  |  |  |  | Osr2 | Pmaip1 |  | |  |  |
|  |  |  |  |  |  | Otop1 | Pnma2 |  | |  |  |
|  |  |  |  |  |  | Otp | Pnpla1 |  | |  |  |
|  |  |  |  |  |  | Otx1 | Pnpla3 |  | |  |  |
|  |  |  |  |  |  | Oxt | Popdc3 |  | |  |  |
|  |  |  |  |  |  | P2rx5 | Pou3f1 |  | |  |  |
|  |  |  |  |  |  | P2ry1 | Pou3f3 |  | |  |  |
|  |  |  |  |  |  | P4ha3 | Pou4f1 |  | |  |  |
|  |  |  |  |  |  | Padi1 | Ppfia3 |  | |  |  |
|  |  |  |  |  |  | Padi2 | Ppp1r3b |  | |  |  |
|  |  |  |  |  |  | Pak6 | Ppp1r3g |  | |  |  |
|  |  |  |  |  |  | Palm2 | Ppp1r9a |  | |  |  |
|  |  |  |  |  |  | Panx2 | Ppp2r2c |  | |  |  |
|  |  |  |  |  |  | Pappa | Prdm12 |  | |  |  |
|  |  |  |  |  |  | Papss2 | Prdm13 |  | |  |  |
|  |  |  |  |  |  | Paqr6 | Prdm6 |  | |  |  |
|  |  |  |  |  |  | Parp16 | Prex2 |  | |  |  |
|  |  |  |  |  |  | Parp9 | Prkcb |  | |  |  |
|  |  |  |  |  |  | Pax1 | Prkce |  | |  |  |
|  |  |  |  |  |  | Pax2 | Prlhr |  | |  |  |
|  |  |  |  |  |  | Pcdh17 | Prop1 |  | |  |  |
|  |  |  |  |  |  | Pcdha1 | Prrt1 |  | |  |  |
|  |  |  |  |  |  | Pcdha12 | Prrt3 |  | |  |  |
|  |  |  |  |  |  | Pcdha3 | Prrt4 |  | |  |  |
|  |  |  |  |  |  | Pcdha5 | Prrxl1 |  | |  |  |
|  |  |  |  |  |  | Pcdha7 | Prss12 |  | |  |  |
|  |  |  |  |  |  | Pcdhac2 | Prtg |  | |  |  |
|  |  |  |  |  |  | Pcdhb1 | Psd2 |  | |  |  |
|  |  |  |  |  |  | Pcdhga10 | Pstpip2 |  | |  |  |
|  |  |  |  |  |  | Pcdhga2 | Pter |  | |  |  |
|  |  |  |  |  |  | Pcdhga4 | Ptf1a |  | |  |  |
|  |  |  |  |  |  | Pcdhga5 | Ptger2 |  | |  |  |
|  |  |  |  |  |  | Pcdhga8 | Ptger3 |  | |  |  |
|  |  |  |  |  |  | Pcdhgb2 | Ptpn18 |  | |  |  |
|  |  |  |  |  |  | Pcdhgb4 | Ptprb |  | |  |  |
|  |  |  |  |  |  | Pcdhgb6 | Ptpre |  | |  |  |
|  |  |  |  |  |  | Pcdhgb8 | Ptprg |  | |  |  |
|  |  |  |  |  |  | Pcdhgc3 | Ptprk |  | |  |  |
|  |  |  |  |  |  | Pcdhgc4 | Ptprr |  | |  |  |
|  |  |  |  |  |  | Pcolce2 | Ptprz1 |  | |  |  |
|  |  |  |  |  |  | Pcsk1 | Ptx3 |  | |  |  |
|  |  |  |  |  |  | Pcsk2 | Pvrl1 |  | |  |  |
|  |  |  |  |  |  | Pde1b | Pygo1 |  | |  |  |
|  |  |  |  |  |  | Pde3a | Rab3b |  | |  |  |
|  |  |  |  |  |  | Pde5a | Rab6b |  | |  |  |
|  |  |  |  |  |  | Pdgfc | Rab7l1 |  | |  |  |
|  |  |  |  |  |  | Pdgfra | Rac3 |  | |  |  |
|  |  |  |  |  |  | Pdzrn4 | Rap2b |  | |  |  |
