**Supplementary Tables (Livermore et al, 2019 - Protection against XY gonadal sex reversal by a variant region on mouse chromosome 13)**

**Table S1.** Harwell B6.YPOS mice lack the 110 modifier region

|  |  |  |  |
| --- | --- | --- | --- |
| Genotype/strain | rs27019103 | rs28240850 | rs27029785 |
| Harwell B6.YB6 | C | G | C |
| Harwell B6.YPOS | C | G | C |
| B6/110.YPOS | C/T | G/A | C/A |
| 110/110.YPOS | T | A | A |

**Table S2.** SNPs used to identify mice carrying the *Mod13* region

|  |  |  |
| --- | --- | --- |
| **SNP** | **position** | ***Mod13*/B6** |
| rs29231478 | 13:40958356 | C/G |
| rs13481788 | 13:43632644 | C/T |
| rs29568118 | 13:48119885 | T/C |
| rs48656322 | 13:52288276 | C/T |
| rs29238368 | 13:55400536 | A/G |
| rs241205325 | 13:60767201 | A/G |
| rs224110566 | 13:62773685 | A/G |
| rs29245244 | 13:69504739 | T/C |
| rs47173256 | 13:71076570 | A/G |

**Table S3.** Summary of expression and sequence variation in *Mod13* protein-coding genes

The table shows a list of *Mod13* protein-coding genes on chromosome 13, position 38.2 Mb – 75.7 Mb (from GRCm38 genome). Shaded genes indicate those located in B6 segments of *Mod13*, and unshaded genes indicate those located in non-B6 segments. Gene expression is indicated at 11.5 dpc (where expression is denoted by the threshold x > 0 RPKM, where x = Σ of RPKM for a given cell type) in supporting or progenitor cells; missense SNPs within protein-coding genes are also shown. Non-coding RNA genes and unclassified genes were not included.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Gene information** | | | **Single-cell expression** | | | | **Sequence variation** | |
| **Gene name** | **Start** | **End** | **XX Progenitor** | **XX Supporting** | **XY Progenitor** | **XY Supporting** | **B6 Derived** | **Missense Variation** |
| Snrnp48 | 38204938 | 38227665 | yes | yes | yes | yes | no | no |
| Bmp6 | 38345716 | 38500314 | yes | yes | yes | yes | no | no |
| Txndc5 | 38500273 | 38528824 | yes | yes | yes | yes | no | no |
| Bloc1s5 | 38602706 | 38635876 | yes | yes | yes | yes | no | no |
| Eef1e1 | 38645691 | 38659028 | yes | yes | yes | yes | no | no |
| Slc35b3 | 38932140 | 38960875 | yes | yes | yes | yes | no | no |
| Ofcc1 | 40001882 | 40288011 | no | no | no | no | no | no |
| Tfap2a | 40715302 | 40738237 | no | no | no | no | no | no |
| Gm35160 | 40846739 | 40847554 | no | no | no | no | no | no |
| Gcnt2 | 40859768 | 40960892 | yes | no | yes | yes | no | no |
| Pak1ip1 | 41001023 | 41013019 | yes | yes | yes | yes | no | no |
| Tmem14c | 41016292 | 41022586 | yes | yes | yes | yes | no | no |
| Mak | 41025008 | 41079706 | yes | no | yes | no | no | no |
| Gcm2 | 41101427 | 41111035 | no | no | no | no | no | yes |
| Sycp2l | 41114307 | 41171684 | no | no | yes | yes | no | yes |
| Elovl2 | 41182495 | 41220405 | yes | yes | yes | yes | no | no |
| Smim13 | 41249860 | 41276574 | yes | yes | yes | yes | no | no |
| Gm17364 | 41273803 | 41273977 | yes | yes | yes | yes | no | no |
| Nedd9 | 41309916 | 41487360 | yes | yes | yes | yes | no | no |
