

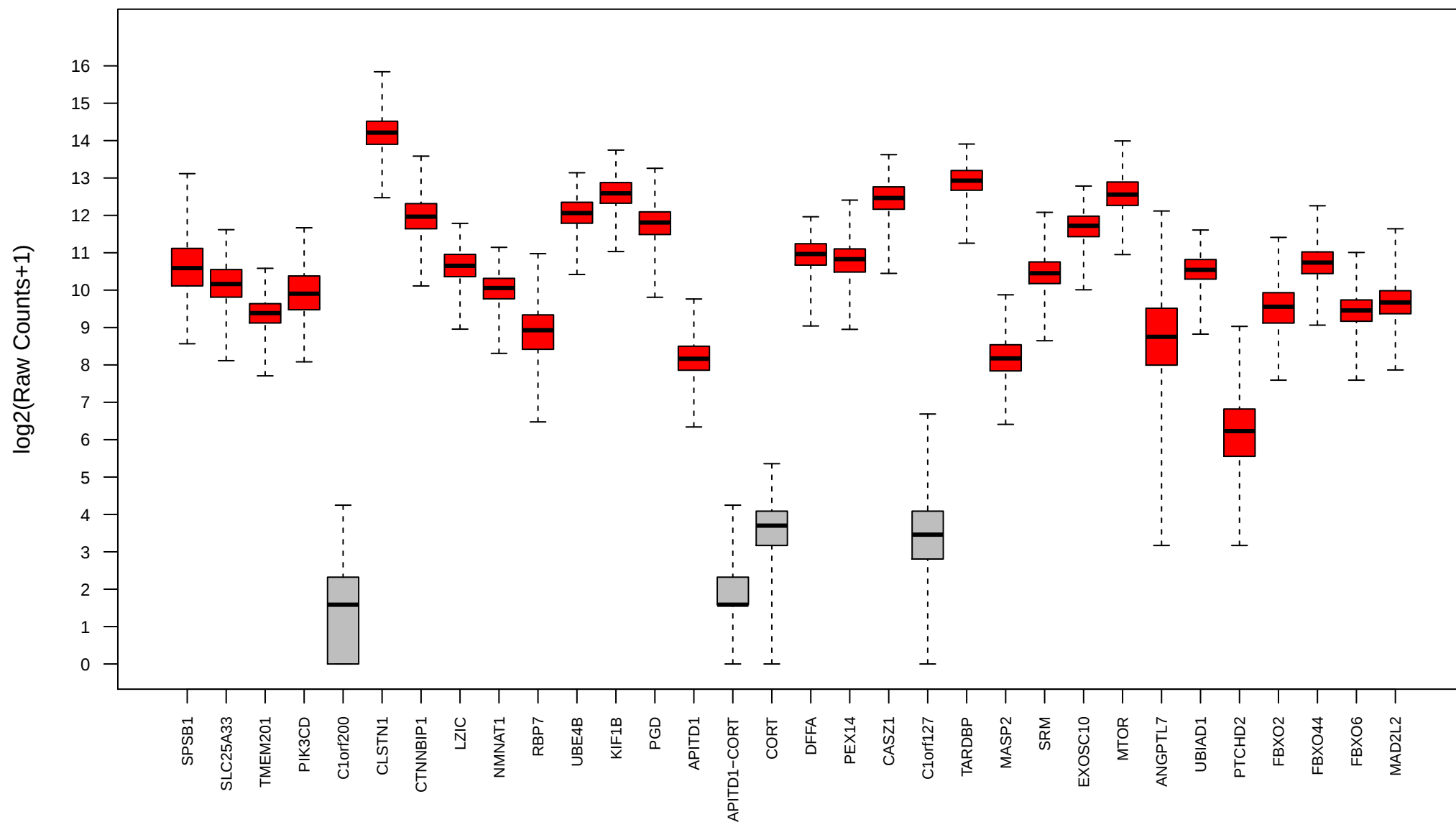
### **Supplementary Figure 1 - Distribution of RNA-seq gene counts for each LD risk-region**

Each page shows the distribution of RNA-seq gene counts on a log2 scale for all genes in each of the risk-regions [the  $\log_2(\text{raw gene count} + 1)$  is plotted to account for samples having 0 reads]. All of the genes are presented in chromosomal order. Genes included in our eQTL analysis are colored in red (median raw gene count  $\geq 14$ ) while those genes excluded due to low expression are colored in gray. The rs number in the title is the reported risk-SNP from prior GWAS studies in the region examined.