|  |  |  |  |  |  | Perp | Rapgefl1 |  | |  |  |
|  |  |  |  |  |  | Pgm1 | Rasgef1c |  | |  |  |
|  |  |  |  |  |  | Pgr | Rasgrp2 |  | |  |  |
|  |  |  |  |  |  | Phlda1 | Rasl10b |  | |  |  |
|  |  |  |  |  |  | Phlda2 | Rassf10 |  | |  |  |
|  |  |  |  |  |  | Phlda3 | Raver2 |  | |  |  |
|  |  |  |  |  |  | Phldb3 | Rbm20 |  | |  |  |
|  |  |  |  |  |  | Phox2a | Rbm24 |  | |  |  |
|  |  |  |  |  |  | Pigz | Rem1 |  | |  |  |
|  |  |  |  |  |  | Pik3c2b | Rgma |  | |  |  |
|  |  |  |  |  |  | Pin1-ps1 | Rgs11 |  | |  |  |
|  |  |  |  |  |  | Pip5kl1 | Rgs6 |  | |  |  |
|  |  |  |  |  |  | Pitx1 | Rhbdl3 |  | |  |  |
|  |  |  |  |  |  | Pitx3 | Rhoj |  | |  |  |
|  |  |  |  |  |  | Pkia | Rhoq |  | |  |  |
|  |  |  |  |  |  | Pkp2 | Rhpn2 |  | |  |  |
|  |  |  |  |  |  | Plagl1 | Rilp |  | |  |  |
|  |  |  |  |  |  | Plau | Ripply2 |  | |  |  |
|  |  |  |  |  |  | Plcl1 | Rnf122 |  | |  |  |
|  |  |  |  |  |  | Plcl2 | Rnf135 |  | |  |  |
|  |  |  |  |  |  | Pld1 | Rnf150 |  | |  |  |
|  |  |  |  |  |  | Pld2 | Rnf182 |  | |  |  |
|  |  |  |  |  |  | Plekha2 | Rnf39 |  | |  |  |
|  |  |  |  |  |  | Plekhg6 | Robo1 |  | |  |  |
|  |  |  |  |  |  | Plekhh1 | Ror1 |  | |  |  |
|  |  |  |  |  |  | Plekhh3 | Rpp25 |  | |  |  |
|  |  |  |  |  |  | Plk5 | Rprm |  | |  |  |
|  |  |  |  |  |  | Plscr4 | Rragd |  | |  |  |
|  |  |  |  |  |  | Plxdc2 | Rspo1 |  | |  |  |
|  |  |  |  |  |  | Pmp22 | Rspo4 |  | |  |  |
|  |  |  |  |  |  | Pnma2 | Rtbdn |  | |  |  |
|  |  |  |  |  |  | Pnpla1 | Rtn4rl2 |  | |  |  |
|  |  |  |  |  |  | Pnpla3 | Ryr1 |  | |  |  |
|  |  |  |  |  |  | Popdc3 | S1pr4 |  | |  |  |
|  |  |  |  |  |  | Pou3f1 | S1pr5 |  | |  |  |
|  |  |  |  |  |  | Pou3f3 | Samd14 |  | |  |  |
|  |  |  |  |  |  | Pou3f4 | Schip1 |  | |  |  |
|  |  |  |  |  |  | Pou4f1 | Scn8a |  | |  |  |
|  |  |  |  |  |  | Pou4f3 | Scnn1g |  | |  |  |
|  |  |  |  |  |  | Ppap2b | Scrt2 |  | |  |  |
|  |  |  |  |  |  | Pparg | Sct |  | |  |  |
|  |  |  |  |  |  | Ppfia3 | Scx |  | |  |  |
|  |  |  |  |  |  | Ppm1l | Sec14l4 |  | |  |  |
|  |  |  |  |  |  | Ppp1r3b | Sema3c |  | |  |  |
|  |  |  |  |  |  | Ppp1r3g | Sema3d |  | |  |  |
|  |  |  |  |  |  | Ppp2r2c | Sema3e |  | |  |  |
|  |  |  |  |  |  | Prdm12 | Sema5a |  | |  |  |
|  |  |  |  |  |  | Prdm13 | Sept1 |  | |  |  |