| Tmem170b | 41606216 | 41641357 | yes | yes | yes | yes | yes | no |
| Adtrp | 41763148 | 41847684 | yes | yes | yes | yes | yes | no |
| Hivep1 | 42051970 | 42185030 | yes | yes | yes | yes | no | no |
| Edn1 | 42301476 | 42307990 | yes | yes | yes | yes | no | no |
| Phactr1 | 42680623 | 43138526 | yes | yes | yes | yes | no | no |
| Tbc1d7 | 43151740 | 43171501 | yes | yes | yes | yes | no | no |
| Gfod1 | 43195245 | 43304172 | yes | yes | yes | yes | no | no |
| Sirt5 | 43365496 | 43395203 | yes | yes | yes | yes | no | no |
| Nol7 | 43398376 | 43402858 | yes | yes | yes | yes | no | no |
| Ranbp9 | 43402675 | 43481282 | yes | yes | yes | yes | no | no |
| Mcur1 | 43538393 | 43560191 | yes | yes | yes | yes | no | no |
| Rnf182 | 43615710 | 43670945 | yes | yes | yes | yes | no | no |
| Cd83 | 43785112 | 43803133 | yes | no | yes | no | no | no |
| Jarid2 | 44729474 | 44921643 | yes | yes | yes | yes | no | no |
| Dtnbp1 | 44922077 | 45002096 | yes | yes | yes | yes | no | no |
| Gm9817 | 45078692 | 45081222 | yes | yes | yes | yes | no | no |
| Mylip | 45389742 | 45411940 | yes | yes | yes | yes | no | no |
| Gmpr | 45507444 | 45546382 | yes | yes | yes | yes | no | no |
| Atxn1 | 45549755 | 45965008 | yes | no | yes | yes | no | no |
| Stmnd1 | 46273721 | 46300115 | yes | no | no | no | no | no |
| Rbm24 | 46418434 | 46431095 | yes | yes | yes | no | no | no |
| Cap2 | 46501848 | 46649642 | yes | yes | yes | no | no | no |
| Fam8a1 | 46669522 | 46678056 | no | no | no | no | no | no |
| Nup153 | 46679905 | 46727940 | yes | yes | yes | yes | no | no |
| Kif13a | 46749087 | 46929867 | yes | yes | yes | yes | no | yes |
| Nhlrc1 | 47012557 | 47014850 | yes | no | yes | yes | no | no |
| Tpmt | 47025170 | 47044737 | yes | yes | yes | yes | no | yes |
| Kdm1b | 47043499 | 47084613 | yes | yes | yes | yes | no | no |
| Dek | 47084775 | 47106201 | yes | yes | yes | yes | no | no |
| Rnf144b | 47122720 | 47247991 | yes | yes | yes | yes | no | no |
| Id4 | 48261427 | 48264036 | yes | yes | yes | no | yes | no |
| Zfp169 | 48487647 | 48513451 | yes | yes | yes | yes | yes | no |
| A830005F24Rik | 48513570 | 48514859 | yes | yes | no | yes | yes | no |
| Ptpdc1 | 48577872 | 48625664 | yes | yes | yes | yes | yes | no |
| Barx1 | 48662998 | 48666507 | no | yes | no | yes | yes | no |
| Phf2 | 48801750 | 48870885 | yes | yes | yes | yes | yes | no |
| Fam120a | 48879216 | 48967877 | yes | yes | yes | yes | yes | yes |
| Wnk2 | 49036303 | 49148012 | yes | yes | yes | yes | yes | no |
| Ninj1 | 49187485 | 49196244 | yes | yes | yes | yes | yes | no |
| Card19 | 49202950 | 49216037 | no | no | no | no | yes | no |
| Susd3 | 49230690 | 49248706 | yes | yes | yes | yes | yes | no |
| Fgd3 | 49261554 | 49320311 | no | no | no | yes | yes | no |
| Bicd2 | 49341585 | 49387026 | yes | yes | yes | yes | yes | no |
| Ippk | 49421190 | 49463060 | yes | yes | yes | yes | yes | no |
| Cenpp | 49464023 | 49652785 | yes | yes | yes | yes | yes | no |
| Ecm2 | 49504810 | 49532789 | no | no | yes | no | yes | no |