Region1, chr1.10456097.10656097

rs636291

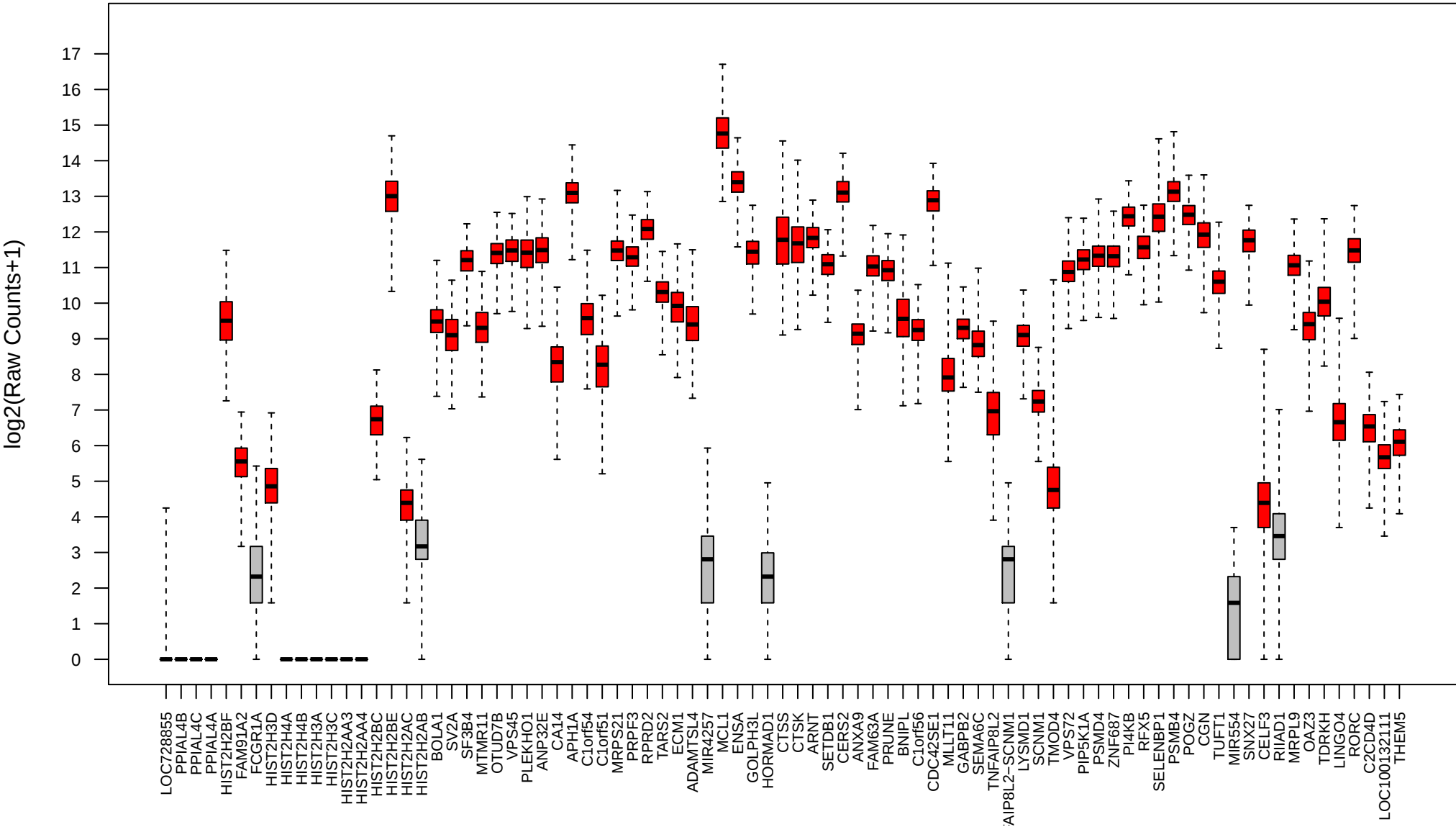
Total Genes: 32



Region2, chr1.150558287.150758287

rs17599629

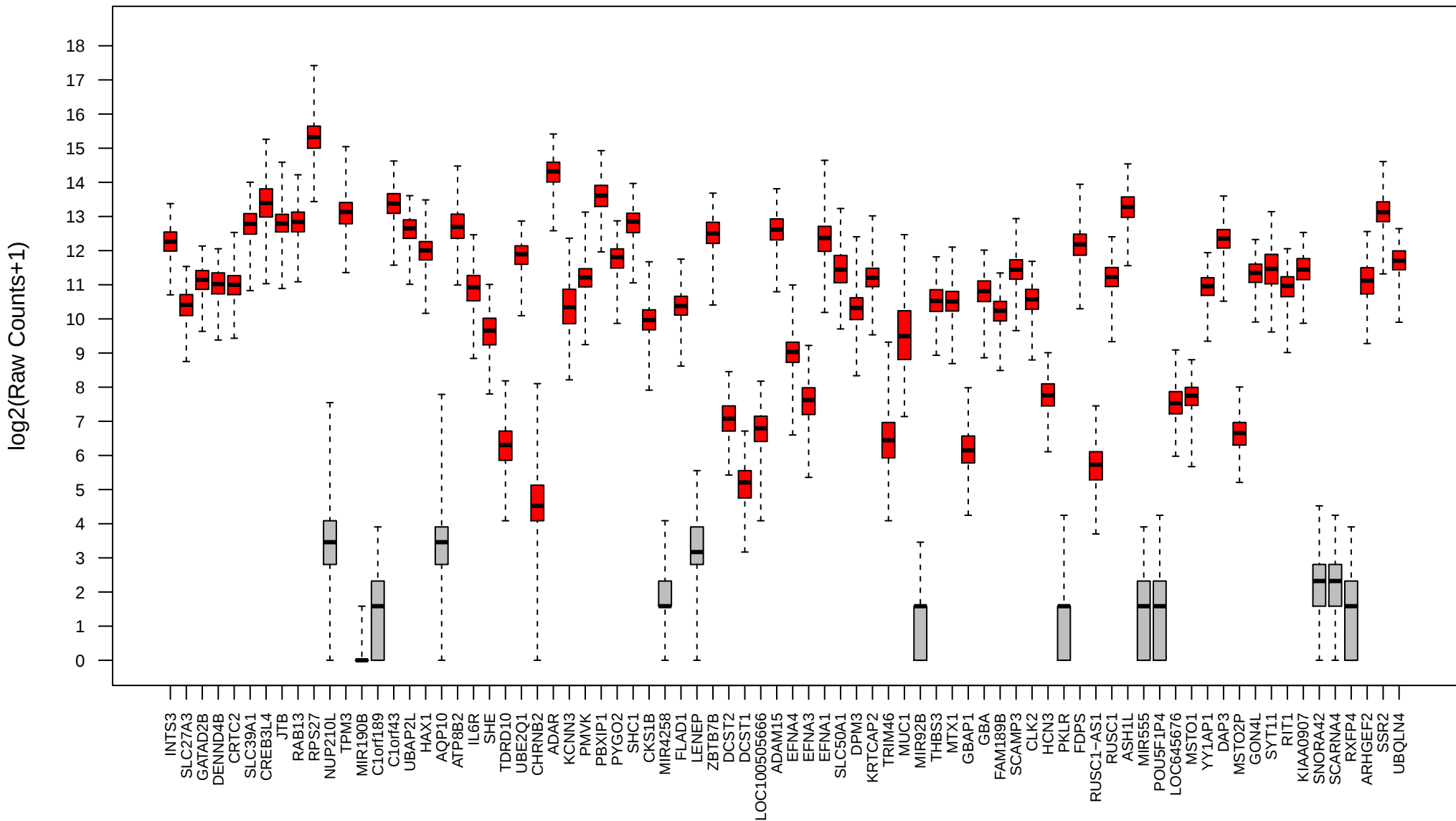
Total Genes: 83



Region3, chr1.154734183.154934183

rs1218582

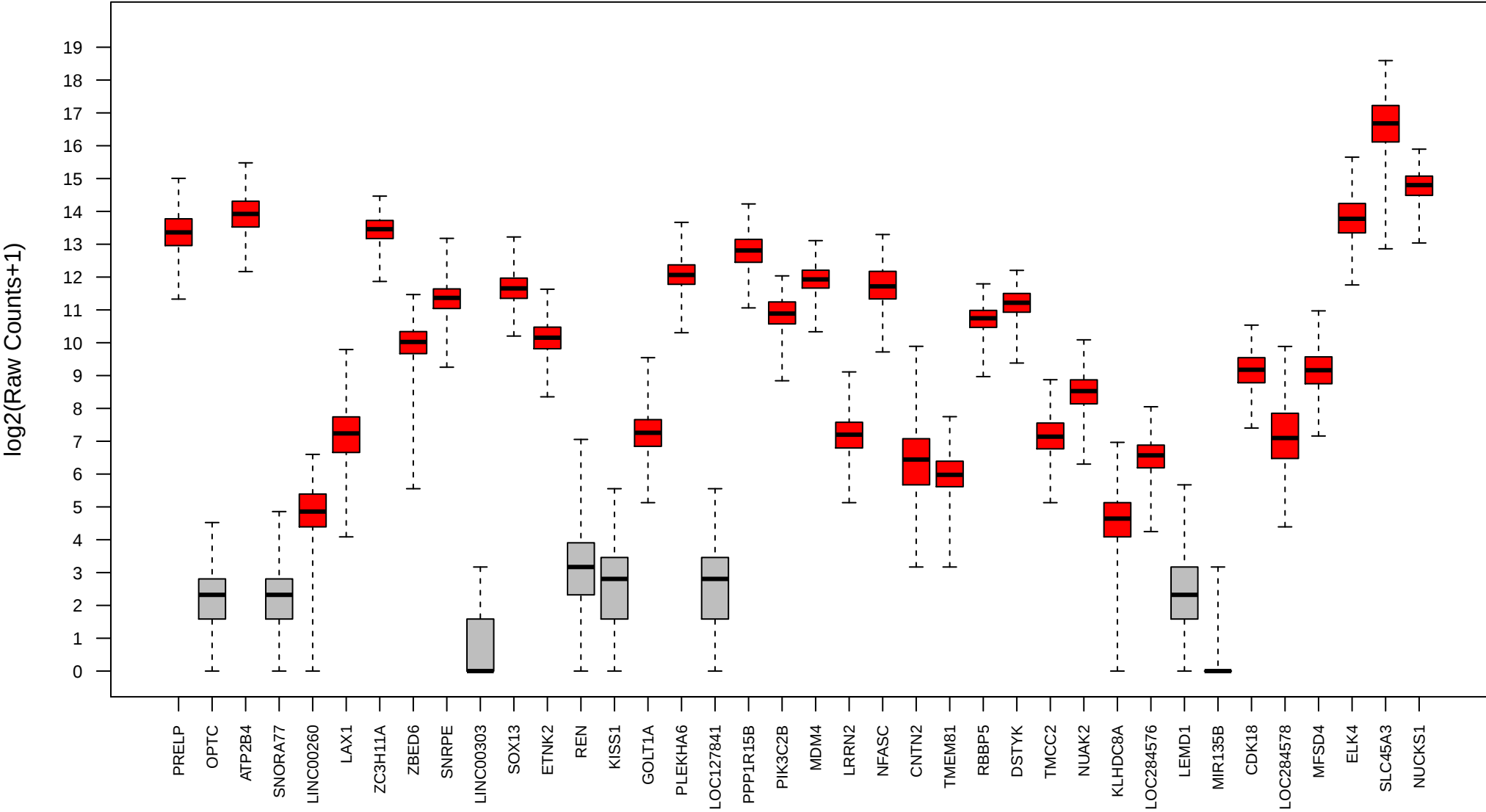
Total Genes: 78



Region4, chr1.204418842.204618842

rs4245739

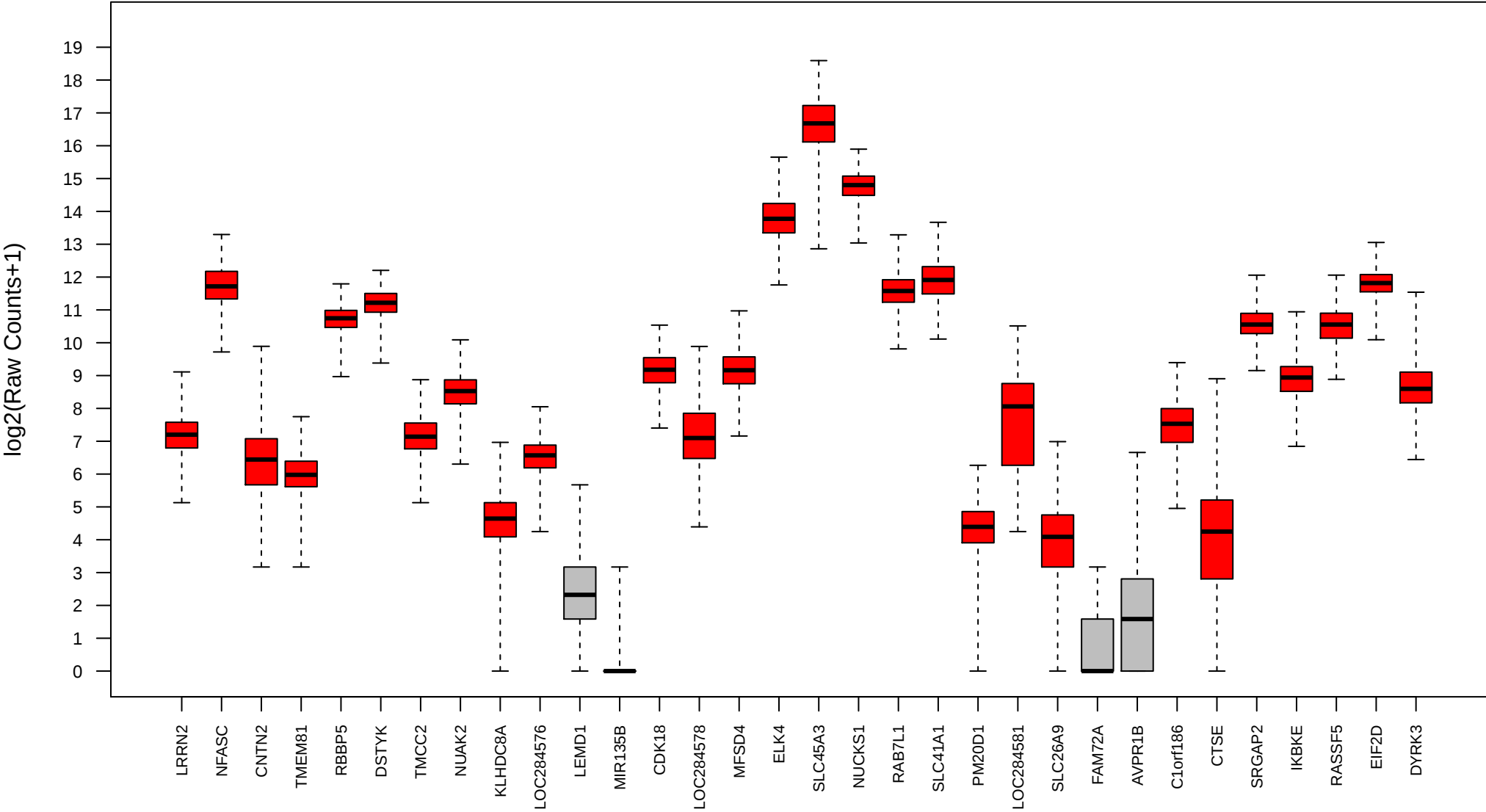
Total Genes: 38



Region5, chr1.205657824.205857824

rs1775148

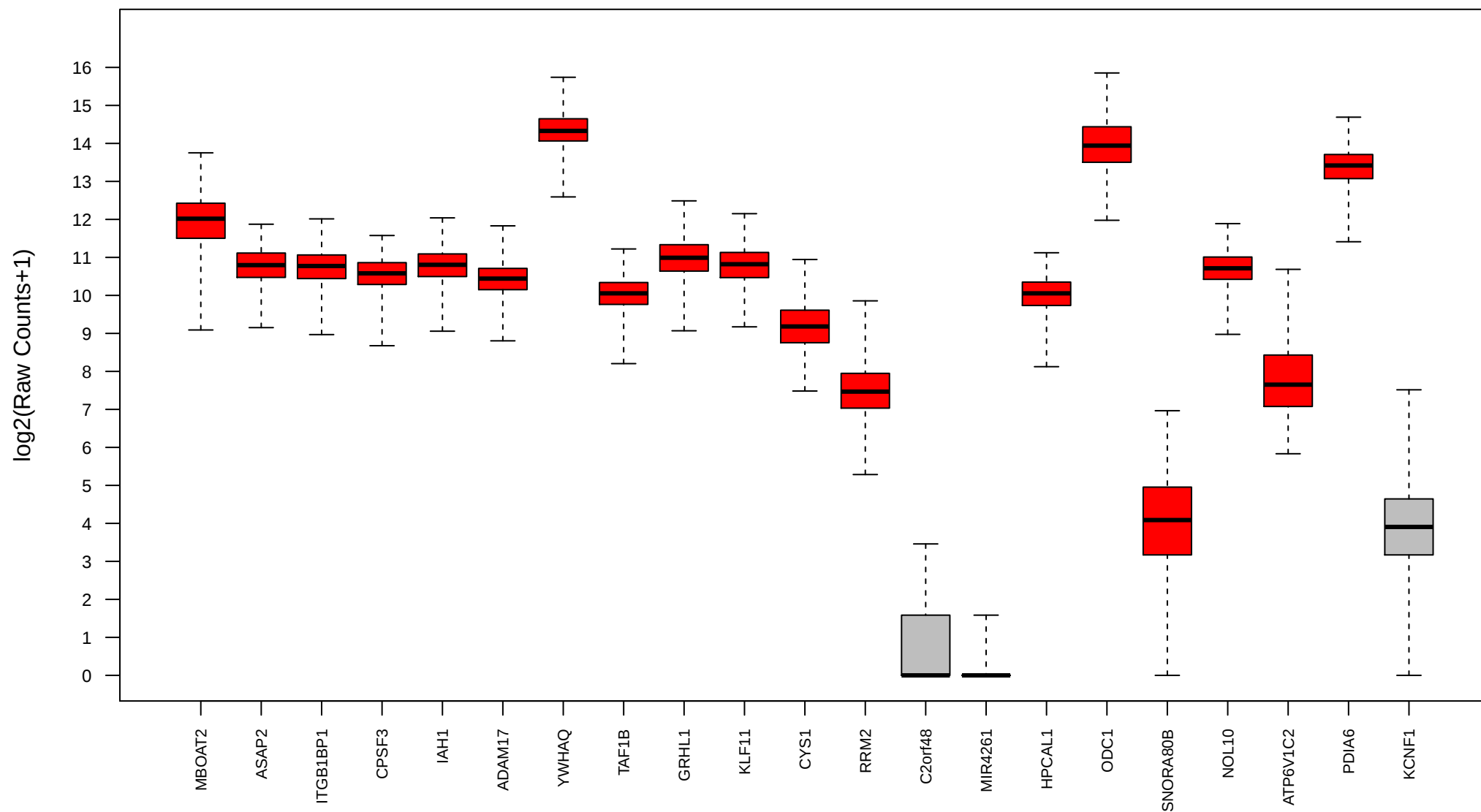
Total Genes: 32



Region6, chr2.10017868.10217868

rs11902236

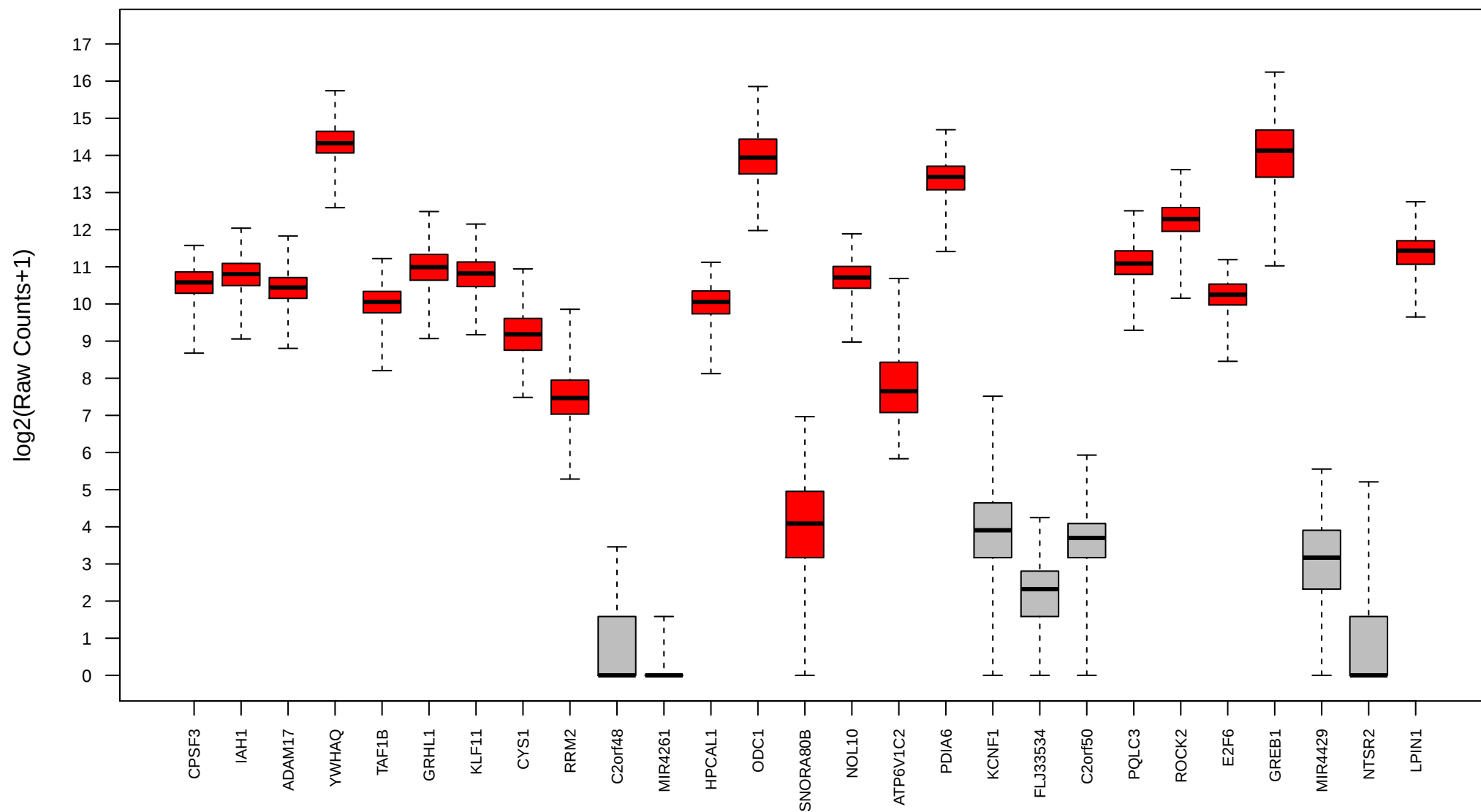
Total Genes: 21



Region7, chr2.10610730.10810730

rs9287719

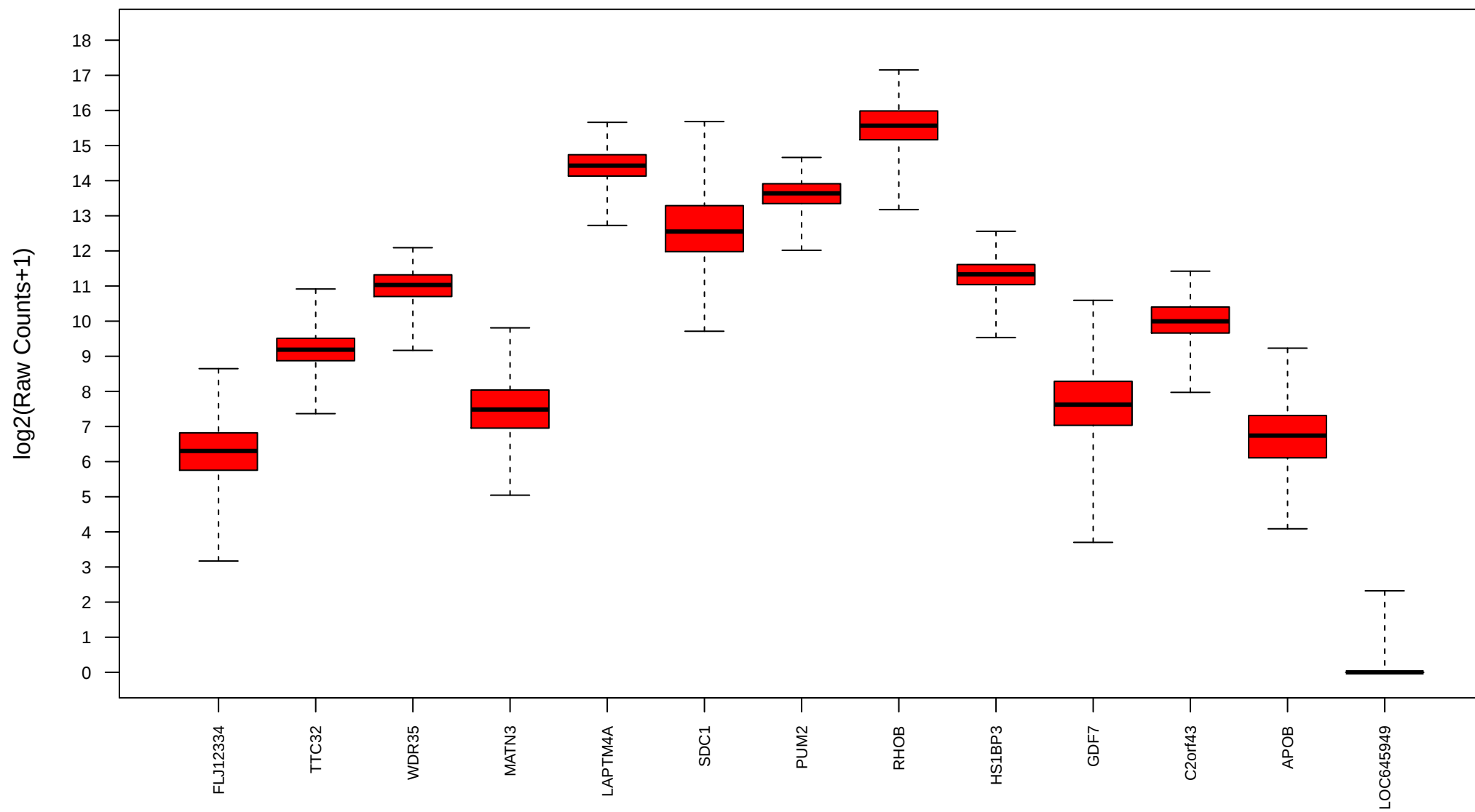
Total Genes: 27



Region8, chr2.20788265.20988265

rs13385191

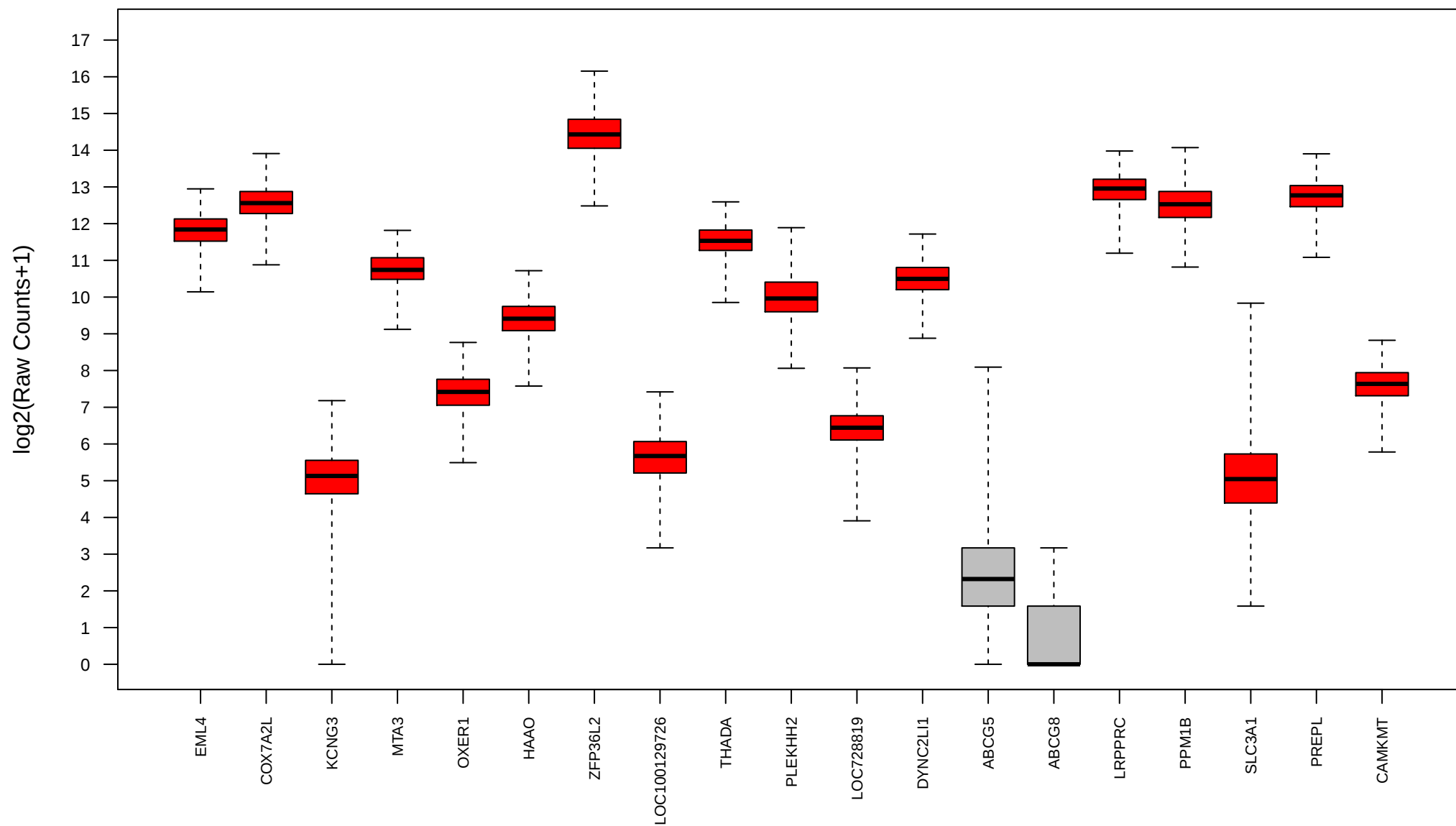
Total Genes: 13



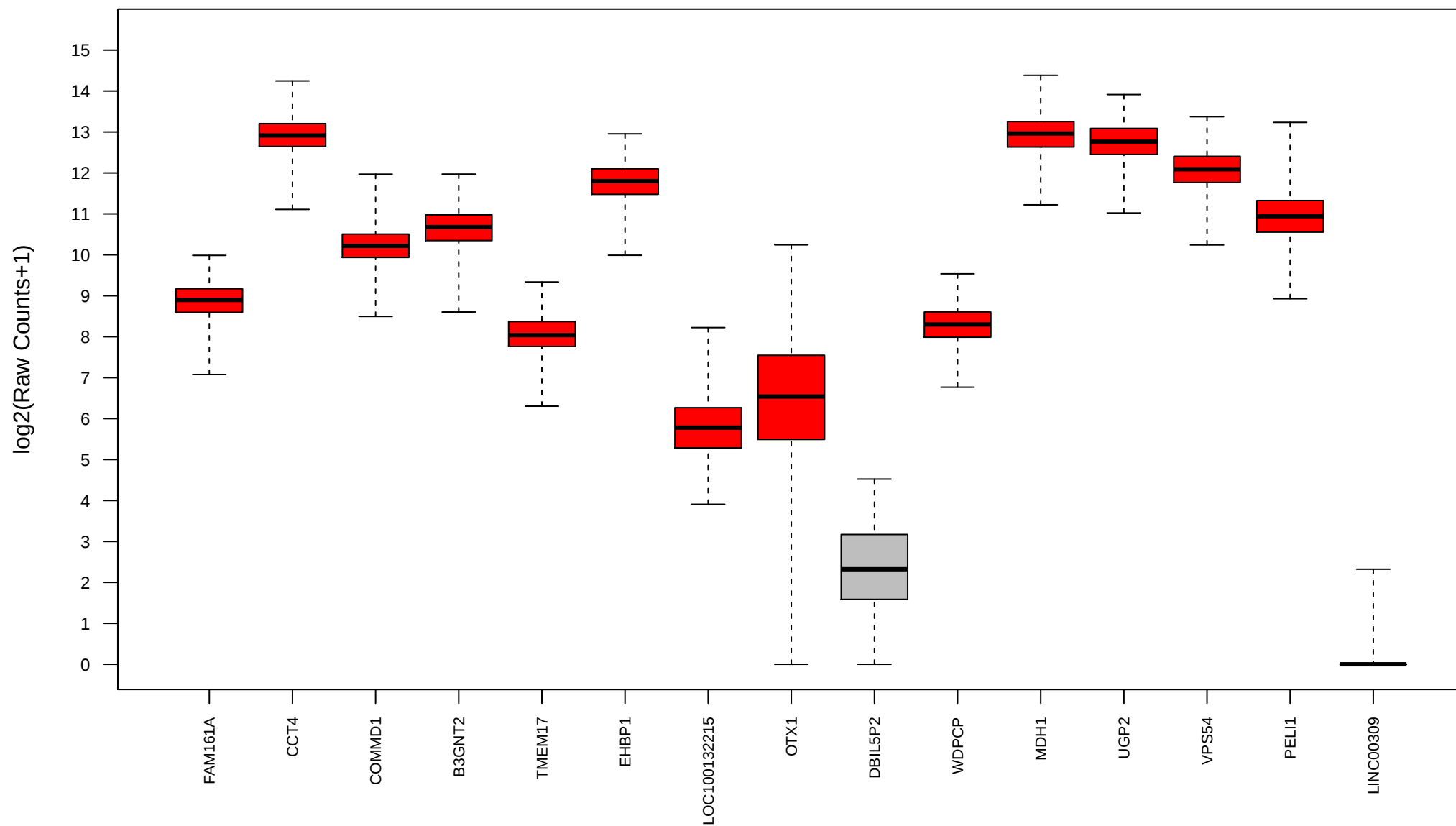
Region9, chr2.43453949.43653949

rs1465618

Total Genes: 19



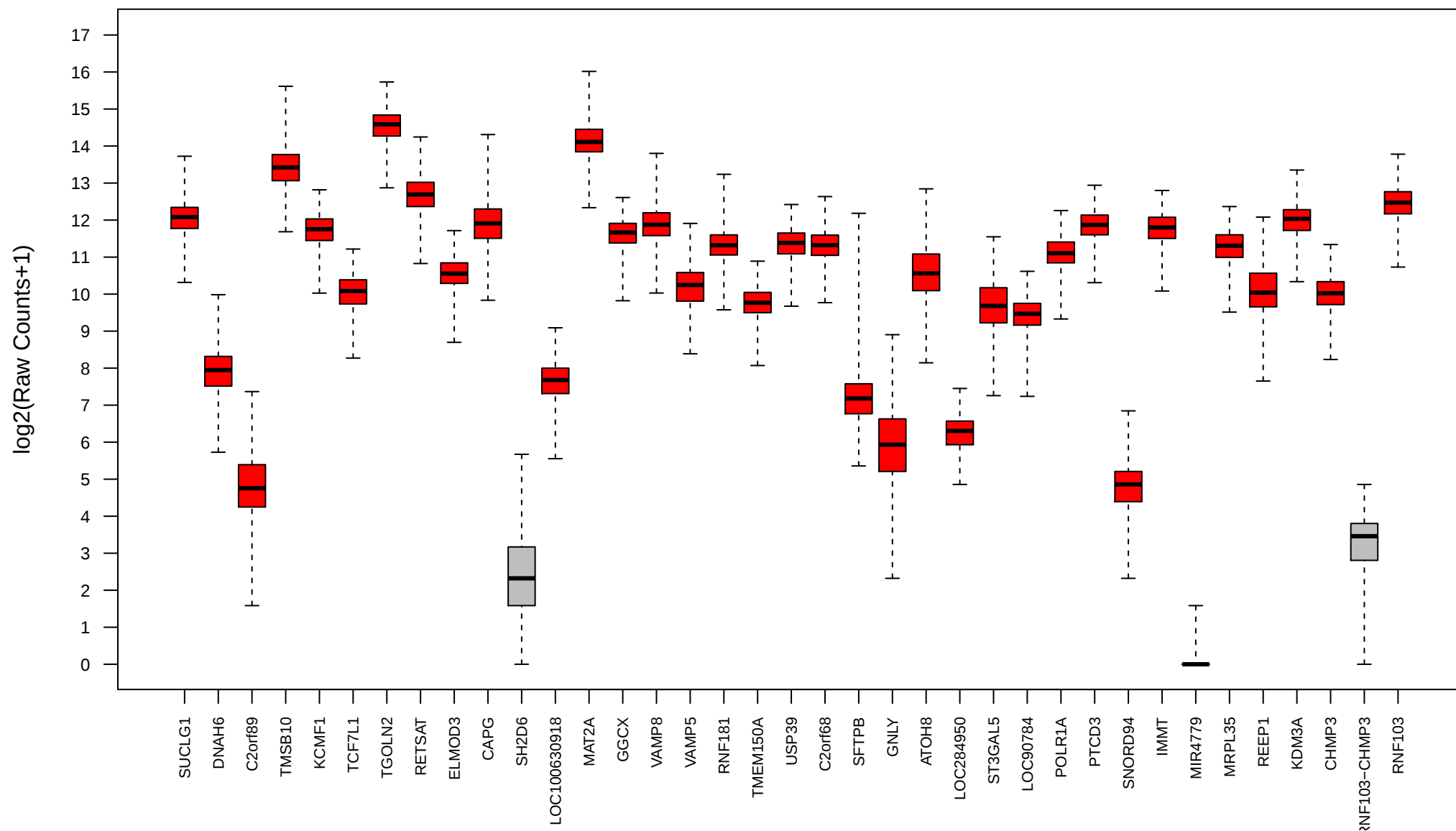
Region10, chr2.63031731.63401164  
rs721048,rs6545977  
Total Genes: 15