|  |  |  |  |  |  | Prdm6 | Sept11 |  | |  |  |
|  |  |  |  |  |  | Prex2 | Sfn |  | |  |  |
|  |  |  |  |  |  | Prkcb | Sfrp1 |  | |  |  |
|  |  |  |  |  |  | Prkcdbp | Sfrp2 |  | |  |  |
|  |  |  |  |  |  | Prkch | Sftpc |  | |  |  |
|  |  |  |  |  |  | Prlhr | Sfxn1 |  | |  |  |
|  |  |  |  |  |  | Prr16 | Sh2d3c |  | |  |  |
|  |  |  |  |  |  | Prrt1 | Sh2d4a |  | |  |  |
|  |  |  |  |  |  | Prrt3 | Sh2d5 |  | |  |  |
|  |  |  |  |  |  | Prrt4 | Sh3bp1 |  | |  |  |
|  |  |  |  |  |  | Prrx2 | Sh3bp4 |  | |  |  |
|  |  |  |  |  |  | Prrxl1 | Sh3pxd2b |  | |  |  |
|  |  |  |  |  |  | Prss12 | Sh3rf1 |  | |  |  |
|  |  |  |  |  |  | Prtg | Sh3rf3 |  | |  |  |
|  |  |  |  |  |  | Psd2 | Shank1 |  | |  |  |
|  |  |  |  |  |  | Psmb8 | Shank3 |  | |  |  |
|  |  |  |  |  |  | Pstpip2 | She |  | |  |  |
|  |  |  |  |  |  | Ptf1a | Shh |  | |  |  |
|  |  |  |  |  |  | Ptger2 | Shox2 |  | |  |  |
|  |  |  |  |  |  | Ptger3 | Sigirr |  | |  |  |
|  |  |  |  |  |  | Ptgs1 | Sim1 |  | |  |  |
|  |  |  |  |  |  | Ptpn14 | Sim2 |  | |  |  |
|  |  |  |  |  |  | Ptpn18 | Six3 |  | |  |  |
|  |  |  |  |  |  | Ptprh | Six5 |  | |  |  |
|  |  |  |  |  |  | Ptprk | Slc16a11 |  | |  |  |
|  |  |  |  |  |  | Ptprn2 | Slc16a9 |  | |  |  |
|  |  |  |  |  |  | Ptprz1 | Slc18a3 |  | |  |  |
|  |  |  |  |  |  | Pvrl1 | Slc1a1 |  | |  |  |
|  |  |  |  |  |  | Pvt1 | Slc24a4 |  | |  |  |
|  |  |  |  |  |  | Pygo1 | Slc25a34 |  | |  |  |
|  |  |  |  |  |  | Rab19 | Slc26a11 |  | |  |  |
|  |  |  |  |  |  | Rab37 | Slc27a2 |  | |  |  |
|  |  |  |  |  |  | Rab3b | Slc29a4 |  | |  |  |
|  |  |  |  |  |  | Rab6b | Slc2a12 |  | |  |  |
|  |  |  |  |  |  | Ranbp3l | Slc30a10 |  | |  |  |
|  |  |  |  |  |  | Rap2b | Slc32a1 |  | |  |  |
|  |  |  |  |  |  | Rapgefl1 | Slc35f1 |  | |  |  |
|  |  |  |  |  |  | Rasal1 | Slc35f2 |  | |  |  |
|  |  |  |  |  |  | Rasgef1a | Slc39a4 |  | |  |  |
|  |  |  |  |  |  | Rasgef1c | Slc45a3 |  | |  |  |
|  |  |  |  |  |  | Rasgrp2 | Slc46a1 |  | |  |  |
|  |  |  |  |  |  | Rasl10a | Slc47a1 |  | |  |  |
|  |  |  |  |  |  | Rasl10b | Slc48a1 |  | |  |  |
|  |  |  |  |  |  | Rasl11a | Slc6a3 |  | |  |  |
|  |  |  |  |  |  | Rassf10 | Slc6a4 |  | |  |  |
|  |  |  |  |  |  | Raver2 | Slc9a2 |  | |  |  |
|  |  |  |  |  |  | Rax | Slc9a4 |  | |  |  |