| Aspn | 49544443 | 49567565 | yes | no | yes | yes | yes | no |
| Omd | 49582462 | 49592822 | yes | no | yes | no | yes | no |
| Ogn | 49608071 | 49624500 | yes | no | yes | no | yes | no |
| Nol8 | 49653078 | 49679016 | yes | yes | yes | yes | yes | no |
| Iars | 49682100 | 49734267 | yes | yes | yes | yes | yes | no |
| Gm19334 | 49750462 | 49752536 | no | no | no | no | yes | no |
| Gm270 | 49764328 | 49765303 | no | no | no | no | yes | no |
| Gm30302 | 49784742 | 49790401 | no | no | no | no | yes | no |
| Gm272 | 49820728 | 49821646 | no | no | no | no | yes | no |
| Gm8672 | 49861669 | 49864129 | no | no | no | no | yes | no |
| Gm8674 | 49898842 | 49902468 | no | no | no | no | yes | no |
| Gm17611 | 49976258 | 49977074 | no | no | no | no | yes | no |
| Gm8700 | 50099026 | 50104045 | no | no | no | no | yes | no |
| Gm19470 | 50161821 | 50163398 | no | no | no | no | yes | no |
| Gm906 | 50245181 | 50250308 | no | no | no | no | yes | no |
| Gm19536 | 50399335 | 50400423 | no | no | no | no | yes | no |
| Fbxw17 | 50417864 | 50433780 | yes | yes | yes | yes | yes | no |
| Gm47429 | 50443408 | 50443912 | no | no | no | no | yes | no |
| Nutm2 | 50467307 | 50475355 | no | no | no | no | yes | no |
| Gm8765 | 50698312 | 50703435 | no | no | no | no | yes | no |
| Gm8777 | 50885270 | 50891424 | no | no | no | no | yes | no |
| Spin1 | 51100880 | 51152546 | yes | yes | yes | yes | yes | no |
| Nxnl2 | 51171022 | 51175188 | no | no | yes | no | yes | no |
| Hist1h2al | 51202727 | 51203065 | yes | yes | yes | yes | yes | no |
| S1pr3 | 51408639 | 51422797 | yes | yes | yes | yes | yes | no |
| Shc3 | 51431041 | 51567084 | no | no | no | no | yes | no |
| Cks2 | 51645232 | 51650660 | yes | yes | yes | yes | yes | no |
| Secisbp2 | 51651697 | 51684044 | yes | yes | yes | yes | yes | no |
| Gm15440 | 51685529 | 51701041 | no | no | no | no | yes | no |
| Sema4d | 51701246 | 51793747 | yes | yes | yes | yes | yes | no |
| Gadd45g | 51846678 | 51848468 | yes | yes | yes | yes | yes | no |
| Diras2 | 52504375 | 52531241 | NA | NA | NA | NA | yes | no |
| Syk | 52583173 | 52648792 | yes | yes | yes | yes | yes | no |
| Auh | 52835119 | 52929681 | yes | yes | yes | yes | no | yes |
| Nfil3 | 52967209 | 52981073 | yes | yes | yes | yes | no | no |
| Ror2 | 53109312 | 53286124 | yes | no | yes | yes | no | yes |
| Sptlc1 | 53332748 | 53377397 | yes | yes | yes | yes | no | yes |
| Gm38564 | 53415943 | 53419345 | no | no | no | no | no | no |
| Msx2 | 53466884 | 53473074 | yes | no | yes | yes | no | no |
| Drd1 | 54051183 | 54055658 | no | no | no | no | no | no |
| Sfxn1 | 54071869 | 54108342 | yes | yes | yes | yes | no | no |
| Hrh2 | 54192129 | 54236180 | no | no | no | no | no | no |
| Cplx2 | 54371349 | 54383917 | yes | yes | yes | yes | no | no |
| Thoc3 | 54458837 | 54468849 | yes | yes | yes | yes | no | no |
| Simc1 | 54503779 | 54551290 | yes | yes | yes | yes | no | no |
| 4833439L19Rik | 54551218 | 54565435 | no | no | no | no | no | no |
| Arl10 | 54575015 | 54581128 | yes | yes | yes | yes | no | no |