Region11, chr2.85677270.85894297

rs2028898,rs10187424

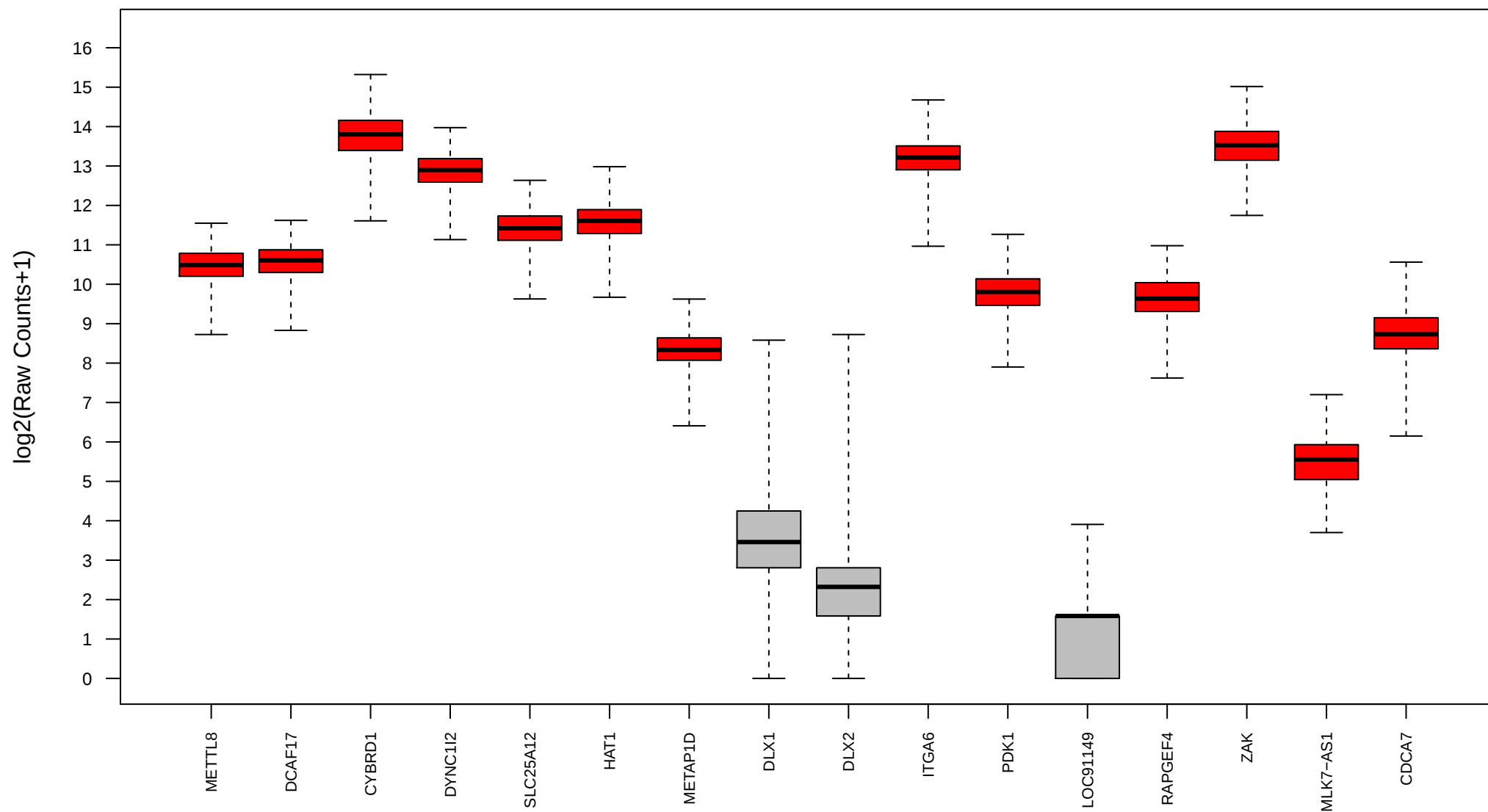
Total Genes: 37



Region12, chr2.173211553.173411553

rs12621278

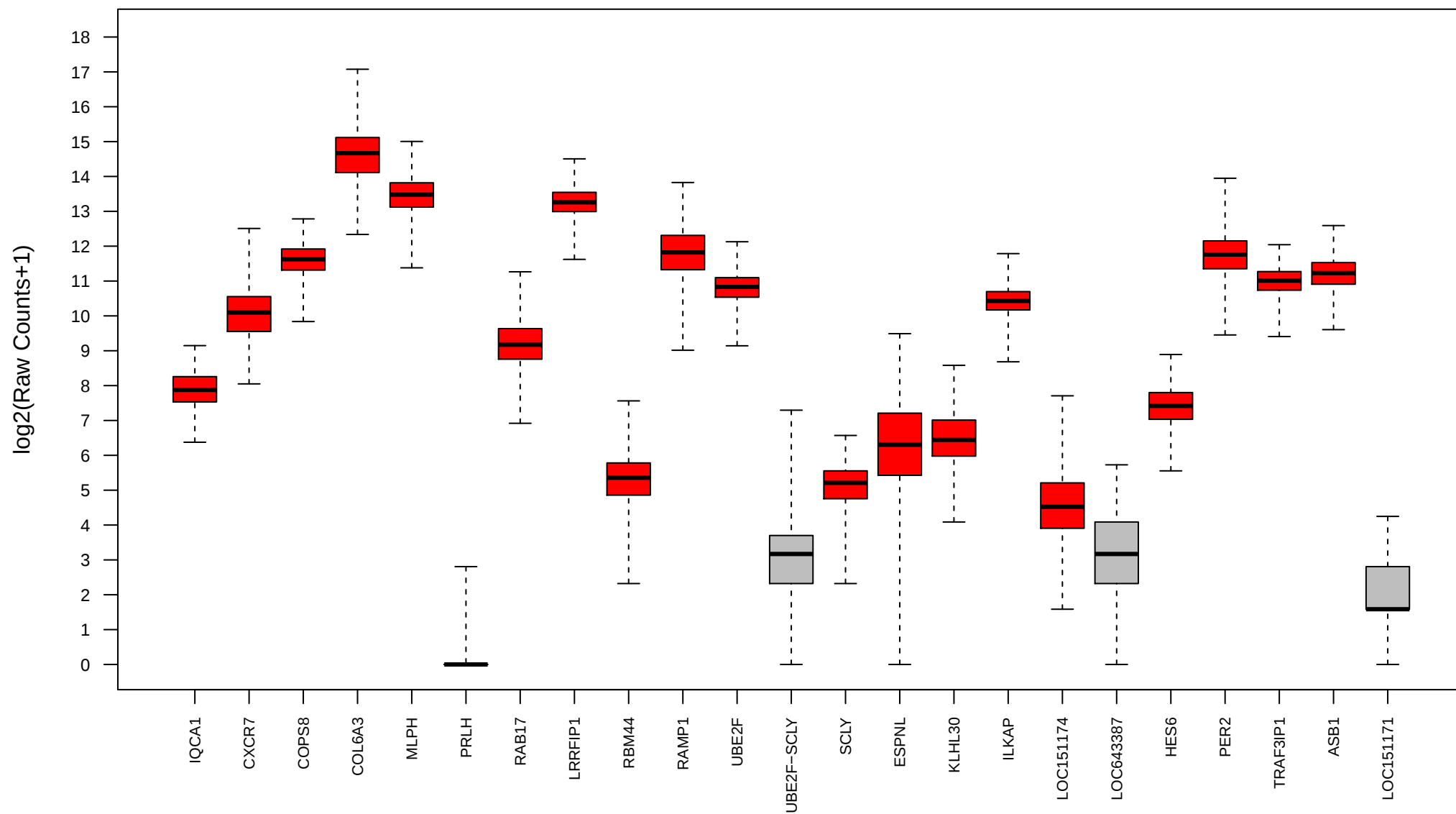
Total Genes: 16



Region13, chr2.238287228.238543226

rs7584330,rs2292884

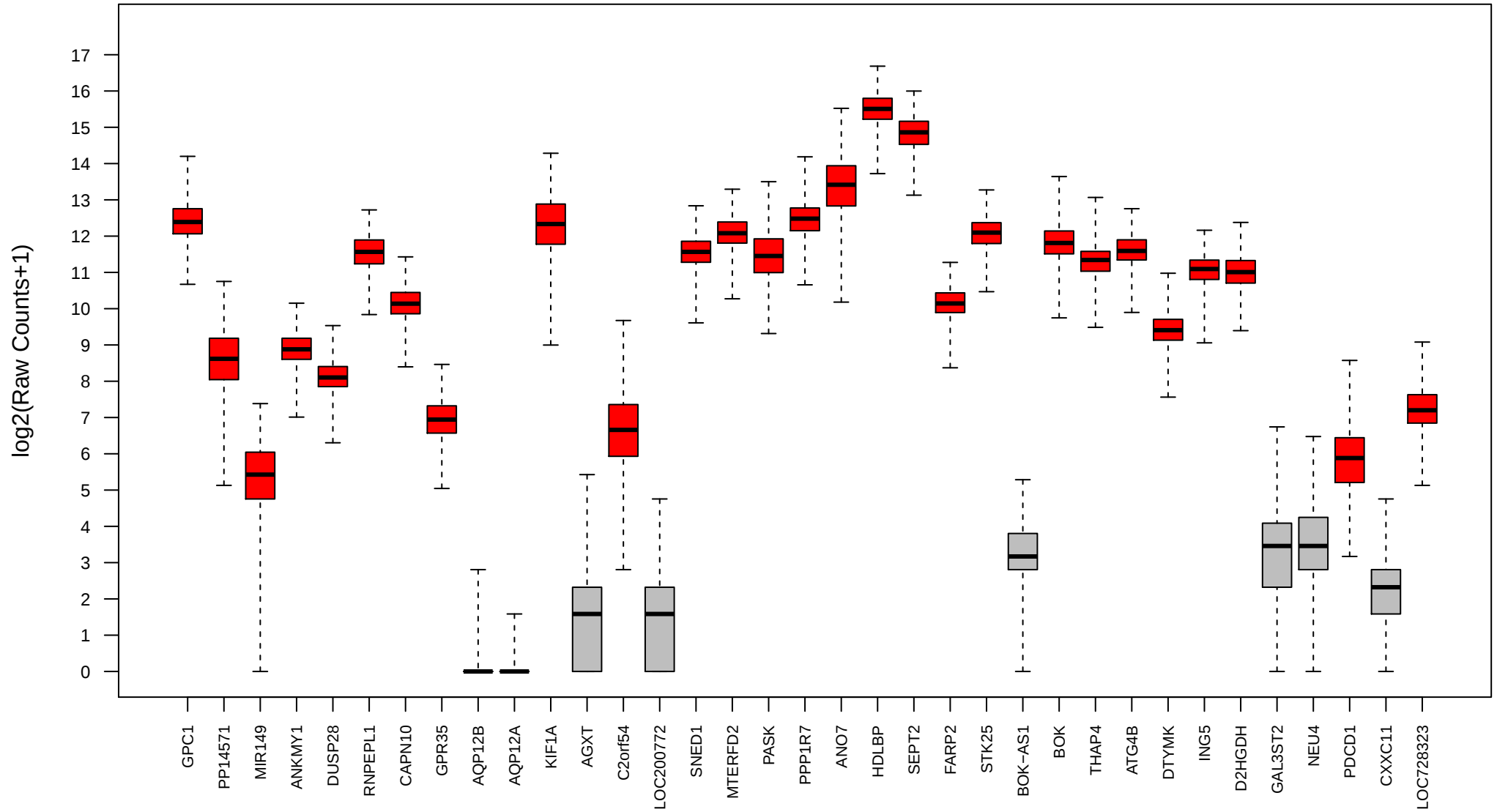
Total Genes: 23



Region14, chr2.242282864.242482864

rs3771570

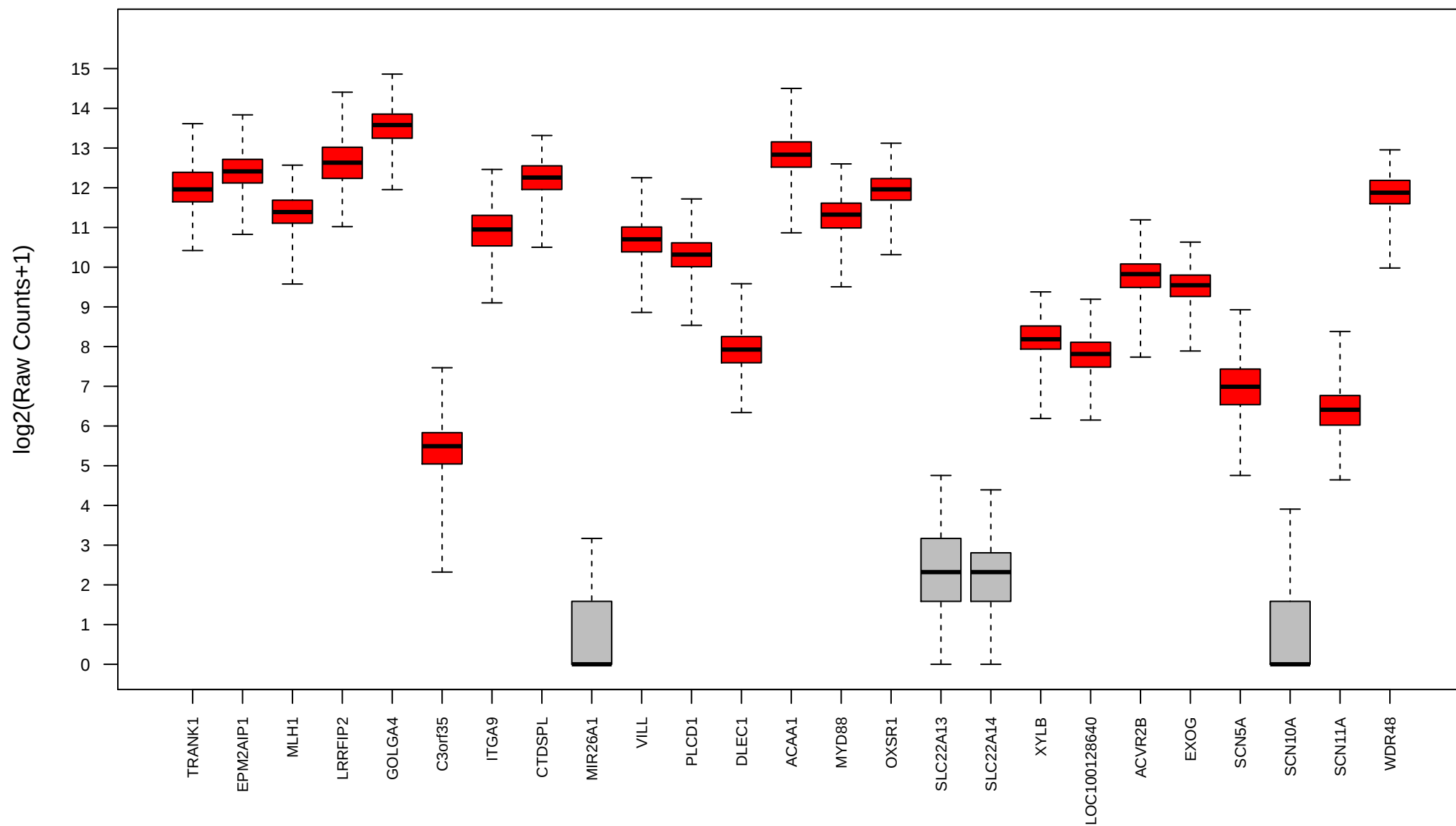
Total Genes: 35



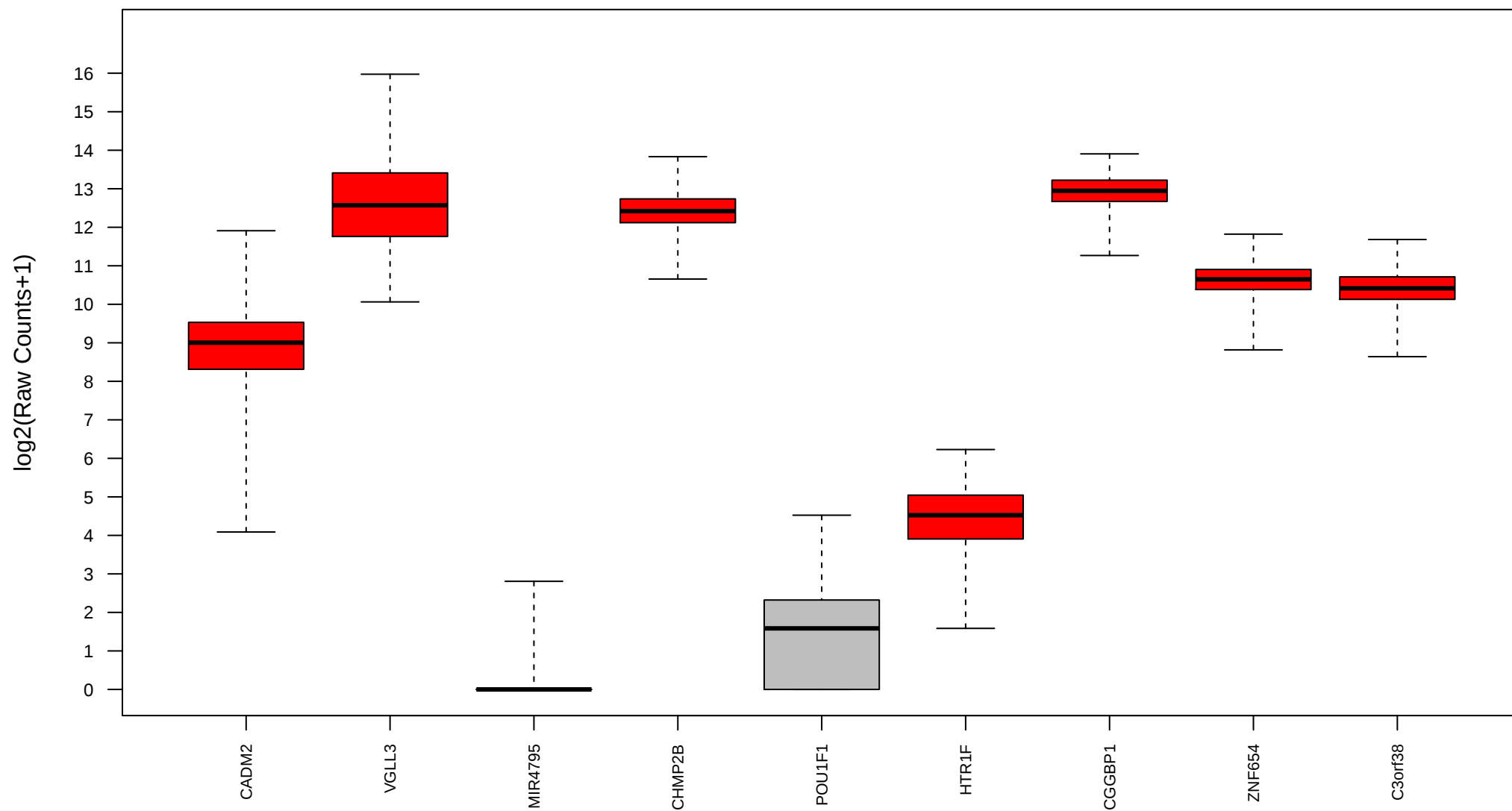
Region15, chr3.37896477.38096477

rs9311171

Total Genes: 25



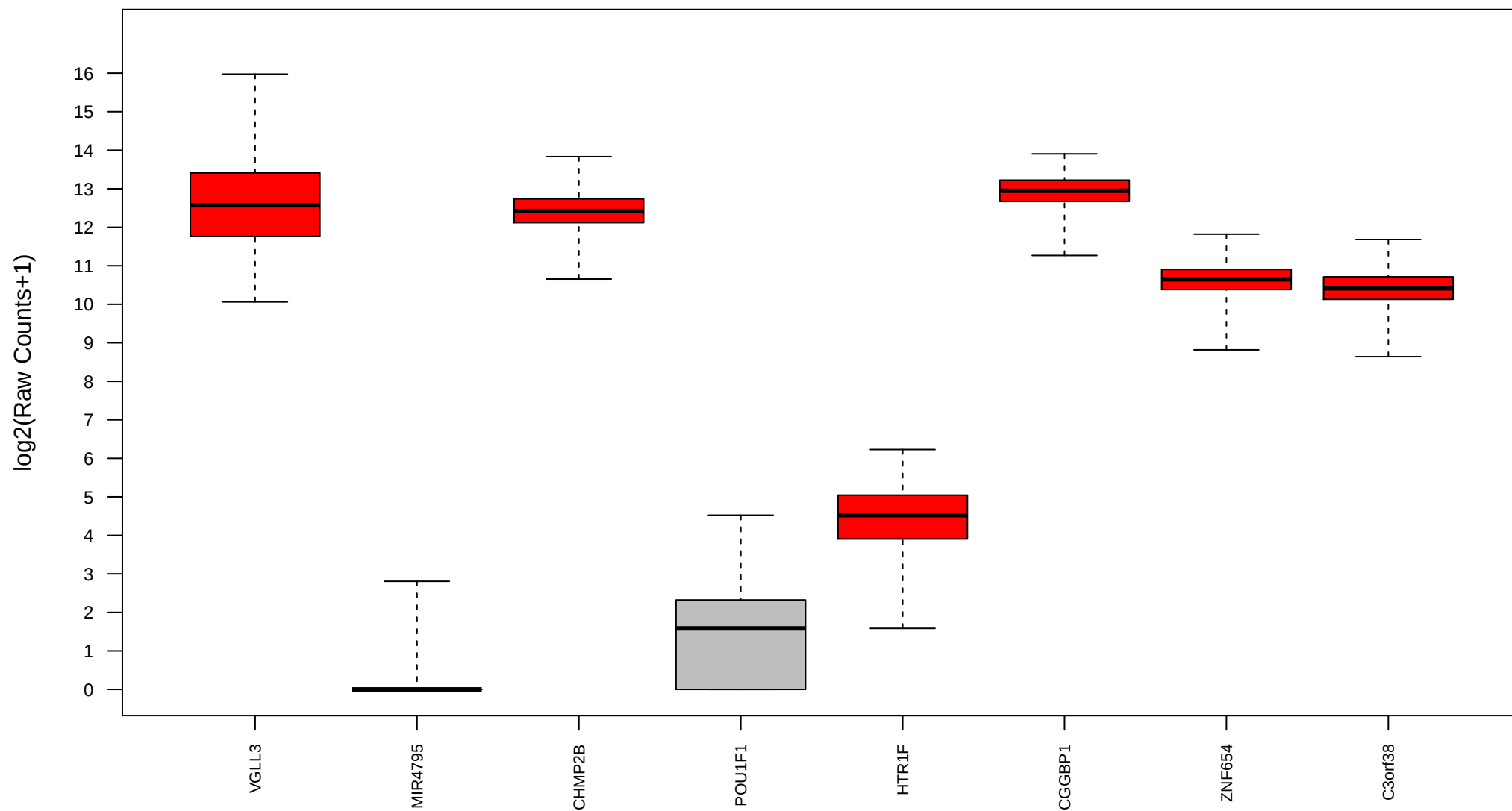
**Region16, chr3.87010674.87341497**  
**rs7629490,rs2660753,rs9284813,rs17181170**  
**Total Genes: 9**