|  |  |  |  |  |  | Rbm20 | Slit2 |  | |  |  |
|  |  |  |  |  |  | Rbm24 | Slitrk2 |  | |  |  |
|  |  |  |  |  |  | Rcan2 | Slitrk5 |  | |  |  |
|  |  |  |  |  |  | Rem1 | Smad7 |  | |  |  |
|  |  |  |  |  |  | Rfx6 | Smad9 |  | |  |  |
|  |  |  |  |  |  | Rgs11 | Snap25 |  | |  |  |
|  |  |  |  |  |  | Rgs6 | Sncb |  | |  |  |
|  |  |  |  |  |  | Rhbdl3 | Snx10 |  | |  |  |
|  |  |  |  |  |  | Rhoj | Snx20 |  | |  |  |
|  |  |  |  |  |  | Rhoq | Snx24 |  | |  |  |
|  |  |  |  |  |  | Ripply2 | Snx30 |  | |  |  |
|  |  |  |  |  |  | Rln3 | Sorcs3 |  | |  |  |
|  |  |  |  |  |  | Rnf122 | Sox14 |  | |  |  |
|  |  |  |  |  |  | Rnf150 | Sox2 |  | |  |  |
|  |  |  |  |  |  | Rnf182 | Sox21 |  | |  |  |
|  |  |  |  |  |  | Rnf39 | Sox4 |  | |  |  |
|  |  |  |  |  |  | Ror1 | Sox7 |  | |  |  |
|  |  |  |  |  |  | Rpp25 | Sox9 |  | |  |  |
|  |  |  |  |  |  | Rprm | Sp5 |  | |  |  |
|  |  |  |  |  |  | Rspo1 | Sp7 |  | |  |  |
|  |  |  |  |  |  | Rspo4 | Sp8 |  | |  |  |
|  |  |  |  |  |  | Rtbdn | Sp9 |  | |  |  |
|  |  |  |  |  |  | Rtn4r | Spata13 |  | |  |  |
|  |  |  |  |  |  | Rtn4rl1 | Spats2l |  | |  |  |
|  |  |  |  |  |  | Rtn4rl2 | Spon1 |  | |  |  |
|  |  |  |  |  |  | Ryr1 | Sri |  | |  |  |
|  |  |  |  |  |  | S1pr5 | Sstr1 |  | |  |  |
|  |  |  |  |  |  | Sall1 | Sstr4 |  | |  |  |
|  |  |  |  |  |  | Samd14 | St3gal2 |  | |  |  |
|  |  |  |  |  |  | Schip1 | St6gal2 |  | |  |  |
|  |  |  |  |  |  | Scn1b | Stard5 |  | |  |  |
|  |  |  |  |  |  | Scn4b | Stat6 |  | |  |  |
|  |  |  |  |  |  | Scn8a | Stbd1 |  | |  |  |
|  |  |  |  |  |  | Scnn1a | Stx1a |  | |  |  |
|  |  |  |  |  |  | Scrt2 | Susd4 |  | |  |  |
|  |  |  |  |  |  | Sct | Syde2 |  | |  |  |
|  |  |  |  |  |  | Sctr | Sync |  | |  |  |
|  |  |  |  |  |  | Sdc1 | Syne1 |  | |  |  |
|  |  |  |  |  |  | Sdc3 | Syne1 |  | |  |  |
|  |  |  |  |  |  | Sdk1 | Synpo2l |  | |  |  |
|  |  |  |  |  |  | Selplg | Syt16 |  | |  |  |
|  |  |  |  |  |  | Sema3d | Syt2 |  | |  |  |
|  |  |  |  |  |  | Sema3e | Tac4 |  | |  |  |
|  |  |  |  |  |  | Sema5a | Tacc2 |  | |  |  |
|  |  |  |  |  |  | Sept1 | Tacstd2 |  | |  |  |
|  |  |  |  |  |  | Sept11 | Tal1 |  | |  |  |
|  |  |  |  |  |  | Sfn | Tap2 |  | |  |  |
|  |  |  |  |  |  | Sfrp1 | Tbr1 |  | |  |  |