| Nop16 | 54584185 | 54590090 | yes | yes | yes | yes | no | no |
| Higd2a | 54590207 | 54591158 | yes | yes | yes | yes | no | no |
| Cltb | 54592401 | 54611344 | yes | yes | yes | yes | no | no |
| Faf2 | 54621784 | 54664068 | yes | yes | yes | yes | no | no |
| Rnf44 | 54679401 | 54693907 | yes | yes | yes | yes | no | no |
| Cdhr2 | 54701461 | 54736662 | no | no | no | no | no | no |
| Gprin1 | 54736671 | 54749874 | yes | no | yes | yes | no | no |
| Sncb | 54758860 | 54766595 | no | no | no | no | no | no |
| Eif4e1b | 54783998 | 54788459 | no | no | no | no | no | no |
| Tspan17 | 54789377 | 54796776 | yes | no | yes | no | no | no |
| Unc5a | 54949411 | 55006018 | no | no | no | yes | no | no |
| Hk3 | 55005985 | 55021385 | no | no | no | no | no | no |
| Uimc1 | 55027880 | 55100300 | yes | yes | yes | yes | no | no |
| Zfp346 | 55105311 | 55134825 | yes | yes | yes | yes | no | no |
| Gm46415 | 55127839 | 55128183 | no | no | no | no | no | no |
| Gm17617 | 55132962 | 55133548 | yes | yes | yes | yes | no | no |
| Fgfr4 | 55152640 | 55168759 | yes | no | yes | no | no | no |
| Nsd1 | 55209782 | 55318325 | yes | yes | yes | yes | no | no |
| Rab24 | 55319743 | 55321946 | yes | yes | yes | yes | no | no |
| Prelid1 | 55322055 | 55325272 | yes | yes | yes | yes | no | no |
| Mxd3 | 55325168 | 55329758 | yes | yes | yes | yes | no | no |
| Lman2 | 55343833 | 55362783 | yes | yes | yes | yes | no | no |
| Rgs14 | 55369732 | 55384687 | yes | no | no | no | no | no |
| Slc34a1 | 55399622 | 55414695 | no | no | no | no | no | yes |
| Pfn3 | 55414688 | 55415232 | no | no | no | no | no | no |
| BC038268 | 55414900 | 55415591 | no | no | no | no | no | no |
| F12 | 55417958 | 55426793 | no | no | no | no | no | no |
| Grk6 | 55445072 | 55460927 | yes | yes | yes | yes | no | no |
| Prr7 | 55464267 | 55473154 | yes | no | no | yes | no | no |
| Dbn1 | 55473429 | 55488111 | yes | yes | yes | yes | no | no |
| Pdlim7 | 55495795 | 55513676 | yes | yes | yes | yes | no | no |
| Dok3 | 55523231 | 55529296 | no | no | yes | no | no | no |
| Ddx41 | 55530410 | 55536658 | yes | yes | yes | yes | no | no |
| Fam193b | 55539316 | 55571120 | yes | yes | yes | yes | no | no |
| Tmed9 | 55593135 | 55597697 | yes | yes | yes | yes | no | no |
| B4galt7 | 55599896 | 55610443 | yes | yes | yes | yes | no | no |
| Caml | 55623005 | 55632411 | yes | yes | yes | yes | no | no |
| Ddx46 | 55635027 | 55681256 | yes | yes | yes | yes | no | no |
| B230219D22Rik | 55693124 | 55703500 | yes | yes | yes | yes | no | no |
| Txndc15 | 55714650 | 55726227 | yes | yes | yes | yes | no | no |
| Pcbd2 | 55727368 | 55776830 | yes | yes | yes | yes | no | no |
| Catsper3 | 55784568 | 55808998 | no | no | no | no | no | no |
| Pitx1 | 55825051 | 55836192 | no | no | yes | no | no | no |
| H2afy | 56073619 | 56136361 | yes | yes | yes | yes | no | no |
| Tifab | 56173704 | 56178885 | no | no | no | no | no | no |
| Neurog1 | 56250492 | 56252163 | no | no | no | no | no | no |
| Cxcl14 | 56288643 | 56296551 | no | no | no | no | no | no |