Region17, chr3.87367332.87567332

rs2055109

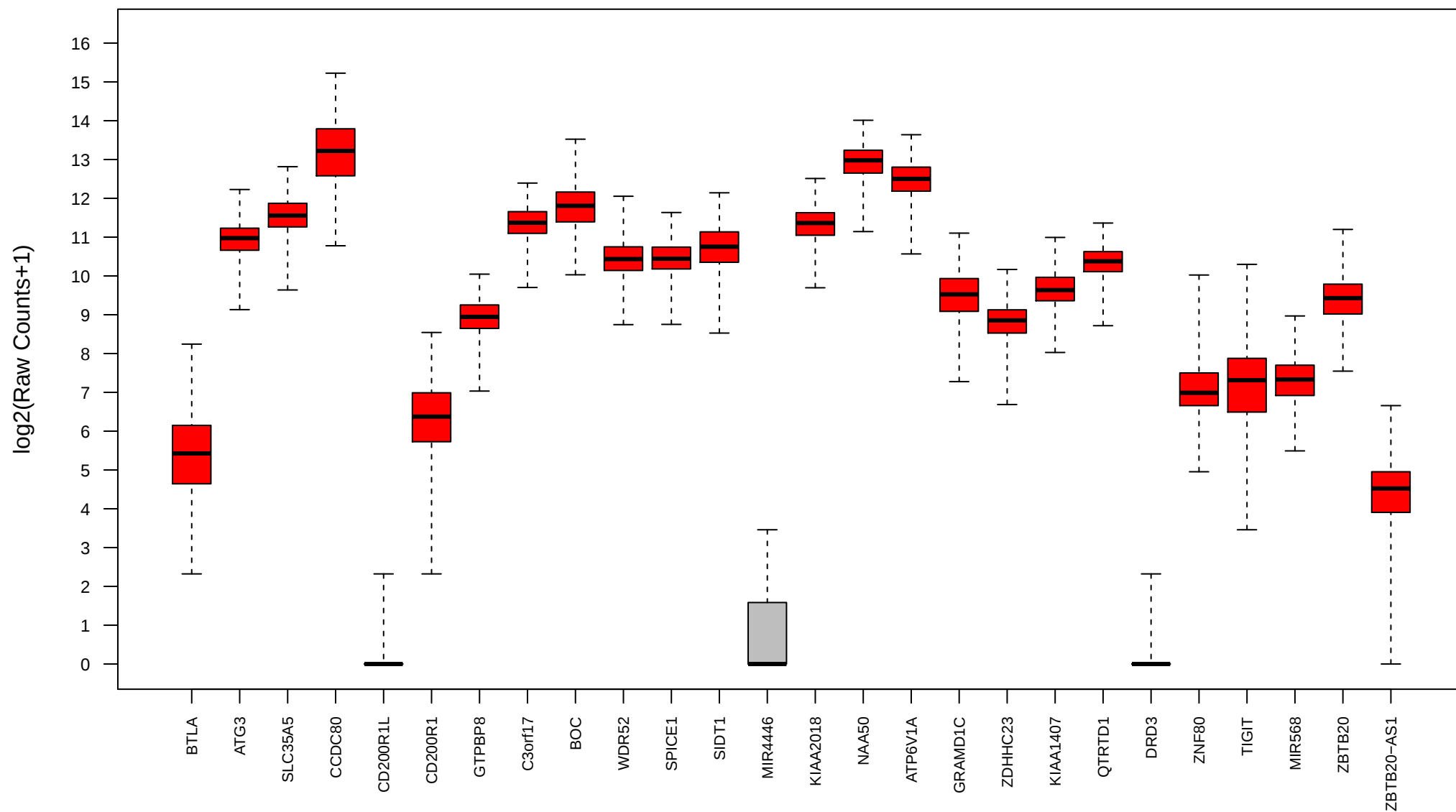
Total Genes: 8



Region18, chr3.113175624.113375624

rs7611694

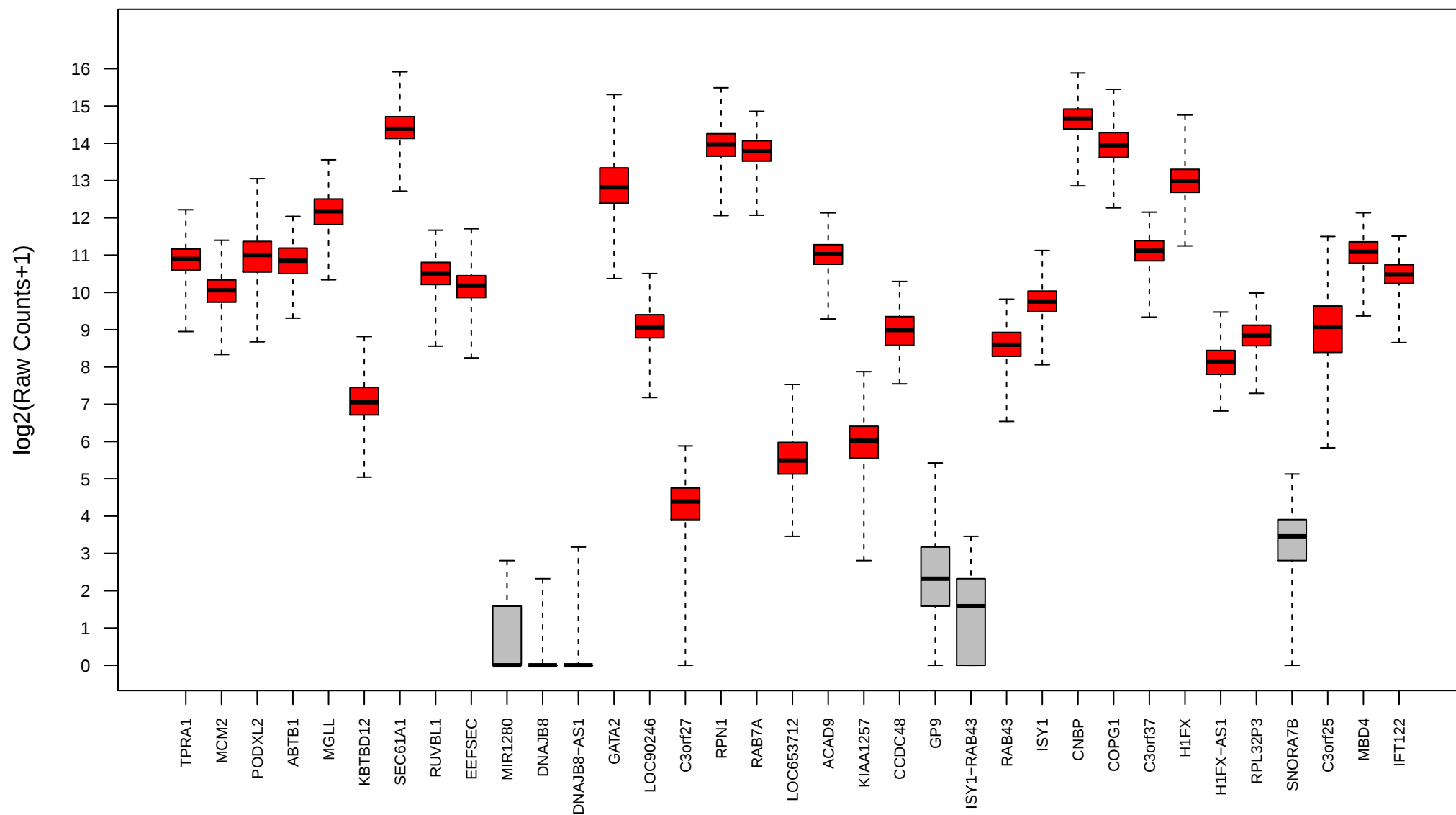
Total Genes: 26



Region19, chr3.127938373.128138373

rs10934853

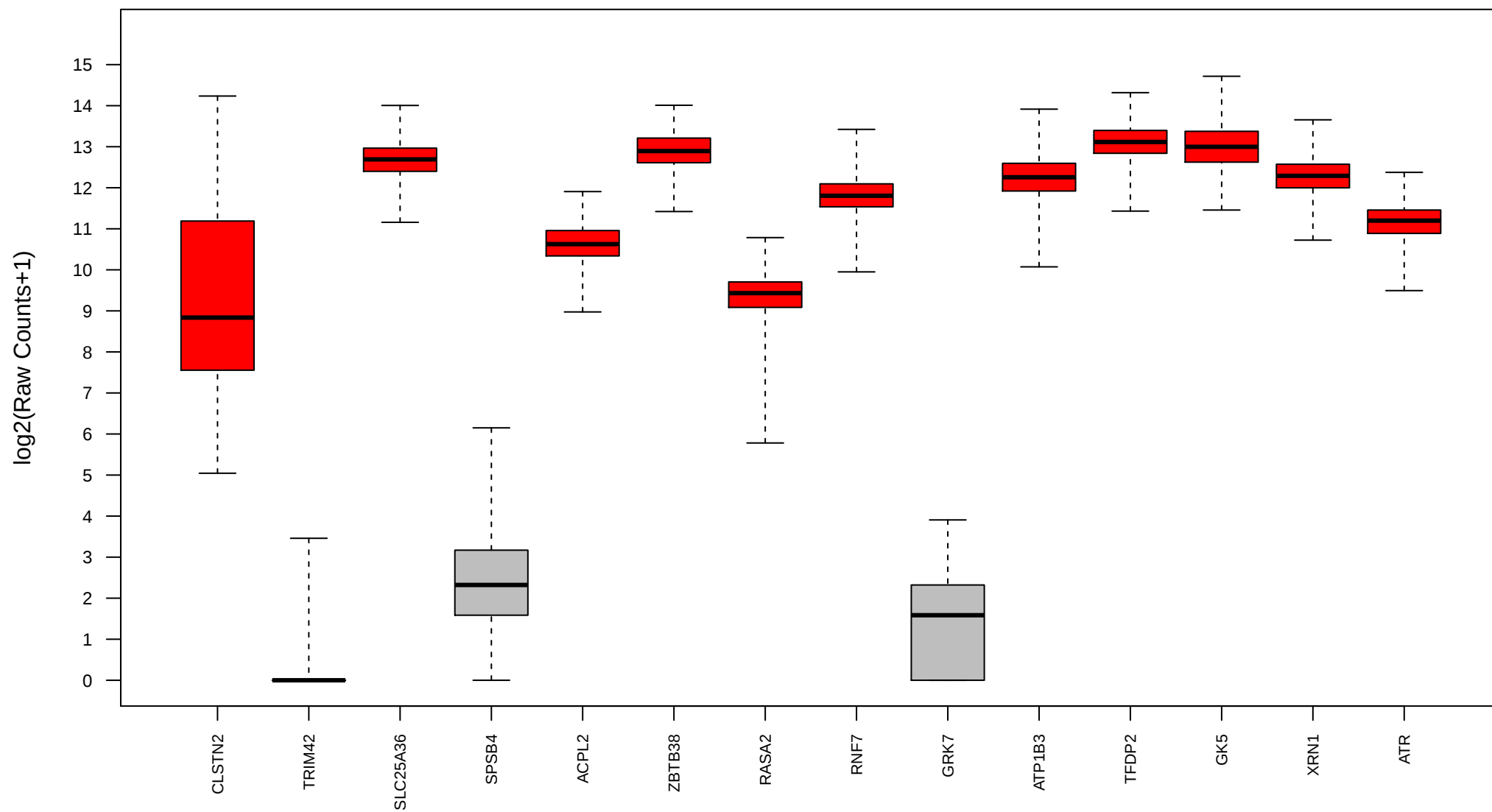
Total Genes: 35



Region20, chr3.141002833.141202833

rs6763931

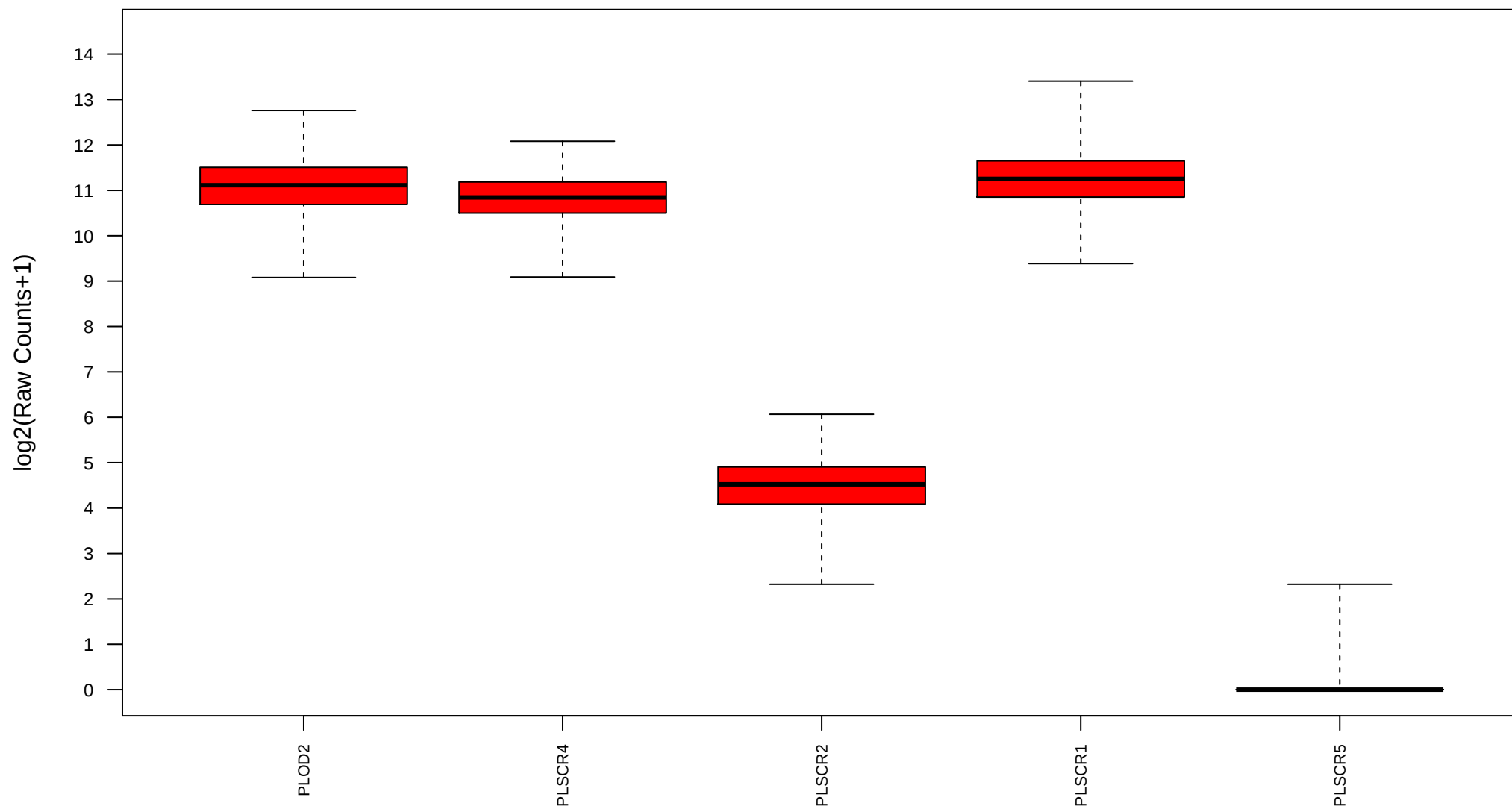
Total Genes: 14



Region21, chr3.145073788.145273788

rs345013

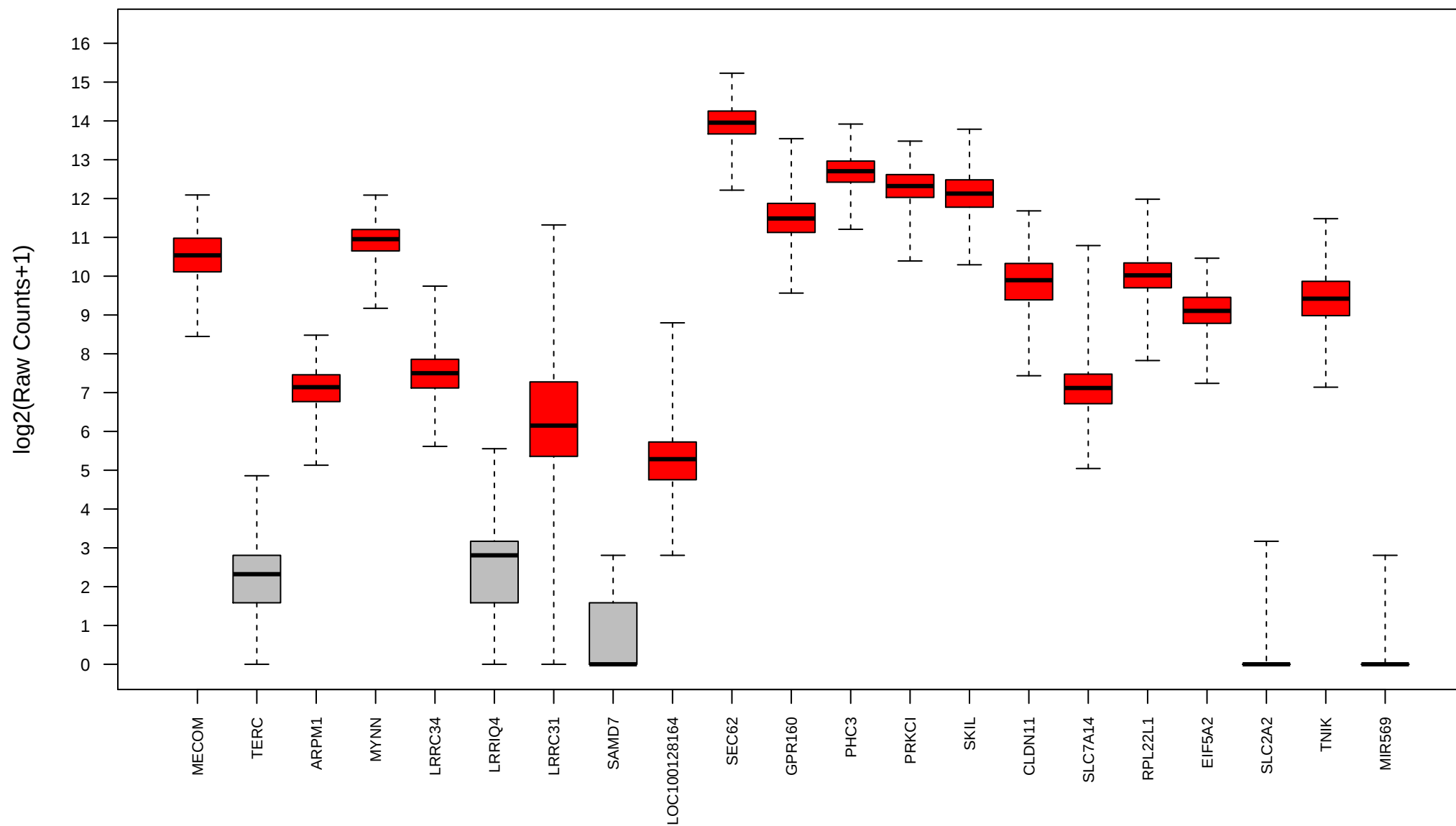
Total Genes: 5



Region22, chr3.170030102.170230102

rs10936632

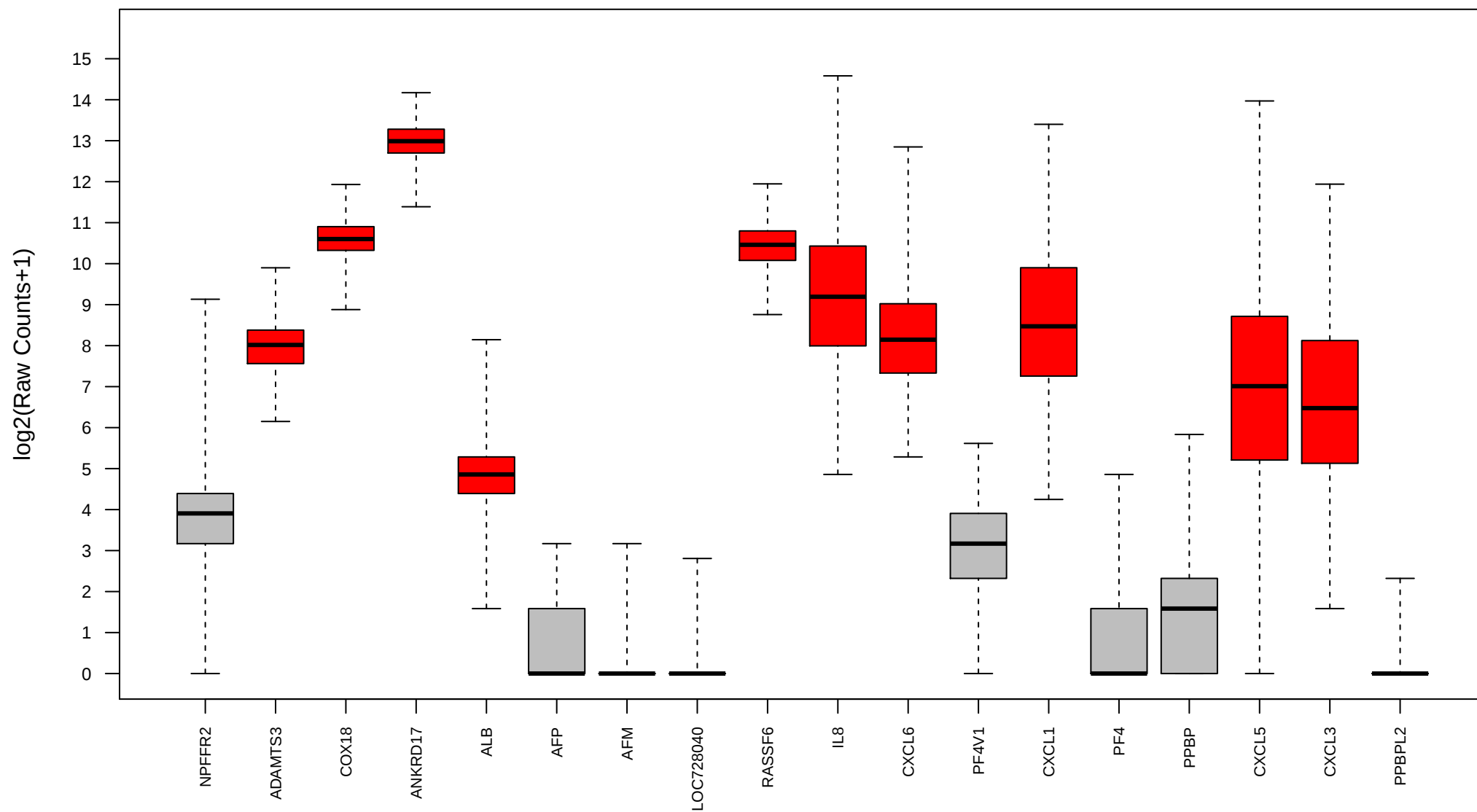