|  |  |  |  |  |  | Sfrp2 | Tbx2 |  | |  |  |
|  |  |  |  |  |  | Sftpc | Tcea3 |  | |  |  |
|  |  |  |  |  |  | Sgip1 | Tcf15 |  | |  |  |
|  |  |  |  |  |  | Sh2d5 | Tesc |  | |  |  |
|  |  |  |  |  |  | Sh3bp1 | Tgfa |  | |  |  |
|  |  |  |  |  |  | Sh3bp4 | Thbs1 |  | |  |  |
|  |  |  |  |  |  | Sh3pxd2b | Thrb |  | |  |  |
|  |  |  |  |  |  | Shank3 | Tiam2 |  | |  |  |
|  |  |  |  |  |  | She | Tifa |  | |  |  |
|  |  |  |  |  |  | Shh | Tigd4 |  | |  |  |
|  |  |  |  |  |  | Shisa2 | Tlx2 |  | |  |  |
|  |  |  |  |  |  | Shox2 | Tlx3 |  | |  |  |
|  |  |  |  |  |  | Shroom1 | Tm6sf1 |  | |  |  |
|  |  |  |  |  |  | Siah3 | Tmco4 |  | |  |  |
|  |  |  |  |  |  | Sigirr | Tmeff2 |  | |  |  |
|  |  |  |  |  |  | Sim1 | Tmem100 |  | |  |  |
|  |  |  |  |  |  | Sim2 | Tmem120b |  | |  |  |
|  |  |  |  |  |  | Six3 | Tmem121 |  | |  |  |
|  |  |  |  |  |  | Six6 | Tmem132c |  | |  |  |
|  |  |  |  |  |  | Skor2 | Tmem132e |  | |  |  |
|  |  |  |  |  |  | Slc10a4 | Tmem158 |  | |  |  |
|  |  |  |  |  |  | Slc16a11 | Tmem160 |  | |  |  |
|  |  |  |  |  |  | Slc16a8 | Tmem178 |  | |  |  |
|  |  |  |  |  |  | Slc16a9 | Tmem196 |  | |  |  |
|  |  |  |  |  |  | Slc18a2 | Tmem28 |  | |  |  |
|  |  |  |  |  |  | Slc18a3 | Tmem55a |  | |  |  |
|  |  |  |  |  |  | Slc1a1 | Tmem63a |  | |  |  |
|  |  |  |  |  |  | Slc1a5 | Tnfaip8 |  | |  |  |
|  |  |  |  |  |  | Slc1a6 | Tnfrsf11a |  | |  |  |
|  |  |  |  |  |  | Slc24a4 | Tnfrsf1a |  | |  |  |
|  |  |  |  |  |  | Slc25a34 | Tnfrsf21 |  | |  |  |
|  |  |  |  |  |  | Slc27a2 | Tnfsf9 |  | |  |  |
|  |  |  |  |  |  | Slc29a2 | Tnxb |  | |  |  |
|  |  |  |  |  |  | Slc29a4 | Tppp |  | |  |  |
|  |  |  |  |  |  | Slc2a10 | Tradd |  | |  |  |
|  |  |  |  |  |  | Slc30a10 | Traf6 |  | |  |  |
|  |  |  |  |  |  | Slc32a1 | Trib1 |  | |  |  |
|  |  |  |  |  |  | Slc35f1 | Trim29 |  | |  |  |
|  |  |  |  |  |  | Slc35f3 | Trim63 |  | |  |  |
|  |  |  |  |  |  | Slc43a3 | Trim67 |  | |  |  |
|  |  |  |  |  |  | Slc45a3 | Trim8 |  | |  |  |
|  |  |  |  |  |  | Slc47a1 | Trpv2 |  | |  |  |
|  |  |  |  |  |  | Slc4a3 | Tshz3 |  | |  |  |
|  |  |  |  |  |  | Slc5a1 | Tspo |  | |  |  |
|  |  |  |  |  |  | Slc5a8 | Ttl |  | |  |  |
|  |  |  |  |  |  | Slc6a11 | Ttpa |  | |  |  |
|  |  |  |  |  |  | Slc6a4 | Tubg2 |  | |  |  |