| Gm3045 | 56426594 | 56433753 | no | no | no | no | no | no |
| Slc25a48 | 56438355 | 56474239 | no | no | no | no | no | no |
| Il9 | 56479277 | 56482246 | no | no | no | no | no | no |
| Fbxl21 | 56522472 | 56537898 | yes | yes | no | yes | no | no |
| Lect2 | 56542464 | 56548502 | yes | no | no | no | no | yes |
| Gm10781 | 56601418 | 56602562 | no | no | no | no | no | no |
| Tgfbi | 56609603 | 56639339 | yes | yes | yes | yes | no | no |
| Smad5 | 56703010 | 56742377 | yes | yes | yes | yes | no | no |
| Gm45623 | 56752371 | 56753827 | no | no | no | no | no | no |
| Trpc7 | 56773113 | 56895789 | yes | yes | yes | yes | no | no |
| Spock1 | 57421195 | 57908314 | yes | no | yes | no | no | no |
| Klhl3 | 58004221 | 58113592 | yes | no | yes | no | no | no |
| Hnrnpa0 | 58125879 | 58128556 | yes | yes | yes | yes | no | no |
| Idnk | 58157649 | 58164693 | yes | yes | yes | yes | no | no |
| Ubqln1 | 58176156 | 58215653 | yes | yes | yes | yes | no | no |
| Gkap1 | 58233346 | 58274839 | yes | yes | yes | yes | no | no |
| Kif27 | 58287502 | 58359122 | yes | yes | yes | no | no | no |
| 2210016F16Rik | 58380046 | 58385225 | no | no | no | no | no | no |
| Hnrnpk | 58391142 | 58403343 | yes | yes | yes | yes | no | no |
| Rmi1 | 58402248 | 58411148 | yes | yes | yes | yes | no | no |
| Slc28a3 | 58545399 | 58610877 | yes | no | yes | yes | no | no |
| Ntrk2 | 58806569 | 59133970 | yes | yes | yes | yes | no | no |
| Agtpbp1 | 59449537 | 59585227 | yes | yes | yes | yes | no | no |
| Naa35 | 59585259 | 59634798 | yes | yes | yes | yes | no | no |
| Golm1 | 59634996 | 59675784 | yes | yes | yes | yes | no | no |
| 4921517D22Rik | 59687402 | 59694103 | no | no | no | no | no | no |
| Spata31d1a | 59700083 | 59706588 | no | no | no | no | no | no |
| Spata31d1b | 59712284 | 59719289 | no | no | no | no | no | yes |
| Spata31d1d | 59725925 | 59731752 | yes | no | yes | no | no | yes |
| 1700014D04Rik | 59740842 | 59746752 | no | no | no | no | no | yes |
| Isca1 | 59755409 | 59769810 | yes | yes | yes | yes | no | no |
| Gm49354 | 59758935 | 59782245 | no | no | no | no | no | no |
| Tut7 | 59771876 | 59823169 | no | no | no | no | no | no |
| Gas1 | 60174405 | 60177365 | yes | yes | yes | yes | no | no |
| Gm10779 | 60331449 | 60333751 | no | no | no | no | no | no |
| Dapk1 | 60601947 | 60763191 | yes | yes | yes | yes | no | no |
| BC051665 | 60781887 | 60786364 | no | no | no | no | no | no |
| Ctsll3 | 60798250 | 60802844 | no | no | no | no | no | no |
| 4930486L24Rik | 60842612 | 60864416 | no | no | no | no | no | no |
| Gm49392 | 60842621 | 60896894 | no | no | no | no | no | no |
| Gm49393 | 60853230 | 60935590 | no | no | no | no | no | no |
| Ctla2b | 60895350 | 60897447 | no | no | no | no | no | no |
| Gm49391 | 60895350 | 60936571 | no | no | no | no | no | no |
| Tpbpb | 60901295 | 60904847 | no | no | no | no | no | no |
| Ctla2a | 60934155 | 60936625 | no | no | no | no | no | no |
| Tpbpa | 60938692 | 60941935 | no | no | no | no | no | no |
| Ctsj | 61000277 | 61005958 | no | no | no | no | no | no |