Total Genes: 21



Region23, chr4.73755253.73955253

rs10009409

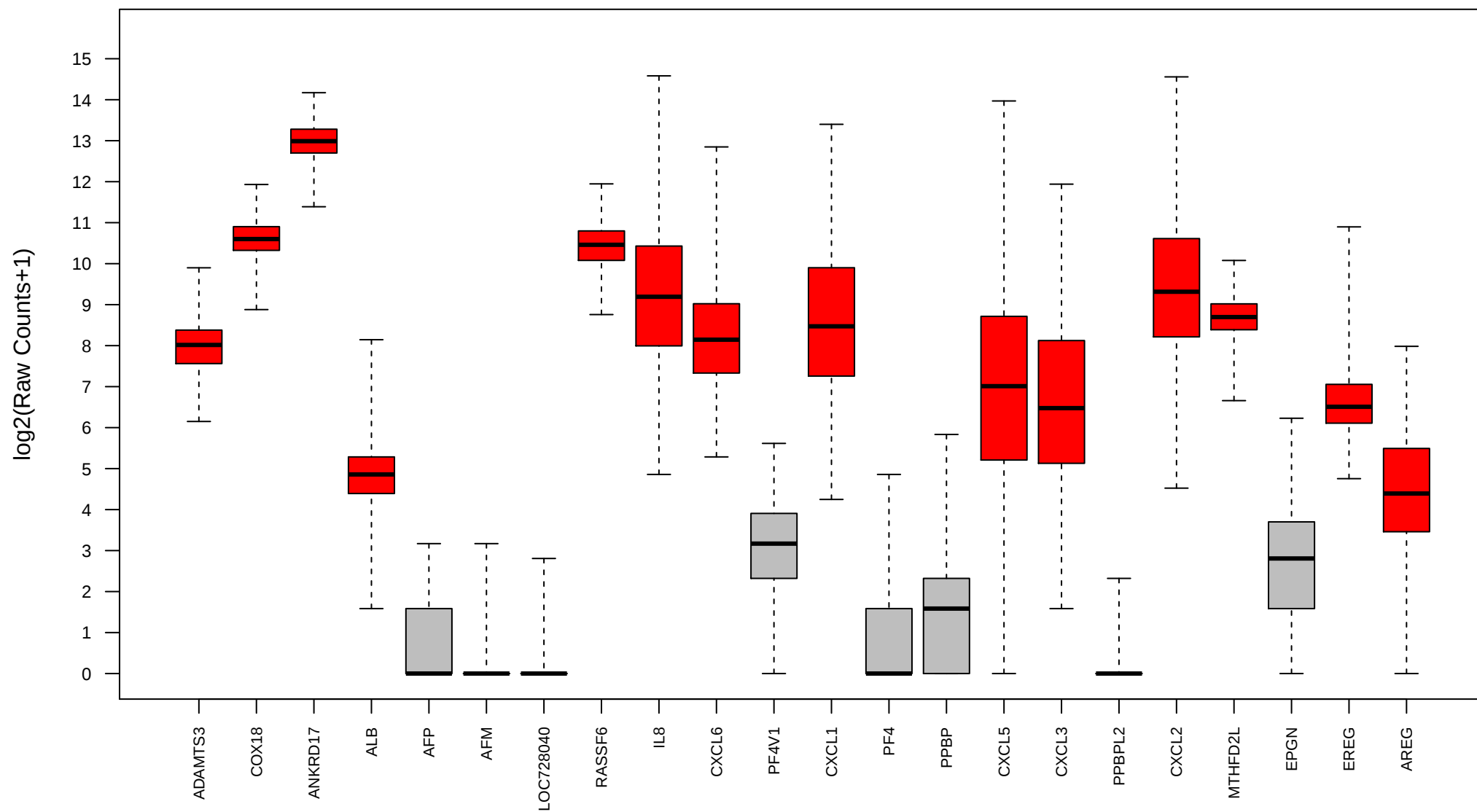
Total Genes: 18



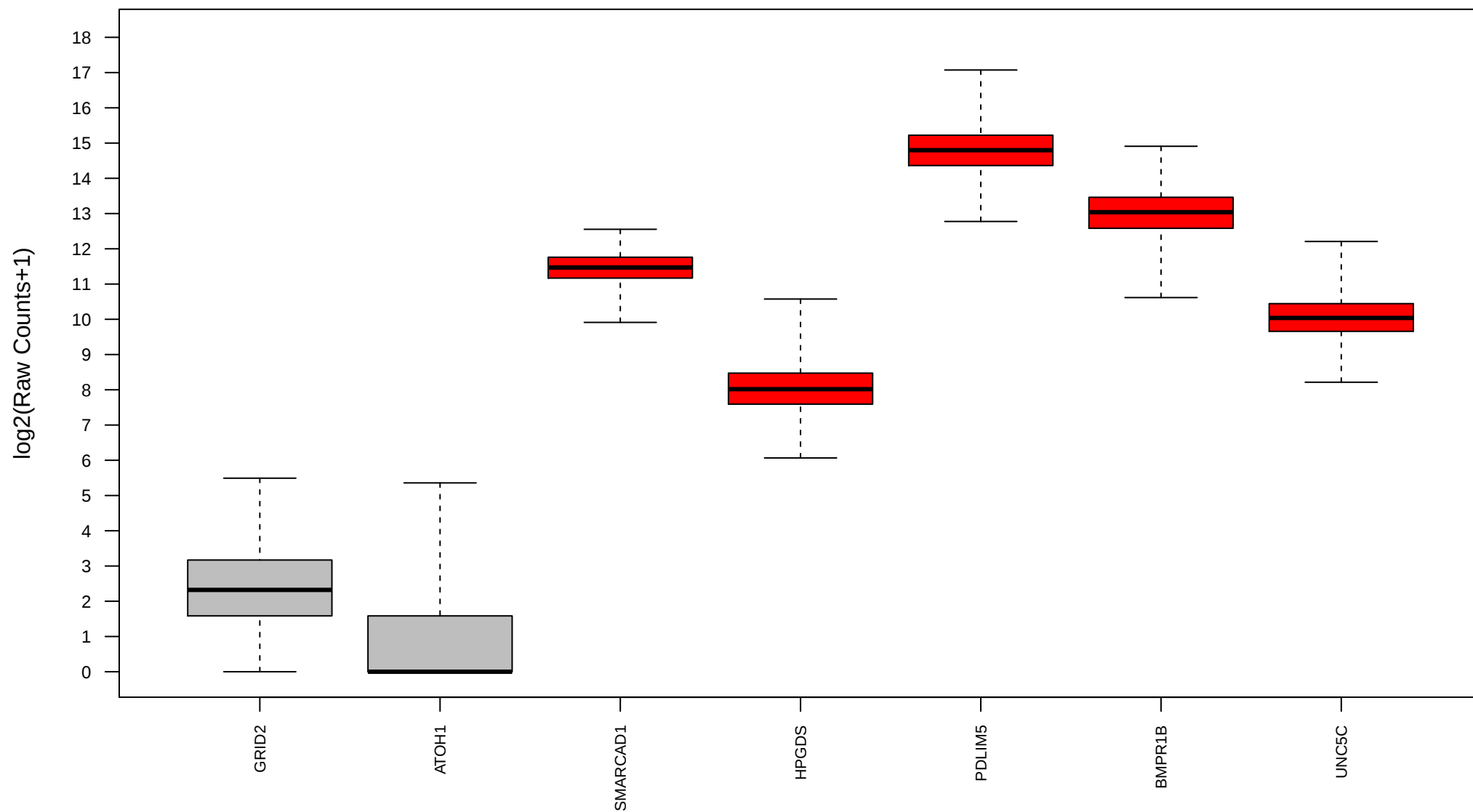
Region24, chr4.74249158.74449158

rs1894292

Total Genes: 22



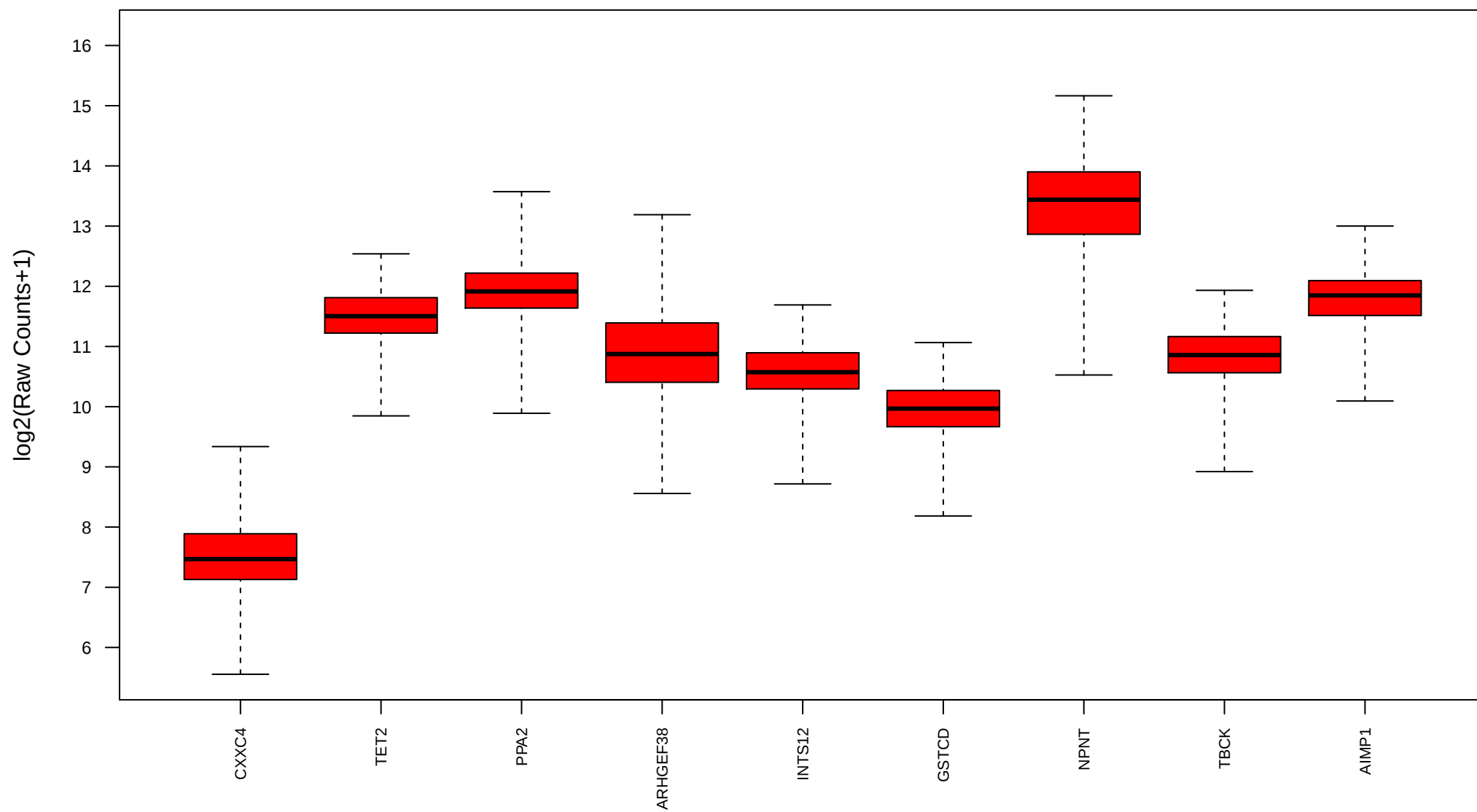
Region25, chr4.95414609.95662877  
rs12500426,rs17021918  
Total Genes: 7



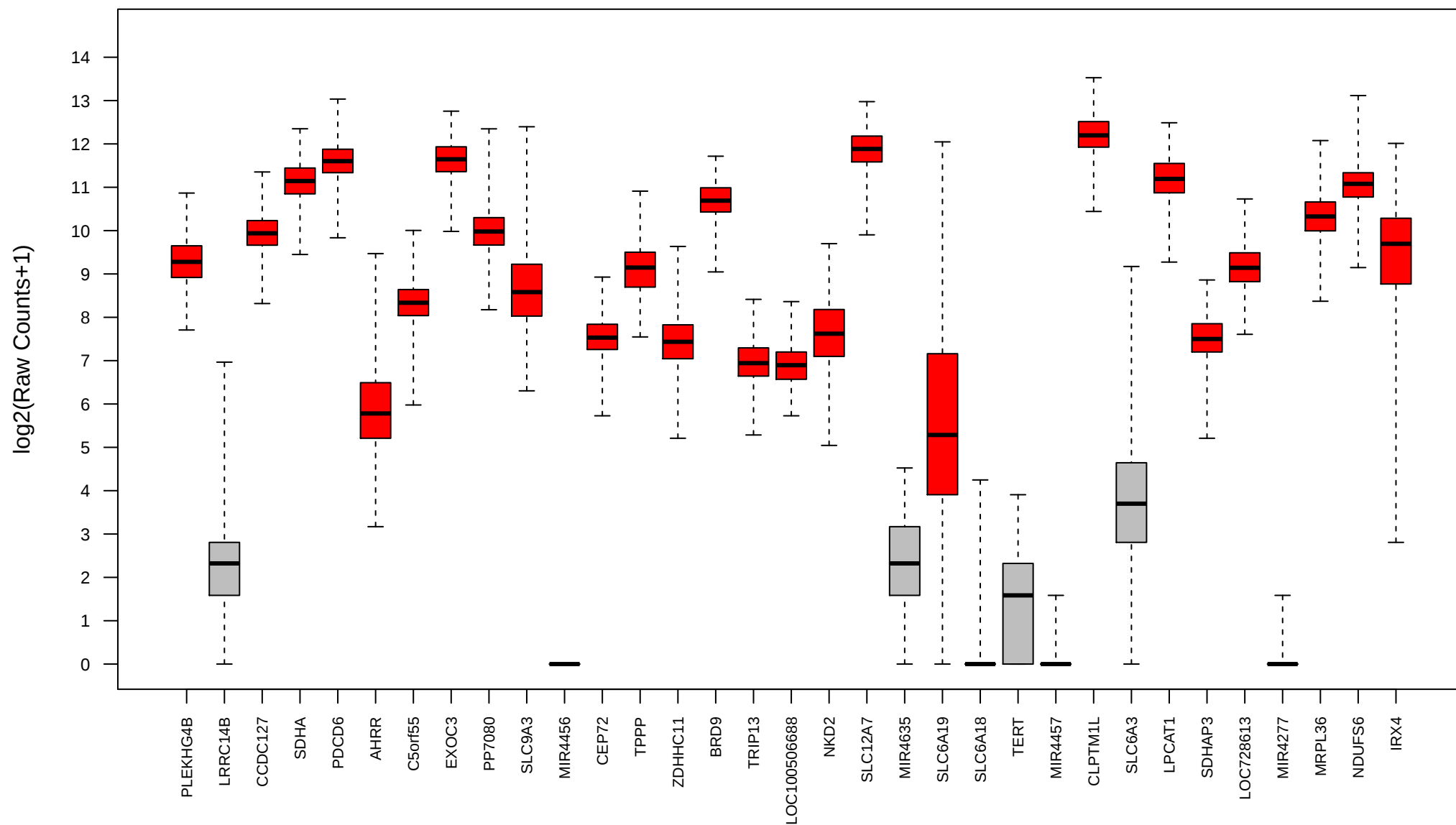
Region26, chr4.105961534.106161534

rs7679673

Total Genes: 9



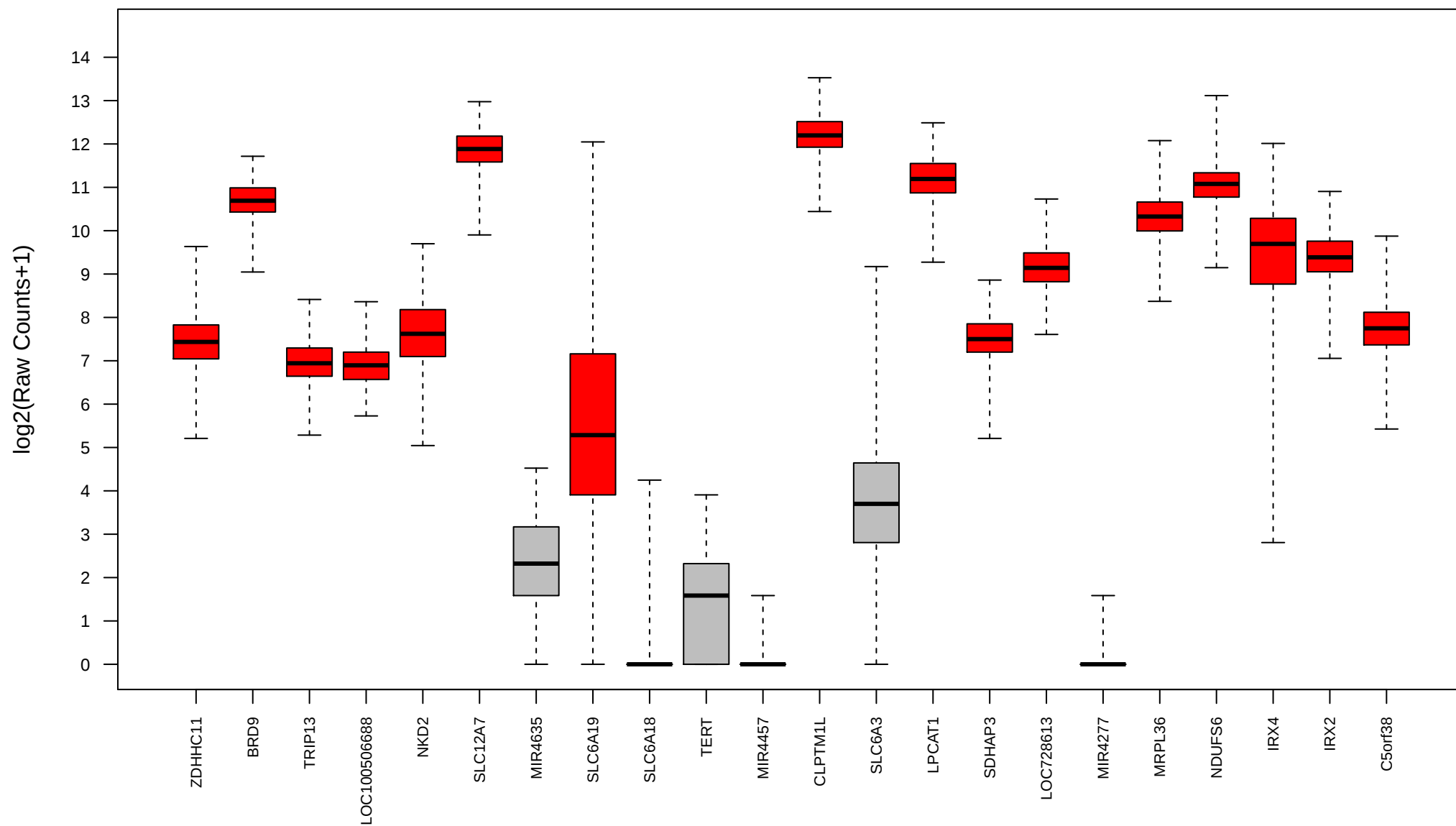
Region27, chr5.1180028.1398733  
rs2242652,rs7725218,rs2853676,rs13190087  
Total Genes: 33