|  |  |  |  |  |  | Slc7a10 | Tulp1 |  | |  |  |
|  |  |  |  |  |  | Slc9a3 | Twist1 |  | |  |  |
|  |  |  |  |  |  | Slco2a1 | Twist2 |  | |  |  |
|  |  |  |  |  |  | Slfn5 | Ucn |  | |  |  |
|  |  |  |  |  |  | Slit2 | Unc5a |  | |  |  |
|  |  |  |  |  |  | Slit3 | Unc5c |  | |  |  |
|  |  |  |  |  |  | Slitrk1 | Unc79 |  | |  |  |
|  |  |  |  |  |  | Slitrk2 | Unc80 |  | |  |  |
|  |  |  |  |  |  | Slitrk5 | Uncx |  | |  |  |
|  |  |  |  |  |  | Smad7 | Upk2 |  | |  |  |
|  |  |  |  |  |  | Sncb | Usp13 |  | |  |  |
|  |  |  |  |  |  | Snx20 | Usp29 |  | |  |  |
|  |  |  |  |  |  | Sorcs3 | Utf1 |  | |  |  |
|  |  |  |  |  |  | Sost | Vat1l |  | |  |  |
|  |  |  |  |  |  | Sox14 | Vegfc |  | |  |  |
|  |  |  |  |  |  | Sox2 | Vgf |  | |  |  |
|  |  |  |  |  |  | Sox21 | Vgll2 |  | |  |  |
|  |  |  |  |  |  | Sp5 | Vipr1 |  | |  |  |
|  |  |  |  |  |  | Sp7 | Vipr2 |  | |  |  |
|  |  |  |  |  |  | Sp8 | Vstm2b |  | |  |  |
|  |  |  |  |  |  | Sp9 | Vtn |  | |  |  |
|  |  |  |  |  |  | Spats2l | Vwa2 |  | |  |  |
|  |  |  |  |  |  | Speg | Wif1 |  | |  |  |
|  |  |  |  |  |  | Spon1 | Wnk4 |  | |  |  |
|  |  |  |  |  |  | Spred2 | Wnt10b |  | |  |  |
|  |  |  |  |  |  | Sri | Wnt11 |  | |  |  |
|  |  |  |  |  |  | Sstr1 | Wnt16 |  | |  |  |
|  |  |  |  |  |  | Sstr4 | Wnt4 |  | |  |  |
|  |  |  |  |  |  | St6gal2 | Wnt5a |  | |  |  |
|  |  |  |  |  |  | Stat6 | Wnt6 |  | |  |  |
|  |  |  |  |  |  | Stc1 | Wnt9a |  | |  |  |
|  |  |  |  |  |  | Stmn2 | Wscd1 |  | |  |  |
|  |  |  |  |  |  | Syde2 | Wt1 |  | |  |  |
|  |  |  |  |  |  | Sync | Xkr7 |  | |  |  |
|  |  |  |  |  |  | Syne1 | Xylt1 |  | |  |  |
|  |  |  |  |  |  | Syne1 | Zadh2 |  | |  |  |
|  |  |  |  |  |  | Syt13 | Zbtb1 |  | |  |  |
|  |  |  |  |  |  | Syt16 | Zbtb39 |  | |  |  |
|  |  |  |  |  |  | Syt2 | Zbtb7a |  | |  |  |
|  |  |  |  |  |  | T | Zbtb7c |  | |  |  |
|  |  |  |  |  |  | Tac1 | Zdhhc2 |  | |  |  |
|  |  |  |  |  |  | Tacr3 | Zfhx4 |  | |  |  |
|  |  |  |  |  |  | Tacstd2 | Zfp30 |  | |  |  |
|  |  |  |  |  |  | Tal1 | Zfp324 |  | |  |  |
|  |  |  |  |  |  | Tal2 | Zfp354a |  | |  |  |
|  |  |  |  |  |  | Tap2 | Zfp358 |  | |  |  |
|  |  |  |  |  |  | Tbr1 | Zfp395 |  | |  |  |
|  |  |  |  |  |  | Tbx15 | Zfp503 |  | |  |  |
|  |  |  |  |  |  | Tbx2 | Zfp532 |  | |  |  |