| Ctsq | 61035027 | 61040631 | no | no | no | no | no | no |
| Ctsr | 61159215 | 61164188 | no | no | no | no | no | no |
| Cts6 | 61195132 | 61203410 | no | no | no | no | no | no |
| Cts8 | 61246747 | 61255348 | no | no | no | no | no | no |
| Gm49398 | 61247878 | 61288839 | no | no | no | no | no | no |
| Cts7 | 61352461 | 61358197 | no | no | no | no | no | no |
| Ctsm | 61535743 | 61541839 | no | no | no | no | no | yes |
| Gm49352 | 61538390 | 61568174 | no | no | no | no | no | yes |
| Cts3 | 61564630 | 61570127 | no | no | no | no | no | yes |
| Gm21933 | 61630023 | 61636282 | no | no | no | no | no | no |
| Gm3325 | 62015605 | 62050986 | no | no | no | no | no | no |
| Zfp808 | 62129916 | 62173419 | yes | yes | yes | yes | no | no |
| Gm3604 | 62368328 | 62383177 | yes | yes | yes | yes | no | no |
| Gm49359 | 62453016 | 62466832 | no | no | no | no | no | no |
| Zfp935 | 62453016 | 62466812 | yes | yes | yes | yes | no | yes |
| Zfp934 | 62516795 | 62579320 | yes | yes | yes | yes | no | yes |
| 6720489N17Rik | 62603013 | 62624182 | no | no | no | no | no | no |
| Gm45951 | 62671784 | 62706256 | no | no | no | no | no | no |
| Gm5141 | 62772200 | 62785808 | yes | yes | yes | yes | no | yes |
| Fbp2 | 62836885 | 62858370 | no | no | no | no | no | no |
| Fbp1 | 62864753 | 62888282 | no | no | no | yes | no | no |
| 2010111I01Rik | 63282142 | 63326096 | no | no | no | no | no | no |
| Fancc | 63304709 | 63497278 | yes | yes | yes | yes | no | no |
| Ptch1 | 63508328 | 63573598 | yes | yes | yes | yes | no | yes |
| Ercc6l2 | 63815240 | 63900302 | yes | yes | yes | yes | no | yes |
| Hsd17b3 | 64058266 | 64089230 | no | yes | no | yes | no | yes |
| Slc35d2 | 64096308 | 64129368 | yes | yes | yes | yes | no | yes |
| Zfp367 | 64133022 | 64153202 | yes | yes | yes | yes | no | no |
| Habp4 | 64161866 | 64186537 | yes | yes | yes | yes | no | no |
| Cdc14b | 64192545 | 64274988 | yes | yes | yes | yes | no | no |
| Aaed1 | 64291836 | 64312710 | yes | yes | yes | yes | no | no |
| Ctsl | 64361890 | 64370748 | yes | yes | yes | yes | no | no |
| Cdk20 | 64432319 | 64439722 | yes | no | yes | no | no | no |
| Fam240b | 64481246 | 64497792 | no | no | no | no | no | yes |
| Cntnap3 | 64737591 | 64904029 | yes | no | yes | no | no | yes |
| Spata31 | 64917406 | 64923184 | no | no | no | yes | no | yes |
| Spata31d1c | 65033058 | 65038004 | no | no | no | no | no | yes |
| Prss47 | 65044613 | 65052760 | no | no | no | no | no | yes |
| Mfsd14b | 65064663 | 65112975 | no | no | no | no | no | yes |
| Olfr466 | 65152226 | 65153152 | no | no | no | no | no | yes |
| Nlrp4f | 65177111 | 65205716 | no | no | no | no | no | yes |
| Gm10775 | 65259539 | 65260826 | no | no | yes | no | no | yes |
| Zfp369 | 65278814 | 65304221 | yes | yes | yes | yes | no | yes |
| Gm31714 | 65396483 | 65415122 | no | no | no | no | no | no |
| Gm10139 | 65512678 | 65512848 | no | no | no | no | no | no |
| Gm19428 | 65689613 | 65713454 | no | no | no | no | no | no |
| Gm17353 | 65897183 | 65907988 | no | no | no | no | no | no |