Region28, chr5.1795829.1995829

rs12653946

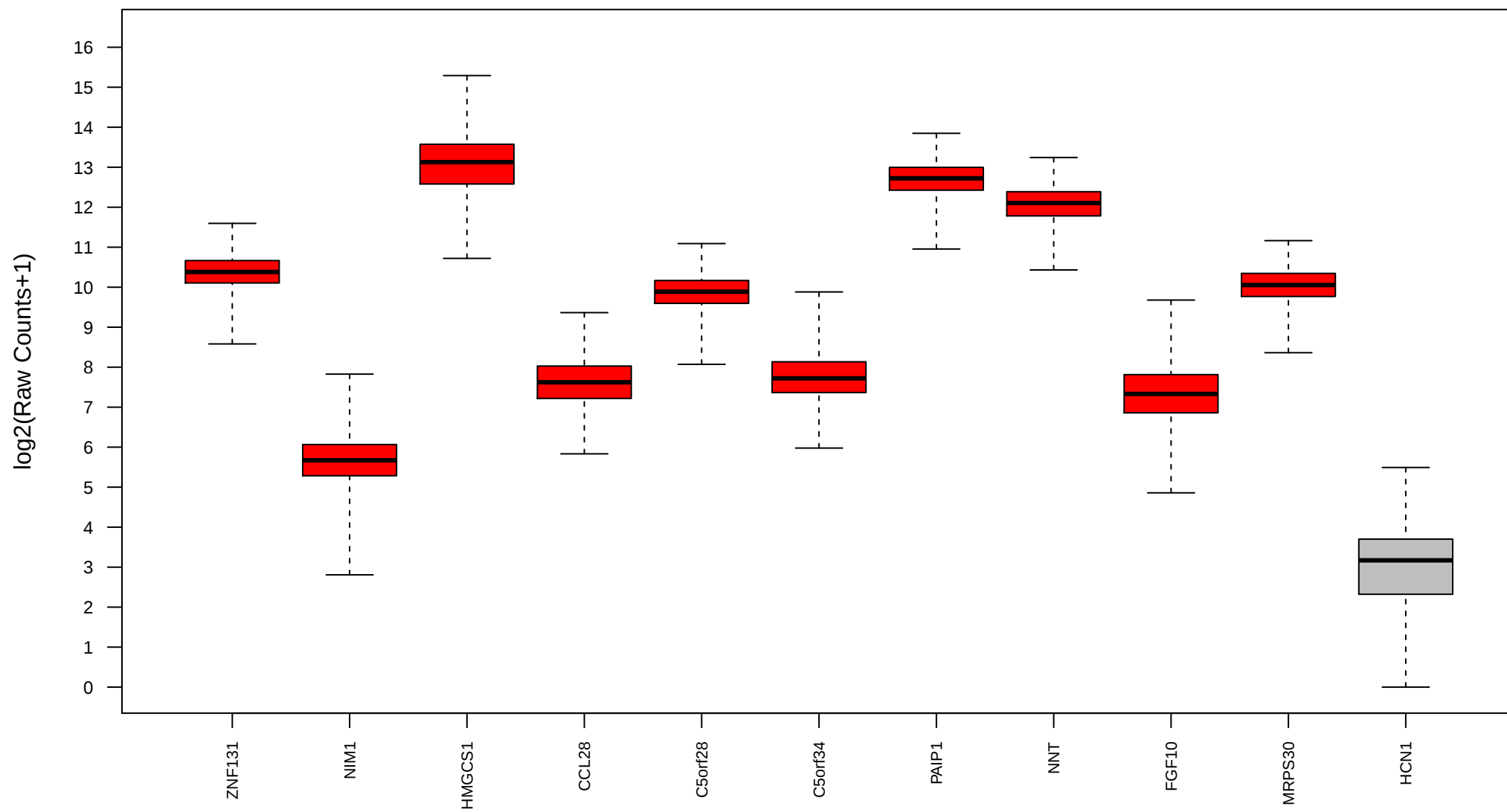
Total Genes: 22



Region29, chr5.44265545.44465545

rs2121875

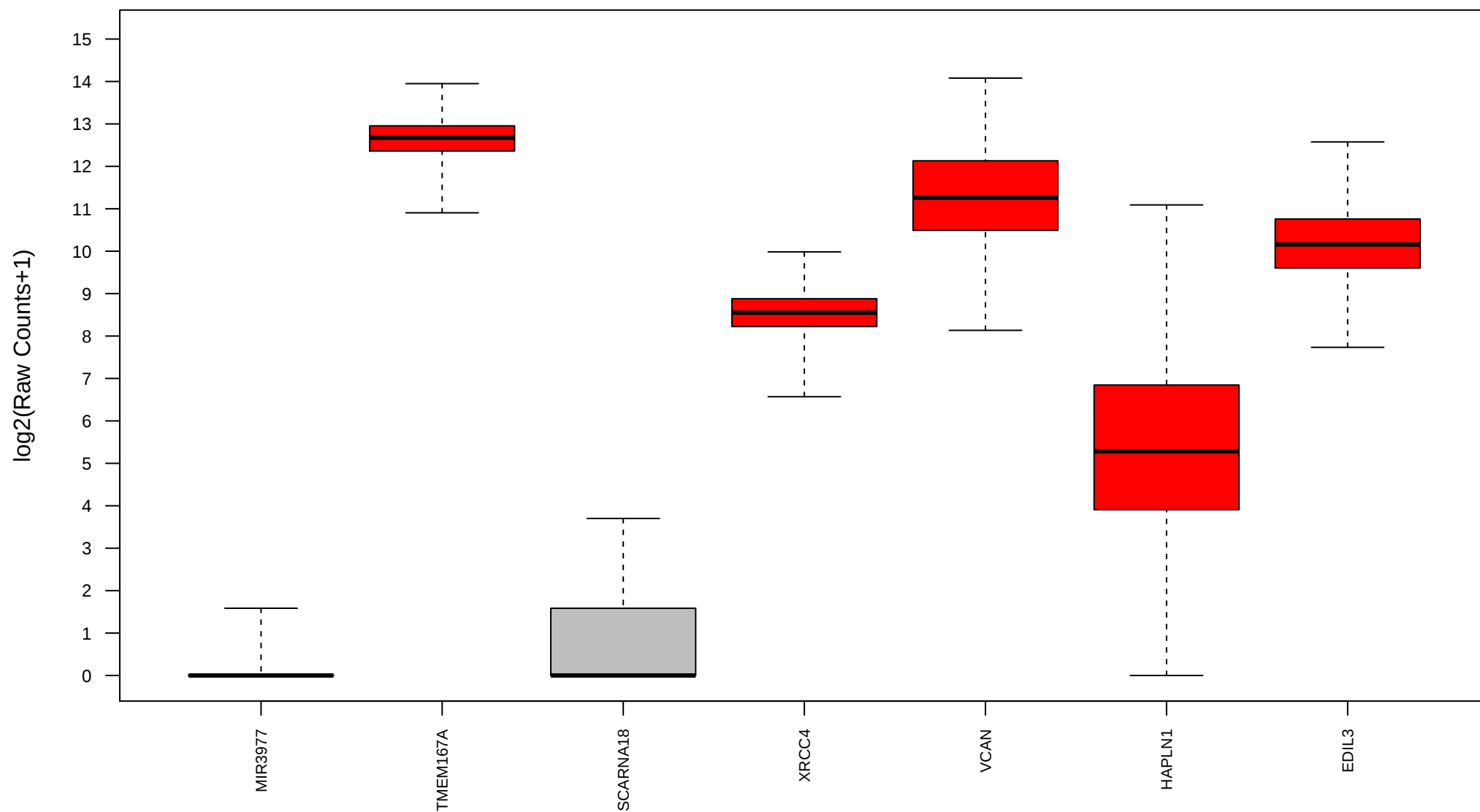
Total Genes: 11



Region30, chr5.82885739.83085739

rs4466137

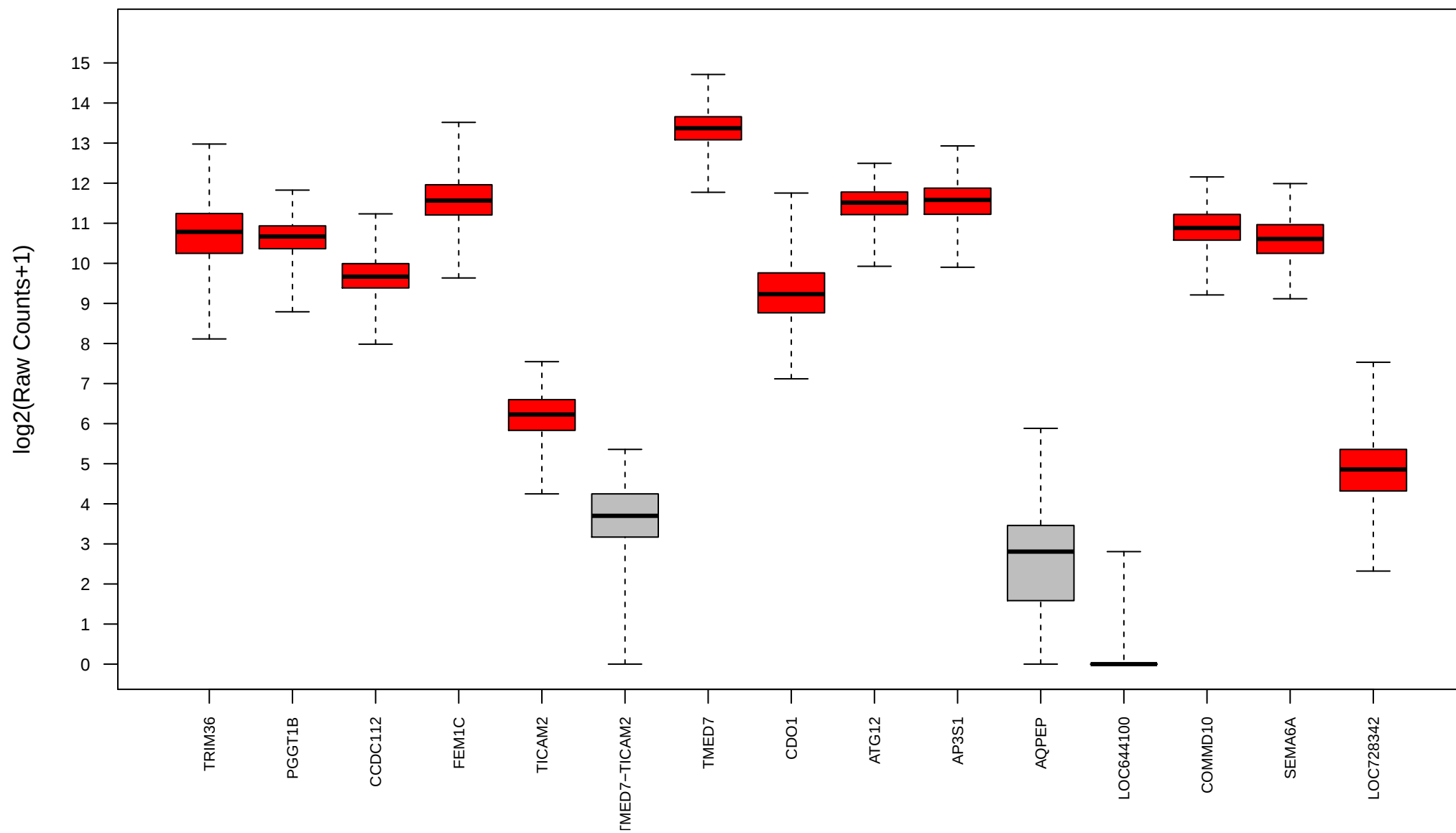
Total Genes: 7



Region31, chr5.115530004.115730004

rs37181

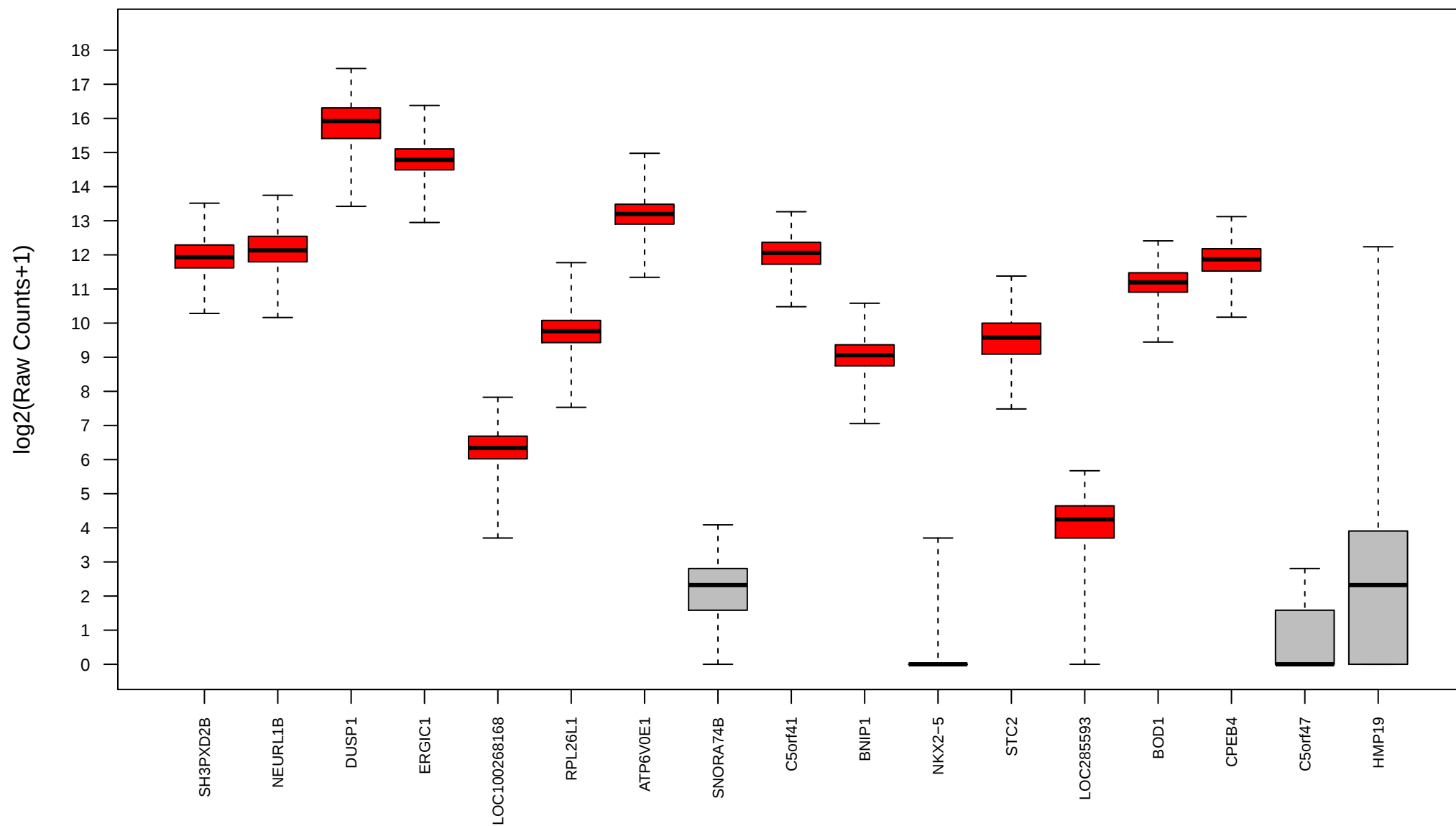
Total Genes: 15



Region32, chr5.172839426.173039426

rs6869841

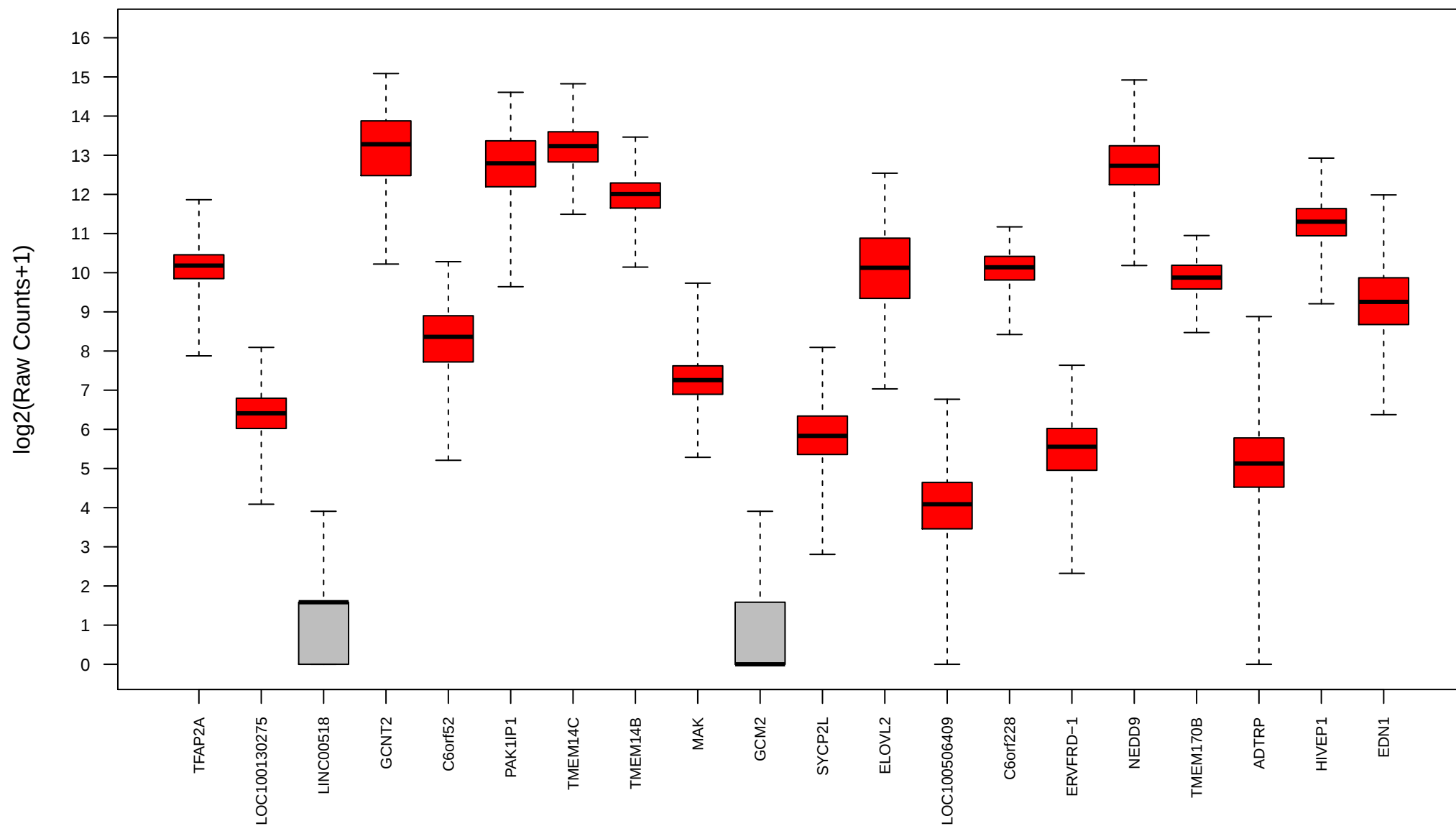
Total Genes: 17



Region33, chr6.11119030.11319030

rs4713266

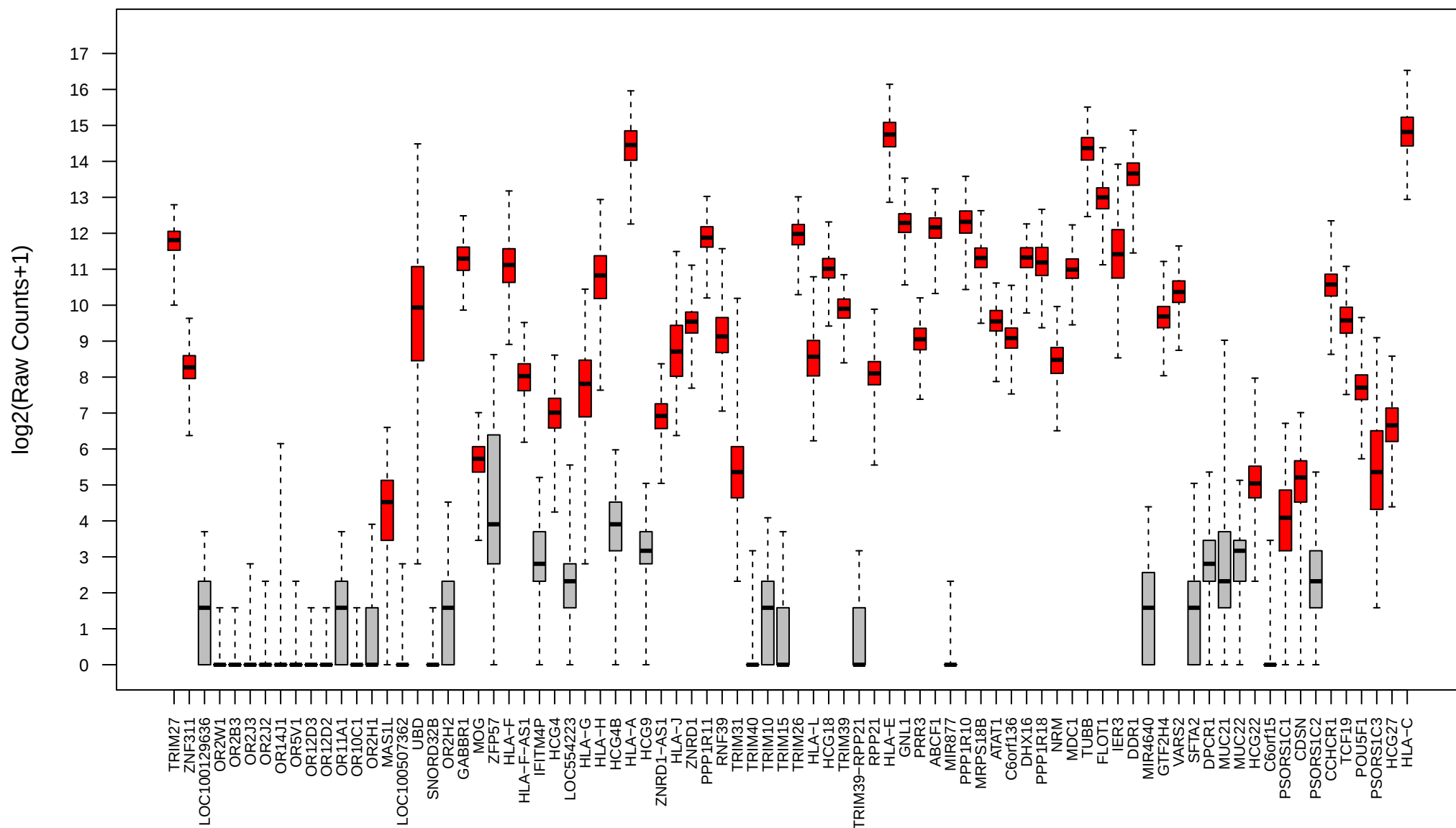
Total Genes: 20



Region34, chr6.29973776.30173776

rs7767188