|  |  |  |  |  |  | Tbx4 | Zfp64 |  | |  |  |
|  |  |  |  |  |  | Tcea3 | Zfp651 |  | |  |  |
|  |  |  |  |  |  | Tcf15 | Zfp697 |  | |  |  |
|  |  |  |  |  |  | Tcf21 | Zfp710 |  | |  |  |
|  |  |  |  |  |  | Tchh | Zfp804a |  | |  |  |
|  |  |  |  |  |  | Tert | Zfp827 |  | |  |  |
|  |  |  |  |  |  | Tesc | Zfp870 |  | |  |  |
|  |  |  |  |  |  | Tgfb1i1 | Zfp872 |  | |  |  |
|  |  |  |  |  |  | Thbs1 | Zfp90 |  | |  |  |
|  |  |  |  |  |  | Thrb | Zfp952 |  | |  |  |
|  |  |  |  |  |  | Thy1 | Zhx2 |  | |  |  |
|  |  |  |  |  |  | Tiam2 | Zic2 |  | |  |  |
|  |  |  |  |  |  | Tifa | Zic3 |  | |  |  |
|  |  |  |  |  |  | Tlx1 | Zkscan16 |  | |  |  |
|  |  |  |  |  |  | Tlx2 |  |  | |  |  |
|  |  |  |  |  |  | Tlx3 |  |  | |  |  |
|  |  |  |  |  |  | Tmeff2 |  |  | |  |  |
|  |  |  |  |  |  | Tmem117 |  |  | |  |  |
|  |  |  |  |  |  | Tmem121 |  |  | |  |  |
|  |  |  |  |  |  | Tmem132b |  |  | |  |  |
|  |  |  |  |  |  | Tmem132c |  |  | |  |  |
|  |  |  |  |  |  | Tmem132e |  |  | |  |  |
|  |  |  |  |  |  | Tmem158 |  |  | |  |  |
|  |  |  |  |  |  | Tmem178 |  |  | |  |  |
|  |  |  |  |  |  | Tmem28 |  |  | |  |  |
|  |  |  |  |  |  | Tmem55a |  |  | |  |  |
|  |  |  |  |  |  | Tmem63a |  |  | |  |  |
|  |  |  |  |  |  | Tnfaip8 |  |  | |  |  |
|  |  |  |  |  |  | Tnfrsf11a |  |  | |  |  |
|  |  |  |  |  |  | Tnfrsf21 |  |  | |  |  |
|  |  |  |  |  |  | Tnfsf13b |  |  | |  |  |
|  |  |  |  |  |  | Tnfsf14 |  |  | |  |  |
|  |  |  |  |  |  | Tnfsf9 |  |  | |  |  |
|  |  |  |  |  |  | Tnnc2 |  |  | |  |  |
|  |  |  |  |  |  | Tnxb |  |  | |  |  |
|  |  |  |  |  |  | Tppp |  |  | |  |  |
|  |  |  |  |  |  | Tradd |  |  | |  |  |
|  |  |  |  |  |  | Traf6 |  |  | |  |  |
|  |  |  |  |  |  | Tram1l1 |  |  | |  |  |
|  |  |  |  |  |  | Trib1 |  |  | |  |  |
|  |  |  |  |  |  | Trim29 |  |  | |  |  |
|  |  |  |  |  |  | Trim50 |  |  | |  |  |
|  |  |  |  |  |  | Trim58 |  |  | |  |  |
|  |  |  |  |  |  | Trim67 |  |  | |  |  |
|  |  |  |  |  |  | Trpc6 |  |  | |  |  |
|  |  |  |  |  |  | Trpm6 |  |  | |  |  |
|  |  |  |  |  |  | Tshz2 |  |  | |  |  |
|  |  |  |  |  |  | Tshz3 |  |  | |  |  |
|  |  |  |  |  |  | Ttl |  |  | |  |  |
|  |  |  |  |  |  | Ttpa |  |  | |  |  |
|  |  |  |  |  |  | Tulp1 |  |  | |  |  |
|  |  |  |  |  |  | Twist1 |  |  | |  |  |