| Gm46425 | 65950589 | 65958927 | no | no | no | no | no | no |
| Gm3844 | 66062452 | 66062976 | no | no | no | no | no | no |
| Gm10324 | 66119547 | 66122836 | no | no | no | no | no | no |
| Gm45965 | 66163779 | 66165062 | no | no | no | no | no | no |
| Gm10772 | 66227319 | 66227573 | no | no | no | no | no | no |
| Gm46426 | 66281716 | 66284053 | no | no | no | no | no | no |
| 2410141K09Rik | 66418114 | 66441118 | no | no | no | no | no | yes |
| Gm46427 | 66527953 | 66529383 | no | no | no | no | no | no |
| Gm45966 | 66589169 | 66598733 | no | no | no | no | no | no |
| Zfp640 | 66668946 | 66680803 | no | no | no | no | no | no |
| Gm7896 | 66792583 | 66802563 | no | no | no | no | no | no |
| Gm10323 | 66849651 | 66854871 | no | no | no | no | no | no |
| Uqcrb | 66900617 | 66905378 | yes | yes | yes | yes | no | no |
| Gm10767 | 66904914 | 66909236 | yes | yes | yes | yes | no | no |
| Mterf3 | 66906968 | 66933088 | yes | yes | yes | yes | no | no |
| Ptdss1 | 66932830 | 66998401 | yes | yes | yes | yes | no | no |
| Zfp712 | 67038596 | 67061170 | yes | yes | yes | yes | no | no |
| Zfp708 | 67069398 | 67081545 | yes | yes | yes | yes | no | no |
| Gm28557 | 67069399 | 67108604 | yes | yes | yes | yes | no | no |
| Rslcan18 | 67096613 | 67116263 | yes | no | no | yes | no | no |
| Zfp759 | 67125124 | 67142404 | yes | no | yes | yes | no | no |
| Rsl1 | 67173207 | 67183126 | yes | yes | yes | yes | no | no |
| Zfp455 | 67194506 | 67209298 | yes | yes | yes | yes | no | no |
| Zfp458 | 67254918 | 67278466 | yes | yes | yes | yes | no | no |
| Zfp457 | 67292450 | 67306467 | yes | no | yes | no | no | yes |
| Zfp595 | 67312998 | 67332560 | yes | yes | yes | yes | no | yes |
| Gm28044 | 67317942 | 67360536 | yes | yes | yes | yes | no | no |
| Zfp953 | 67339307 | 67360605 | yes | yes | yes | yes | no | no |
| Gm28041 | 67345246 | 67375733 | yes | no | yes | yes | no | yes |
| Zfp456 | 67362113 | 67375810 | yes | no | yes | yes | no | yes |
| Zfp429 | 67389309 | 67399767 | yes | yes | yes | yes | no | yes |
| Zfp459 | 67405722 | 67421418 | yes | yes | no | yes | no | yes |
| Zfp874a | 67424549 | 67451624 | yes | yes | yes | yes | no | yes |
| Zfp874b | 67471514 | 67484225 | yes | yes | yes | yes | no | yes |
| Zfp58 | 67490167 | 67500555 | yes | yes | yes | yes | no | no |
| Gm26965 | 67491152 | 67526151 | yes | yes | yes | yes | no | no |
| Zfp87 | 67515781 | 67526177 | yes | yes | yes | yes | no | no |
| Zfp748 | 67538641 | 67553138 | yes | yes | yes | yes | no | no |
| Zfp729b | 67589443 | 67609707 | no | no | no | no | no | no |
| Gm49345 | 67592159 | 67637769 | no | no | no | no | no | yes |
| Zfp729a | 67617001 | 67637791 | no | no | no | no | no | yes |
| Zfp738 | 67667437 | 67687071 | yes | yes | yes | yes | no | no |
| Zfp65 | 67705306 | 67729119 | yes | yes | yes | yes | no | no |
| Zfp85 | 67747801 | 67755228 | yes | yes | yes | yes | no | no |
| Zfp493 | 67779754 | 67792512 | yes | yes | yes | no | no | no |
| Zfp273 | 67813740 | 67827002 | yes | yes | yes | no | no | no |