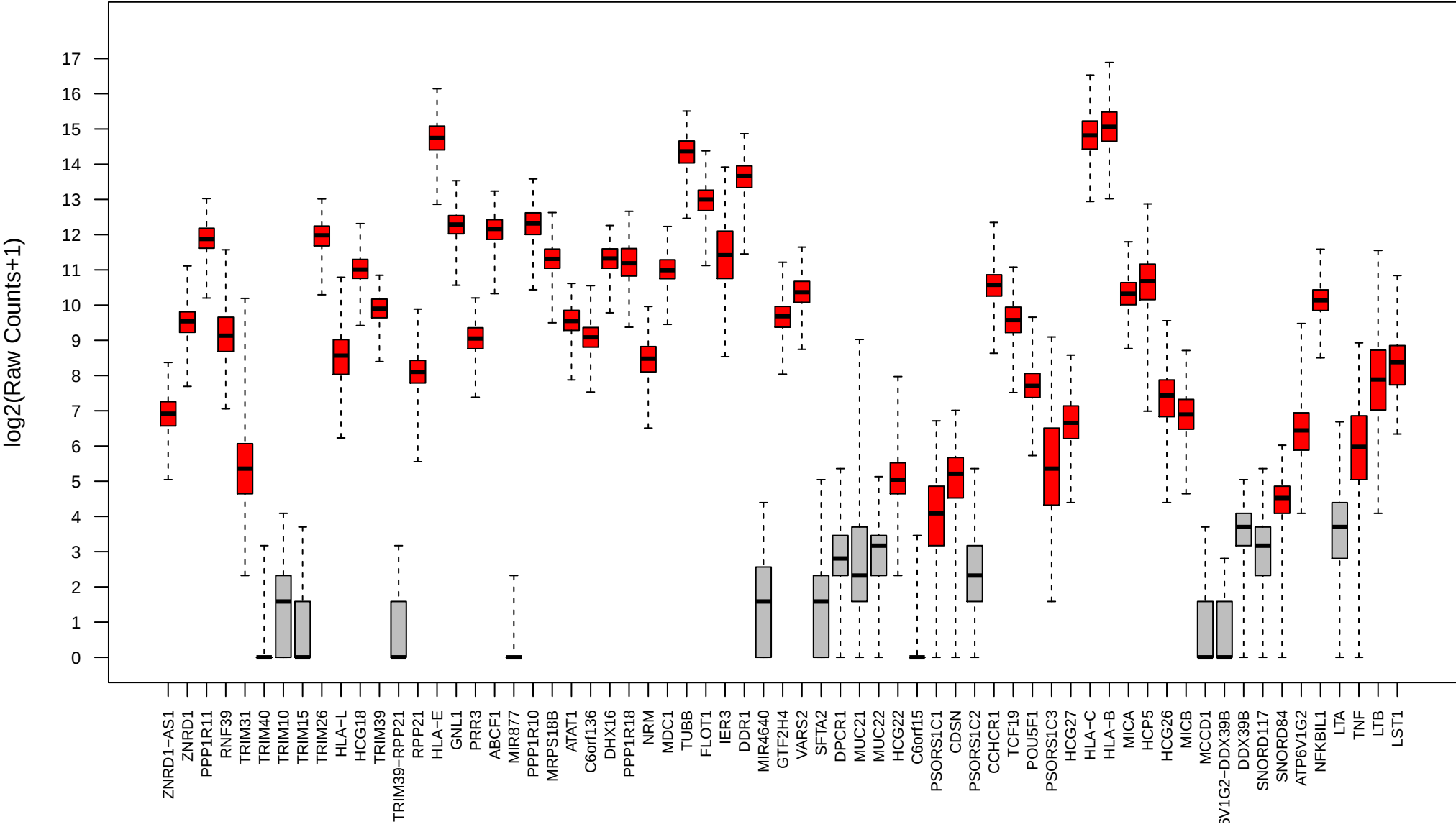
Total Genes: 82



Region35A, chr6.31018511.31218511

rs130067

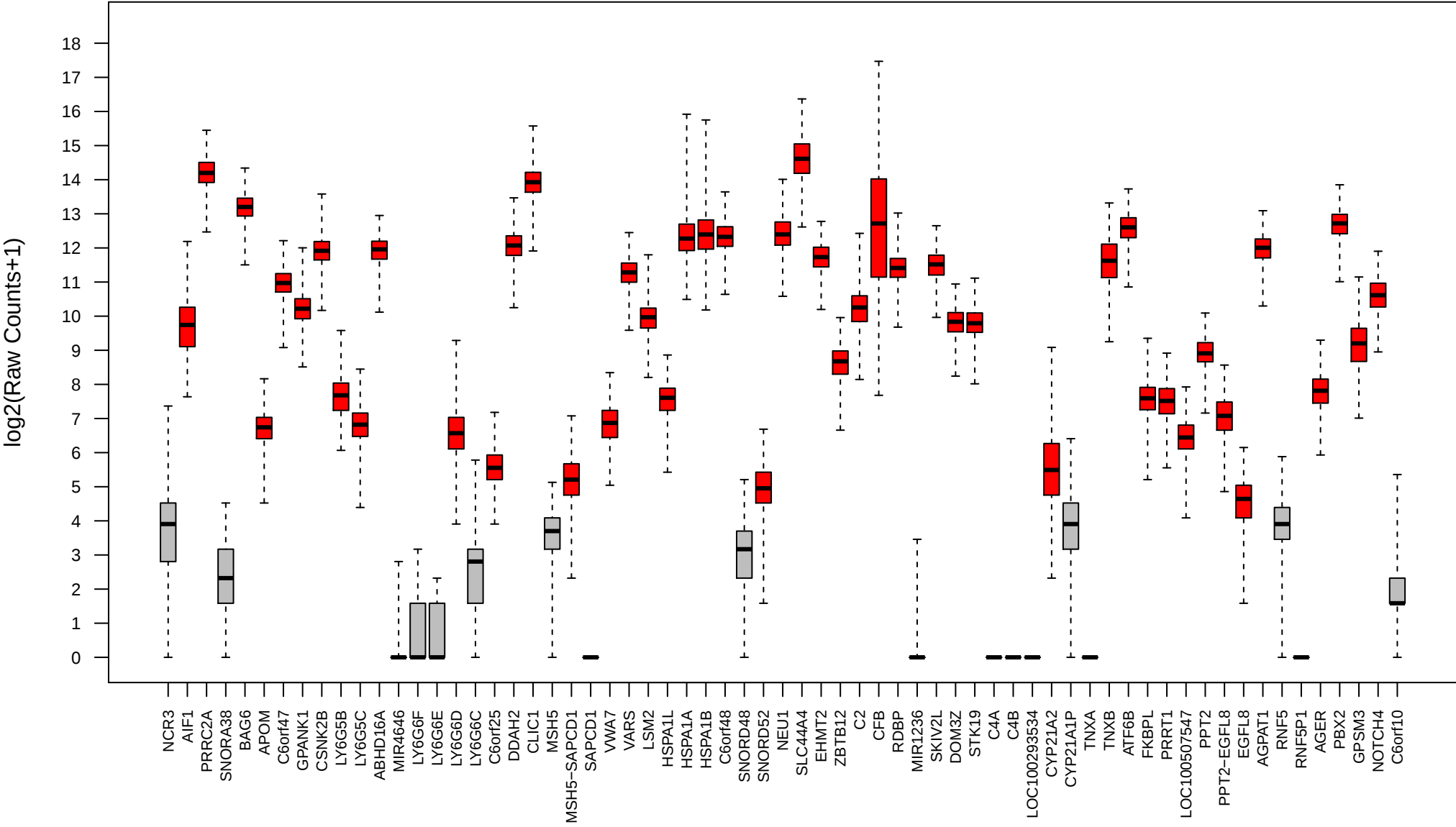
Total Genes: 130



Region35B, chr6.31018511.31218511

rs130067

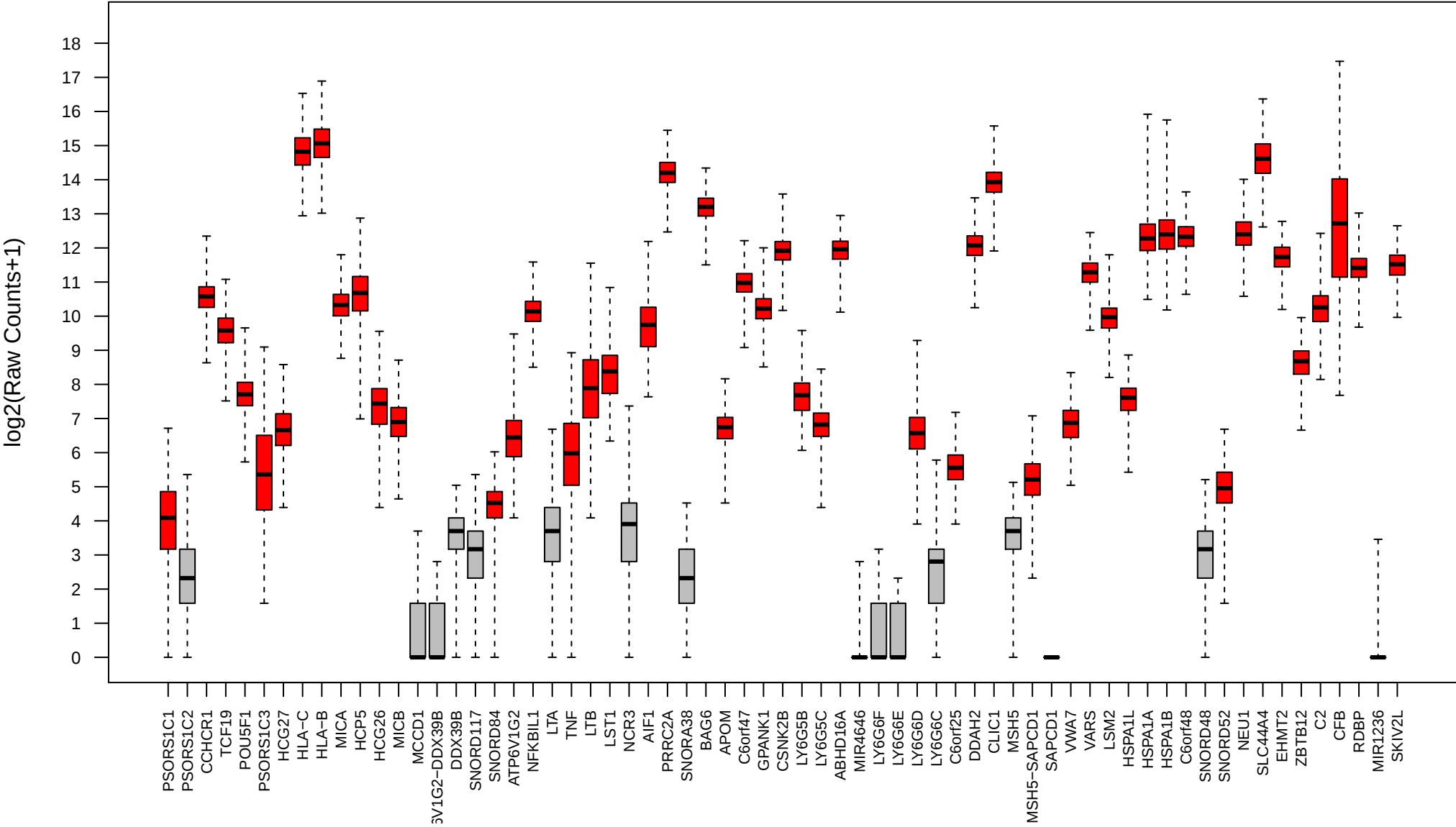
Total Genes: 130



Region36A, chr6.32092331.32292331

rs114376585

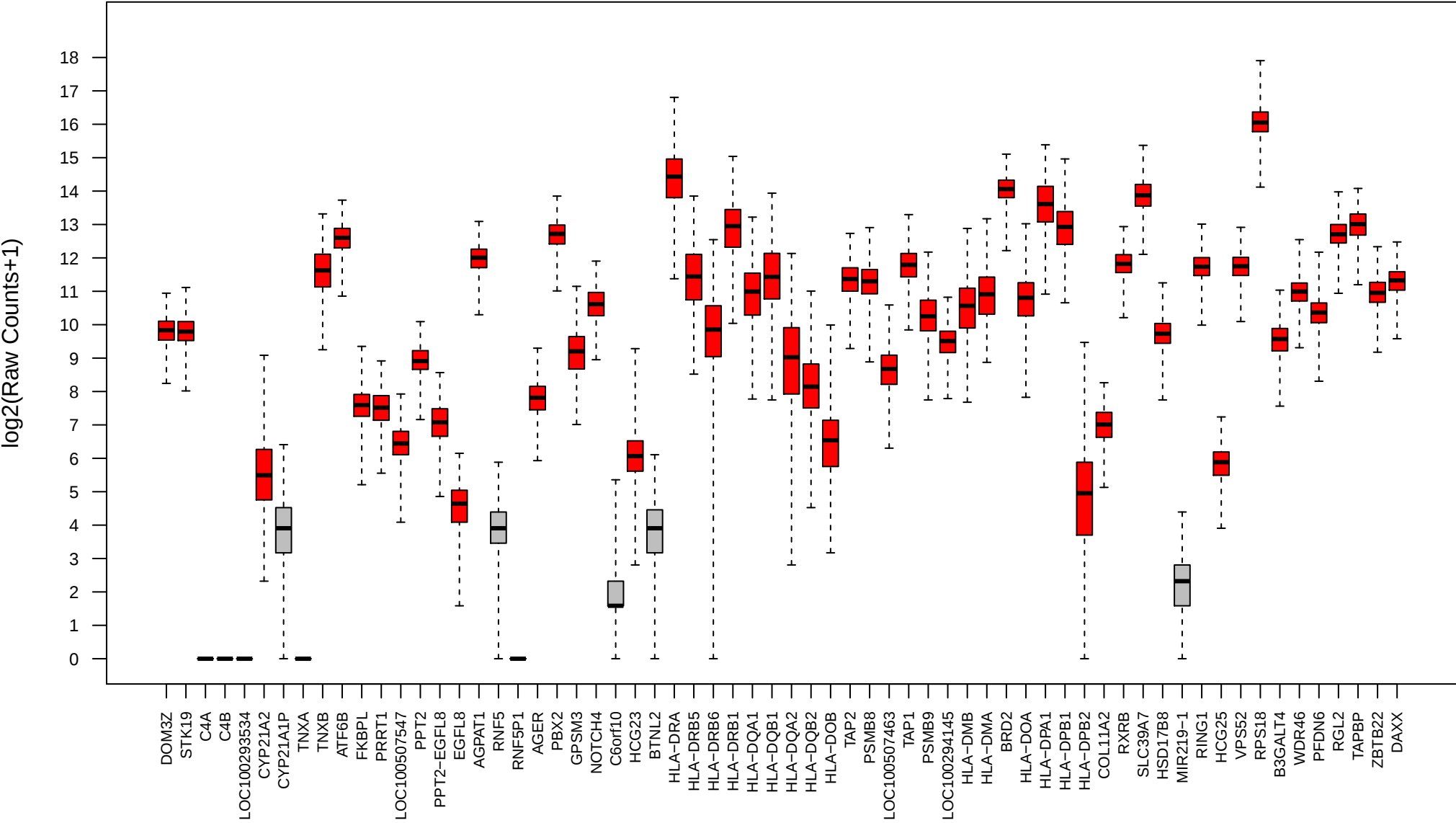
Total Genes: 129



Region36B, chr6.32092331.32292331

rs114376585

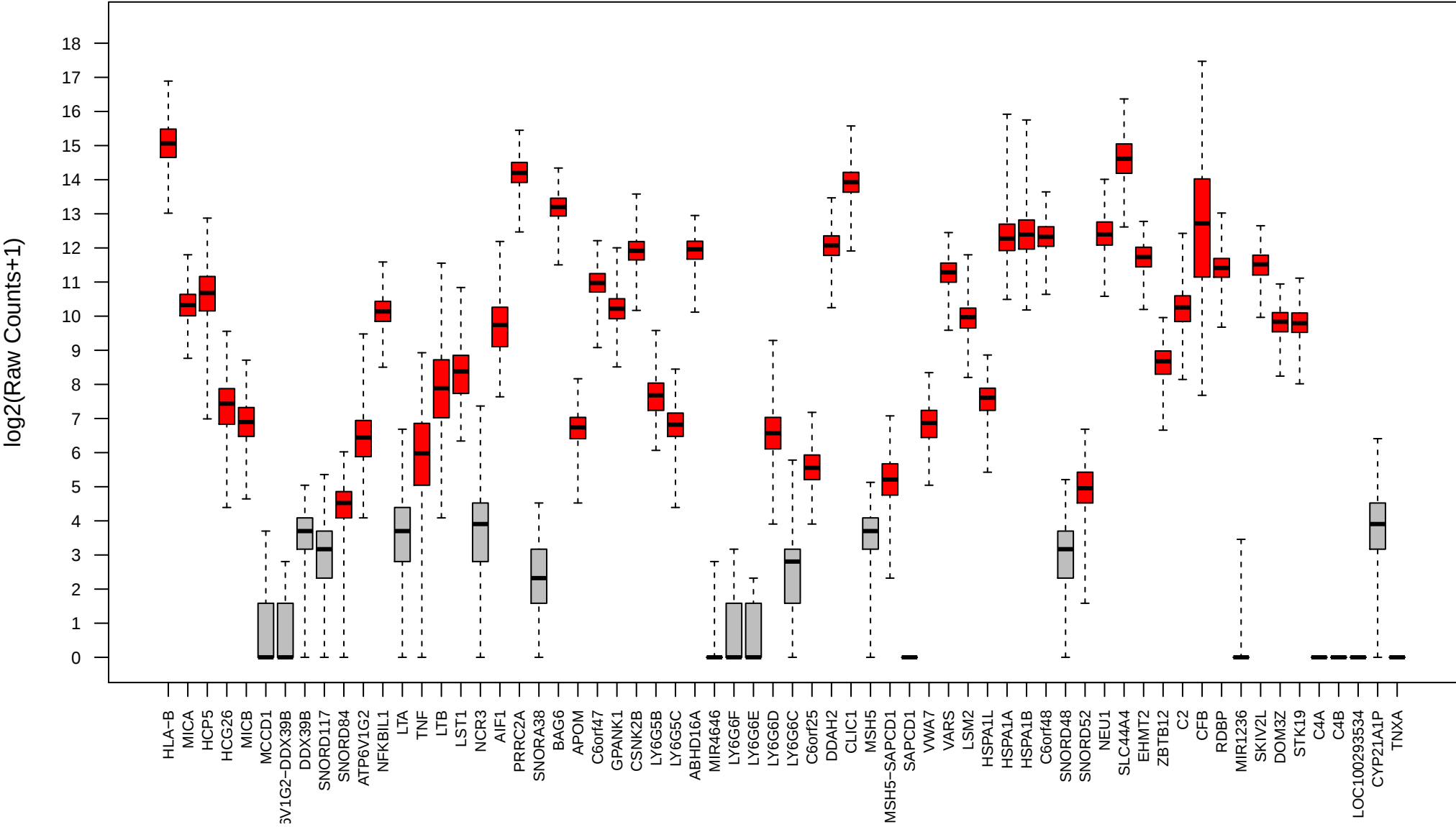
Total Genes: 129



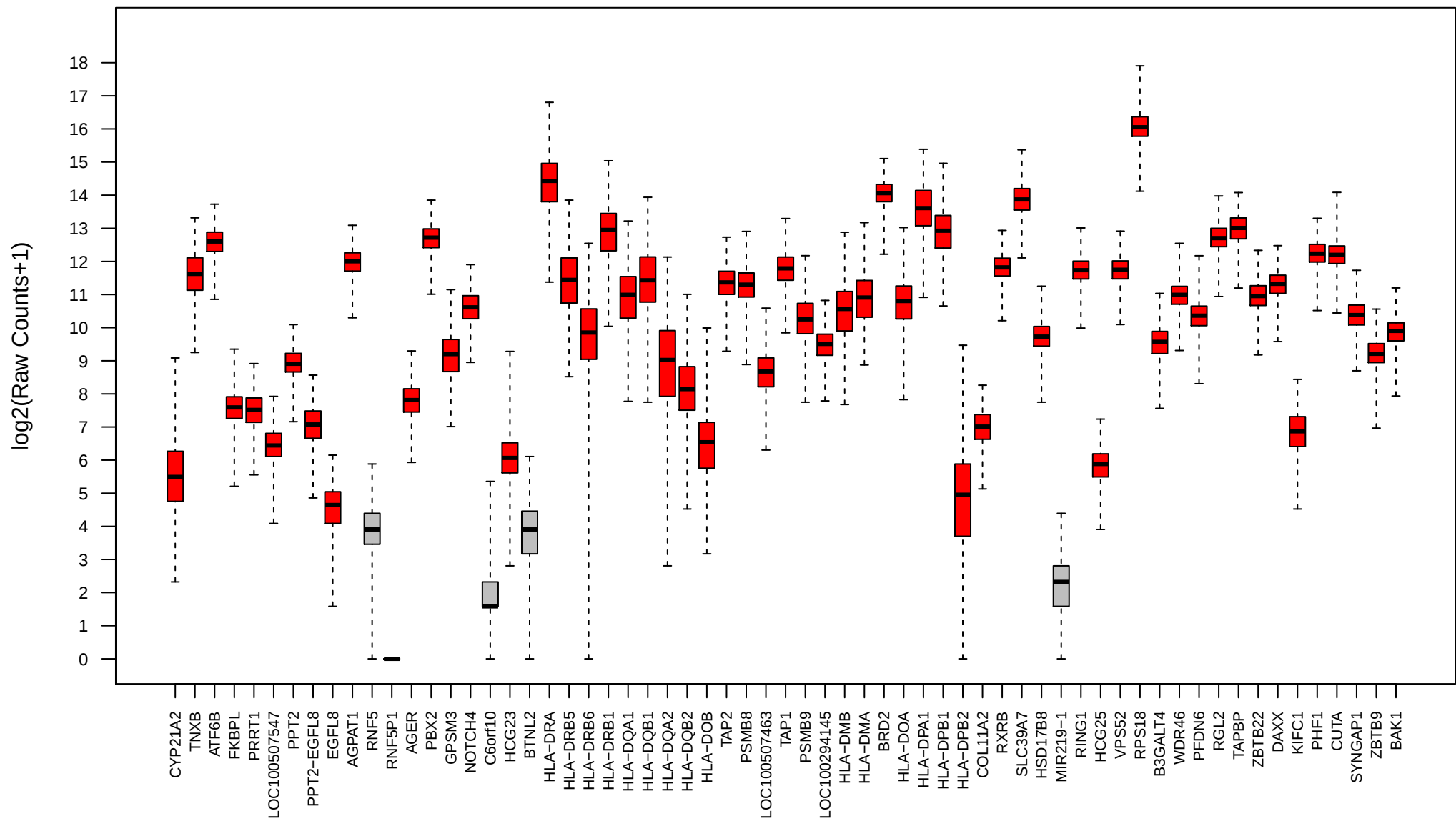
Region37A, chr6.32300939.32500939

rs115306967

Total Genes: 127



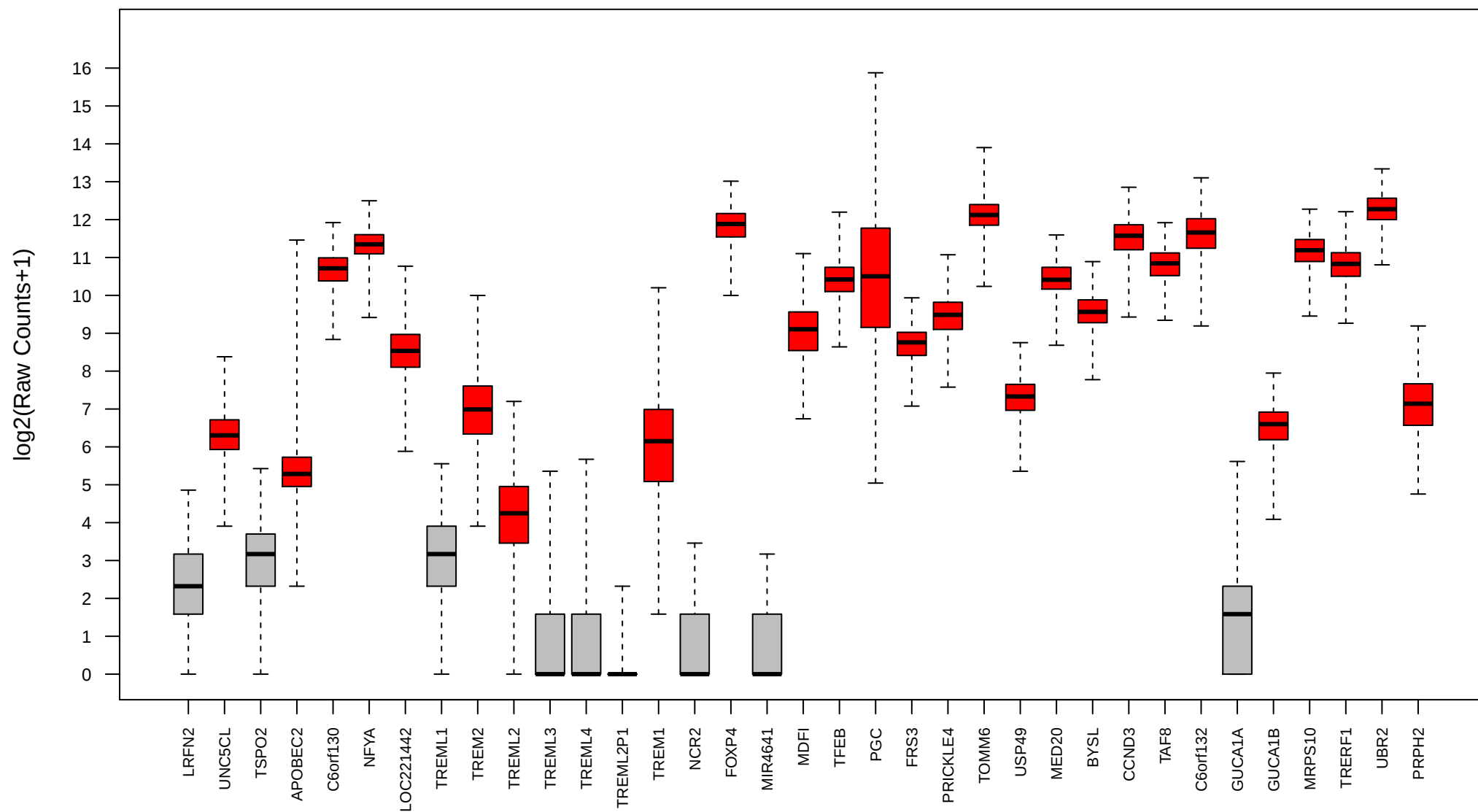
Region37B, chr6.32300939.32500939  
rs115306967  
Total Genes: 127