|  |  |  |  |  |  | Twist2 |  |  | |  |  |
|  |  |  |  |  |  | Ucn |  |  | |  |  |
|  |  |  |  |  |  | Unc5c |  |  | |  |  |
|  |  |  |  |  |  | Unc79 |  |  | |  |  |
|  |  |  |  |  |  | Unc80 |  |  | |  |  |
|  |  |  |  |  |  | Uncx |  |  | |  |  |
|  |  |  |  |  |  | Usp13 |  |  | |  |  |
|  |  |  |  |  |  | Vash1 |  |  | |  |  |
|  |  |  |  |  |  | Vat1l |  |  | |  |  |
|  |  |  |  |  |  | Vav3 |  |  | |  |  |
|  |  |  |  |  |  | Vegfc |  |  | |  |  |
|  |  |  |  |  |  | Vgf |  |  | |  |  |
|  |  |  |  |  |  | Vgll2 |  |  | |  |  |
|  |  |  |  |  |  | Vgll3 |  |  | |  |  |
|  |  |  |  |  |  | Vipr1 |  |  | |  |  |
|  |  |  |  |  |  | Vipr2 |  |  | |  |  |
|  |  |  |  |  |  | Vstm2a |  |  | |  |  |
|  |  |  |  |  |  | Vstm2b |  |  | |  |  |
|  |  |  |  |  |  | Vstm2l |  |  | |  |  |
|  |  |  |  |  |  | Vsx2 |  |  | |  |  |
|  |  |  |  |  |  | Vtn |  |  | |  |  |
|  |  |  |  |  |  | Vwa2 |  |  | |  |  |
|  |  |  |  |  |  | Vwc2 |  |  | |  |  |
|  |  |  |  |  |  | Vwce |  |  | |  |  |
|  |  |  |  |  |  | Wdr95 |  |  | |  |  |
|  |  |  |  |  |  | Wfdc2 |  |  | |  |  |
|  |  |  |  |  |  | Wif1 |  |  | |  |  |
|  |  |  |  |  |  | Wnt1 |  |  | |  |  |
|  |  |  |  |  |  | Wnt10b |  |  | |  |  |
|  |  |  |  |  |  | Wnt11 |  |  | |  |  |
|  |  |  |  |  |  | Wnt16 |  |  | |  |  |
|  |  |  |  |  |  | Wnt3 |  |  | |  |  |
|  |  |  |  |  |  | Wnt3a |  |  | |  |  |
|  |  |  |  |  |  | Wnt4 |  |  | |  |  |
|  |  |  |  |  |  | Wnt5a |  |  | |  |  |
|  |  |  |  |  |  | Wnt9a |  |  | |  |  |
|  |  |  |  |  |  | Wscd1 |  |  | |  |  |
|  |  |  |  |  |  | Xkr7 |  |  | |  |  |
|  |  |  |  |  |  | Xylt1 |  |  | |  |  |
|  |  |  |  |  |  | Zbp1 |  |  | |  |  |
|  |  |  |  |  |  | Zbtb7c |  |  | |  |  |
|  |  |  |  |  |  | Zdhhc14 |  |  | |  |  |
|  |  |  |  |  |  | Zfhx4 |  |  | |  |  |
|  |  |  |  |  |  | Zfp324 |  |  | |  |  |
|  |  |  |  |  |  | Zfp462 |  |  | |  |  |
|  |  |  |  |  |  | Zfp503 |  |  | |  |  |
|  |  |  |  |  |  | Zfp579 |  |  | |  |  |
|  |  |  |  |  |  | Zfp618 |  |  | |  |  |
|  |  |  |  |  |  | Zfp64 |  |  | |  |  |
|  |  |  |  |  |  | Zfp697 |  |  | |  |  |
|  |  |  |  |  |  | Zfp804a |  |  | |  |  |
|  |  |  |  |  |  | Zhx2 |  |  | |  |  |
|  |  |  |  |  |  | Zic2 |  |  | |  |  |
|  |  |  |  |  |  | Zic3 |  |  | |  |  |
|  |  |  |  |  |  | Zmiz1 |  |  | |  |  |