| Gm10037 | 67831106 | 67844035 | yes | no | yes | yes | no | no |
| BC048507 | 67863326 | 67863923 | no | no | yes | no | no | no |
| Gm40991 | 67885454 | 67889982 | no | no | no | no | no | no |
| Gm46386 | 68444523 | 68447939 | no | no | no | no | no | no |
| Mtrr | 68560780 | 68582149 | yes | yes | yes | yes | no | yes |
| Fastkd3 | 68582234 | 68592338 | yes | yes | yes | yes | no | yes |
| 1700001L19Rik | 68597439 | 68614231 | no | no | no | no | no | no |
| Adcy2 | 68620043 | 68999541 | yes | yes | yes | yes | no | no |
| Tent4a | 69497959 | 69534617 | no | no | no | no | no | no |
| Nsun2 | 69533746 | 69635780 | yes | yes | yes | yes | no | no |
| A930018O16Rik | 69534549 | 69535451 | no | no | no | no | no | no |
| Srd5a1 | 69573449 | 69611442 | yes | yes | yes | yes | no | no |
| Ube2ql1 | 69702832 | 69739889 | yes | yes | yes | no | no | yes |
| Med10 | 69802395 | 69816104 | yes | yes | yes | yes | no | no |
| Ice1 | 70588689 | 70637840 | yes | yes | yes | yes | no | no |
| Adamts16 | 70727802 | 70841811 | yes | yes | yes | yes | no | no |
| Irx1 | 71957921 | 71963723 | no | no | no | no | no | no |
| Irx2 | 72628820 | 72634198 | no | no | no | no | yes | no |
| Irx4 | 73260479 | 73269608 | no | no | no | no | yes | no |
| Ndufs6 | 73319874 | 73328542 | yes | yes | yes | yes | yes | yes |
| Mrpl36 | 73331009 | 73332178 | yes | yes | yes | yes | yes | no |
| Lpcat1 | 73467197 | 73516422 | yes | yes | yes | yes | yes | no |
| Slc6a3 | 73536747 | 73578672 | no | no | no | no | yes | no |
| Clptm1l | 73604006 | 73620605 | yes | yes | yes | yes | yes | no |
| Tert | 73626911 | 73649843 | yes | yes | yes | yes | yes | no |
| Slc6a18 | 73661752 | 73678023 | no | no | no | no | yes | no |
| Slc6a19 | 73679745 | 73704865 | no | no | no | no | yes | no |
| Slc12a7 | 73733094 | 73816754 | yes | yes | yes | yes | yes | no |
| Nkd2 | 73818534 | 73847631 | yes | yes | yes | yes | yes | no |
| Trip13 | 73911347 | 73937767 | yes | yes | yes | yes | yes | no |
| Brd9 | 73937811 | 73960895 | yes | yes | yes | yes | yes | no |
| Zdhhc11 | 73963847 | 73992985 | no | no | no | no | yes | no |
| Tppp | 74009407 | 74035753 | yes | yes | yes | no | yes | no |
| Cep72 | 74036500 | 74062299 | yes | yes | yes | yes | yes | no |
| Slc9a3 | 74121457 | 74169442 | no | no | no | no | yes | no |
| Exoc3 | 74169802 | 74208729 | yes | yes | yes | yes | yes | no |
| Ahrr | 74211118 | 74292331 | no | no | yes | no | yes | no |
| Pdcd6 | 74303509 | 74317580 | yes | yes | yes | yes | yes | no |
| Sdha | 74322254 | 74350280 | yes | yes | yes | yes | yes | no |
| Ccdc127 | 74350309 | 74365783 | yes | yes | yes | yes | yes | no |
| Lrrc14b | 74359578 | 74364005 | yes | yes | yes | yes | yes | no |
| Zfp72 | 74369326 | 74390836 | yes | no | yes | yes | yes | no |
| Zfp825 | 74480054 | 74493970 | yes | yes | yes | yes | yes | no |
| Erap1 | 74639624 | 74692537 | yes | yes | yes | yes | no | no |
| Cast | 74692368 | 74808810 | yes | yes | yes | yes | no | no |
| Pcsk1 | 75089826 | 75132498 | no | no | no | no | no | no |