Region38, chr6.41436427.41636427

rs1983891

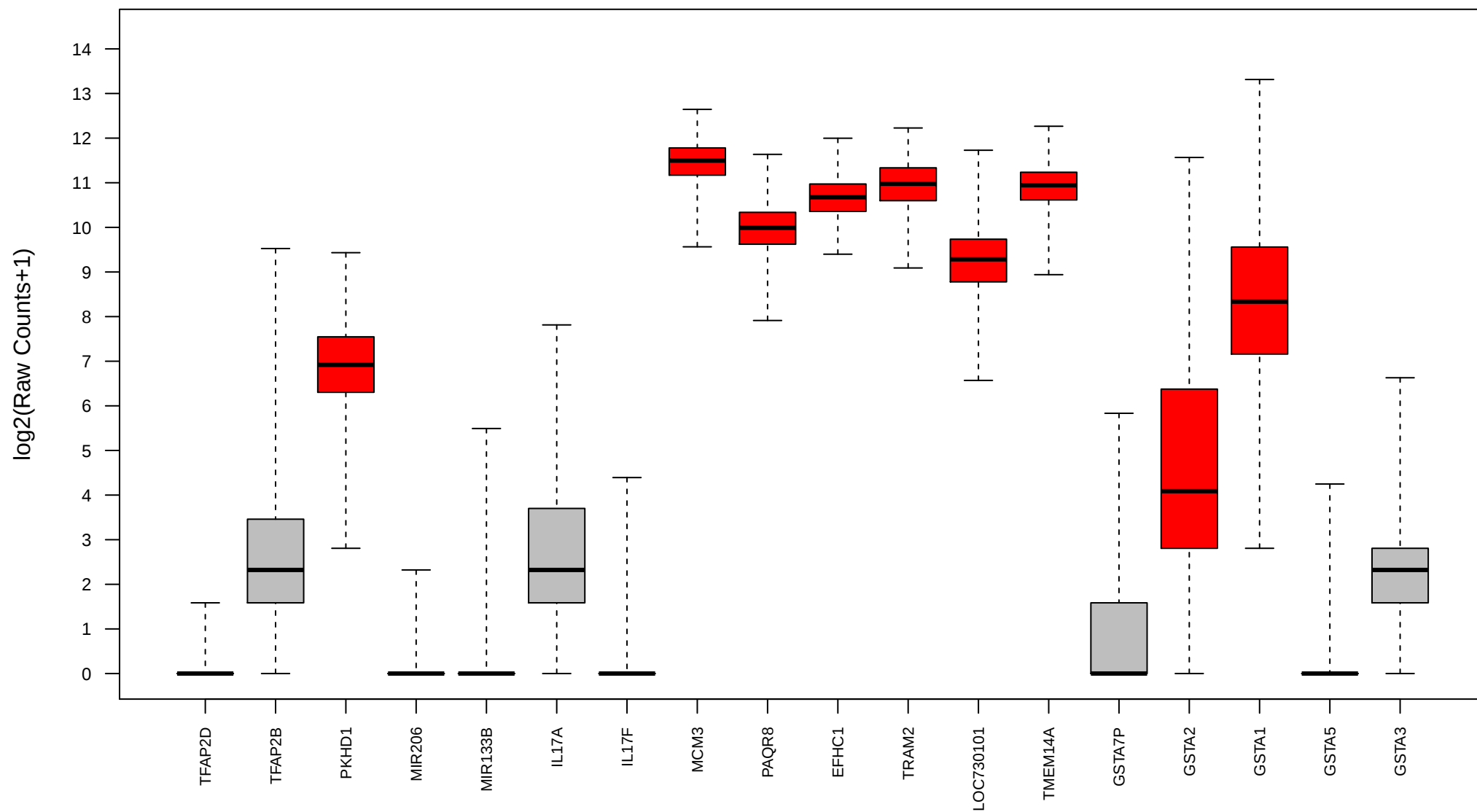
Total Genes: 35



Region39, chr6.5156631.5176631

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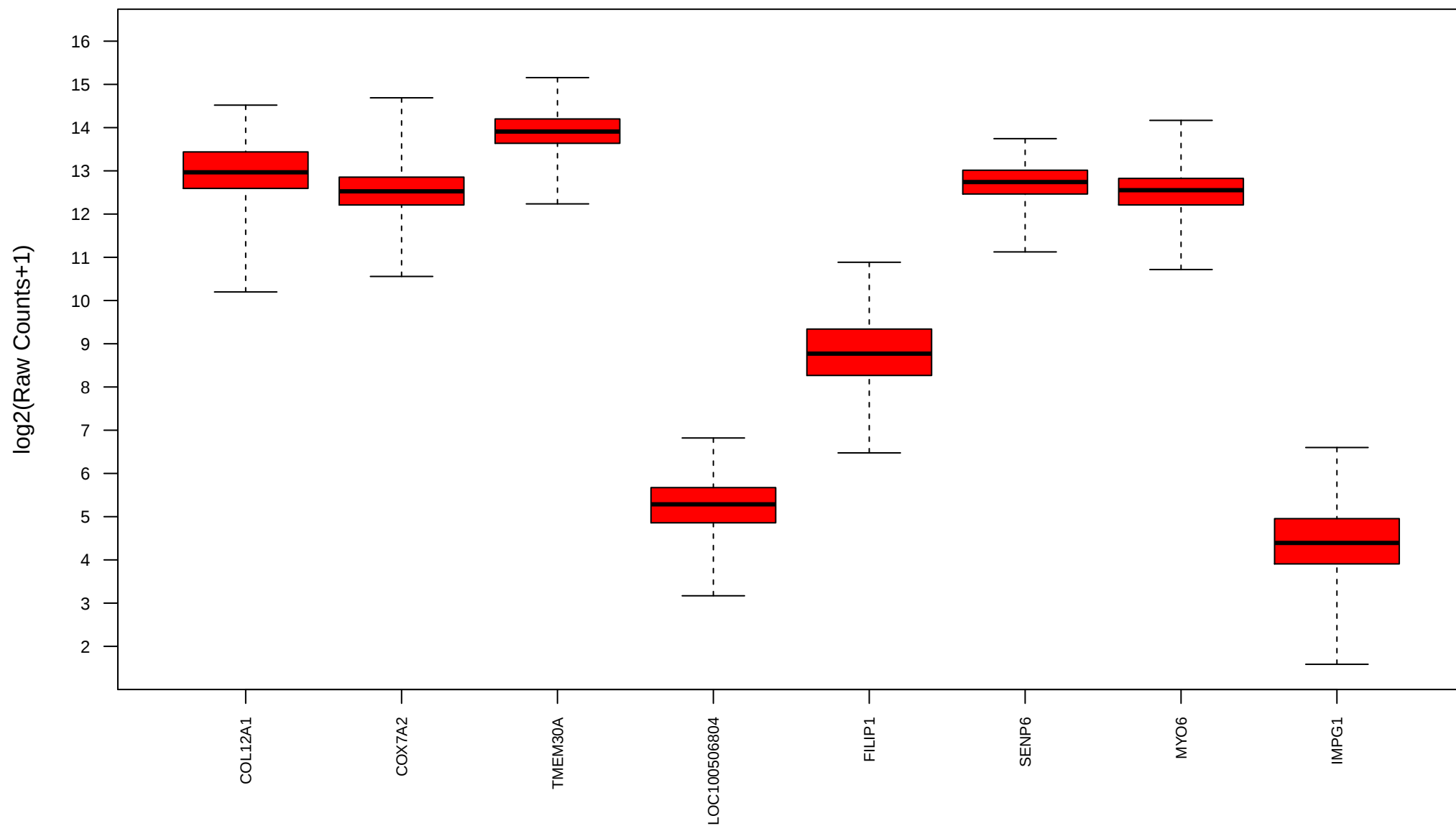
Total Genes: 18



Region40, chr6.76395882.76595882

rs9443189

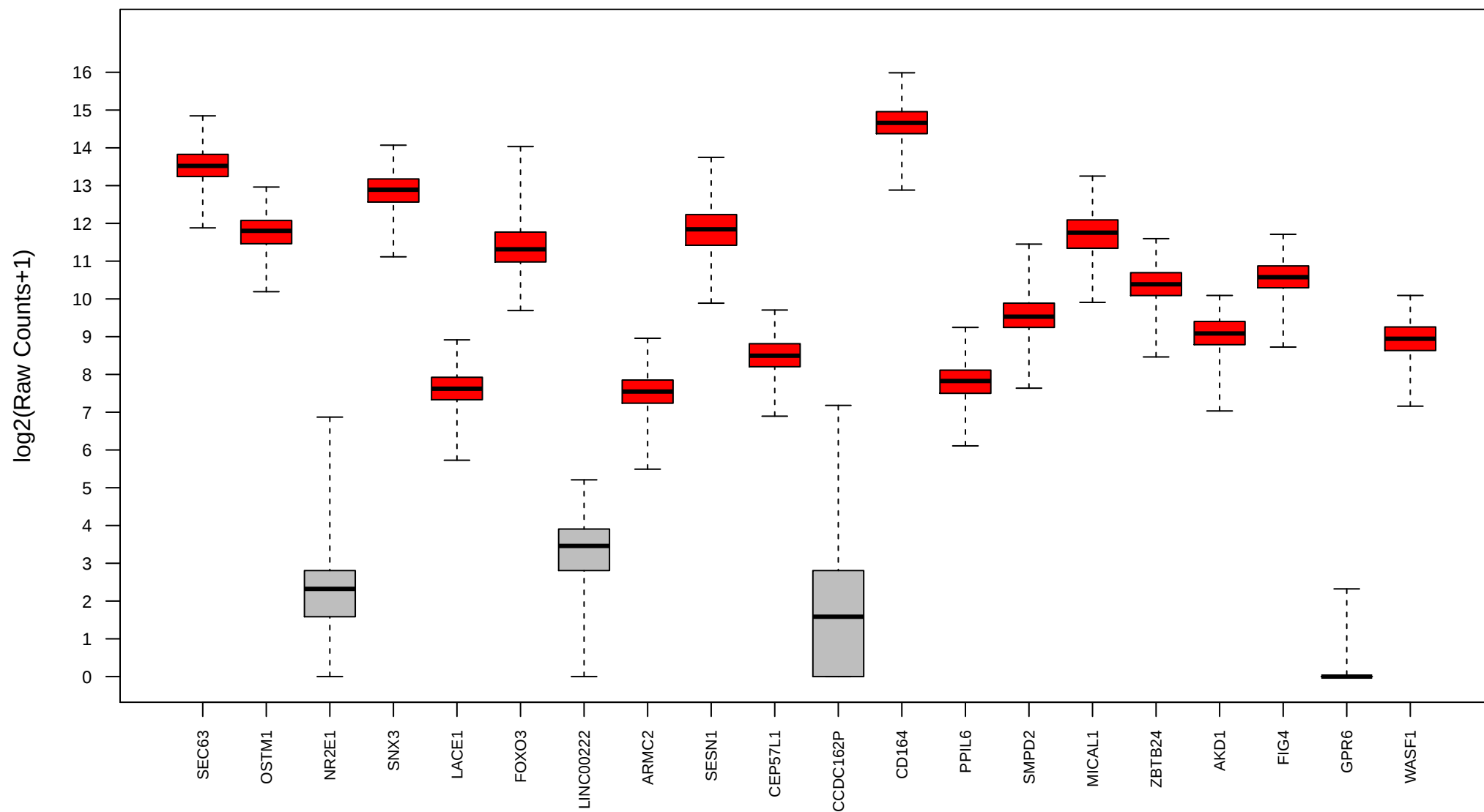
Total Genes: 8



Region41, chr6.109185189.109385189

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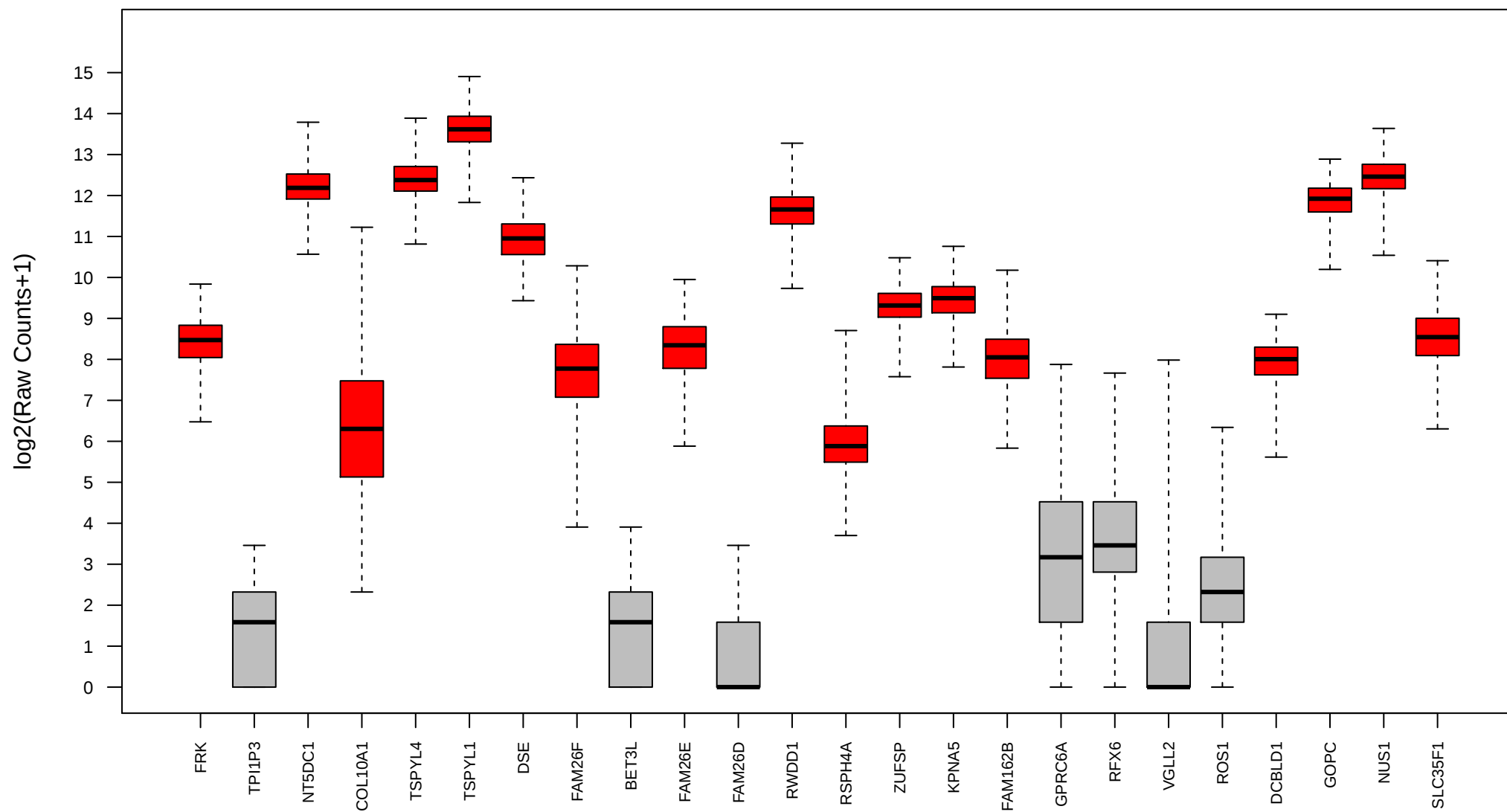
Total Genes: 20



Region42, chr6.117110052.117310052

rs339331

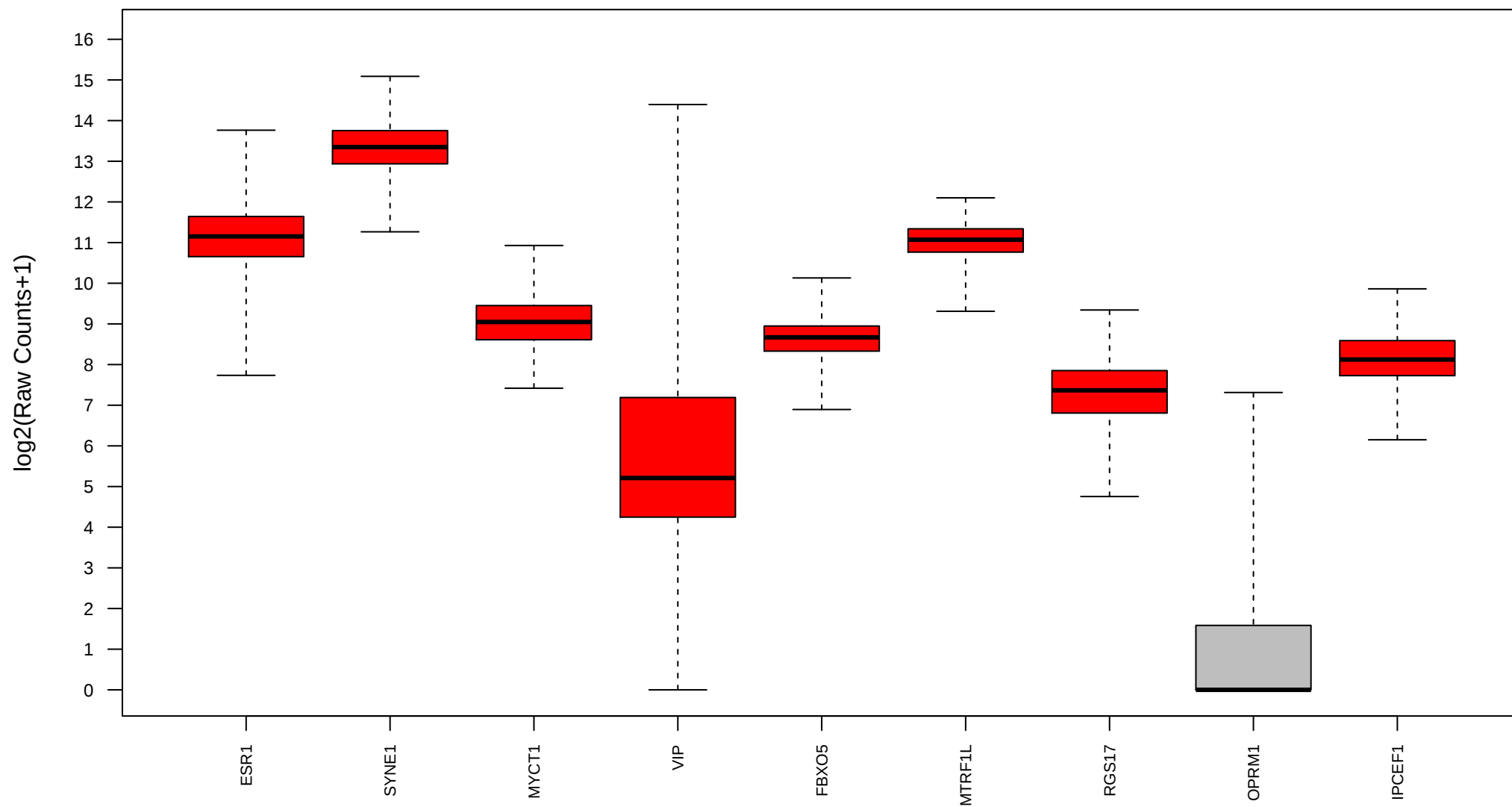
Total Genes: 24



Region43, chr6.153341079.153541079

rs1933488

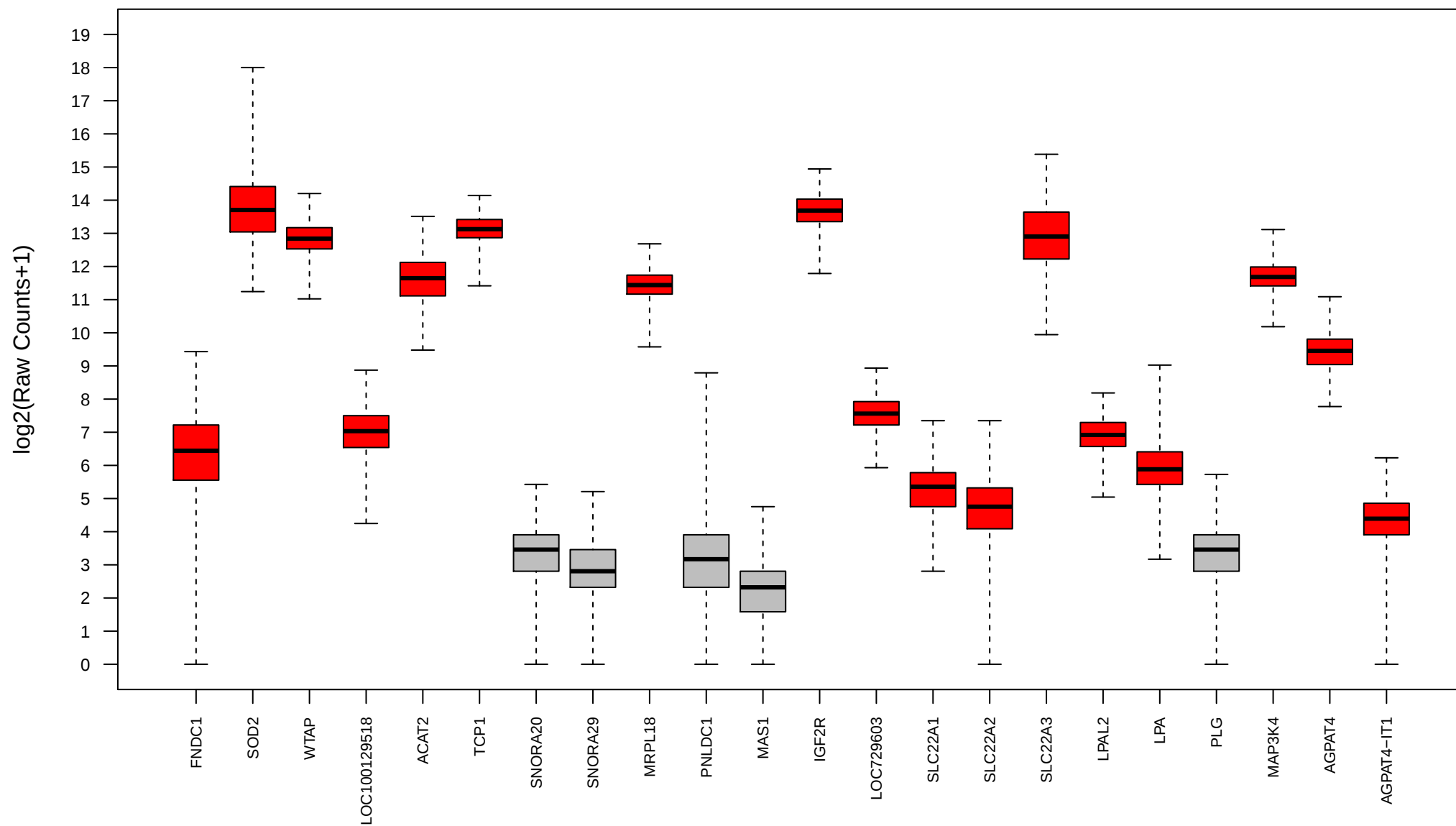
Total Genes: 9



Region44, chr6.160481374.160681374

rs651164

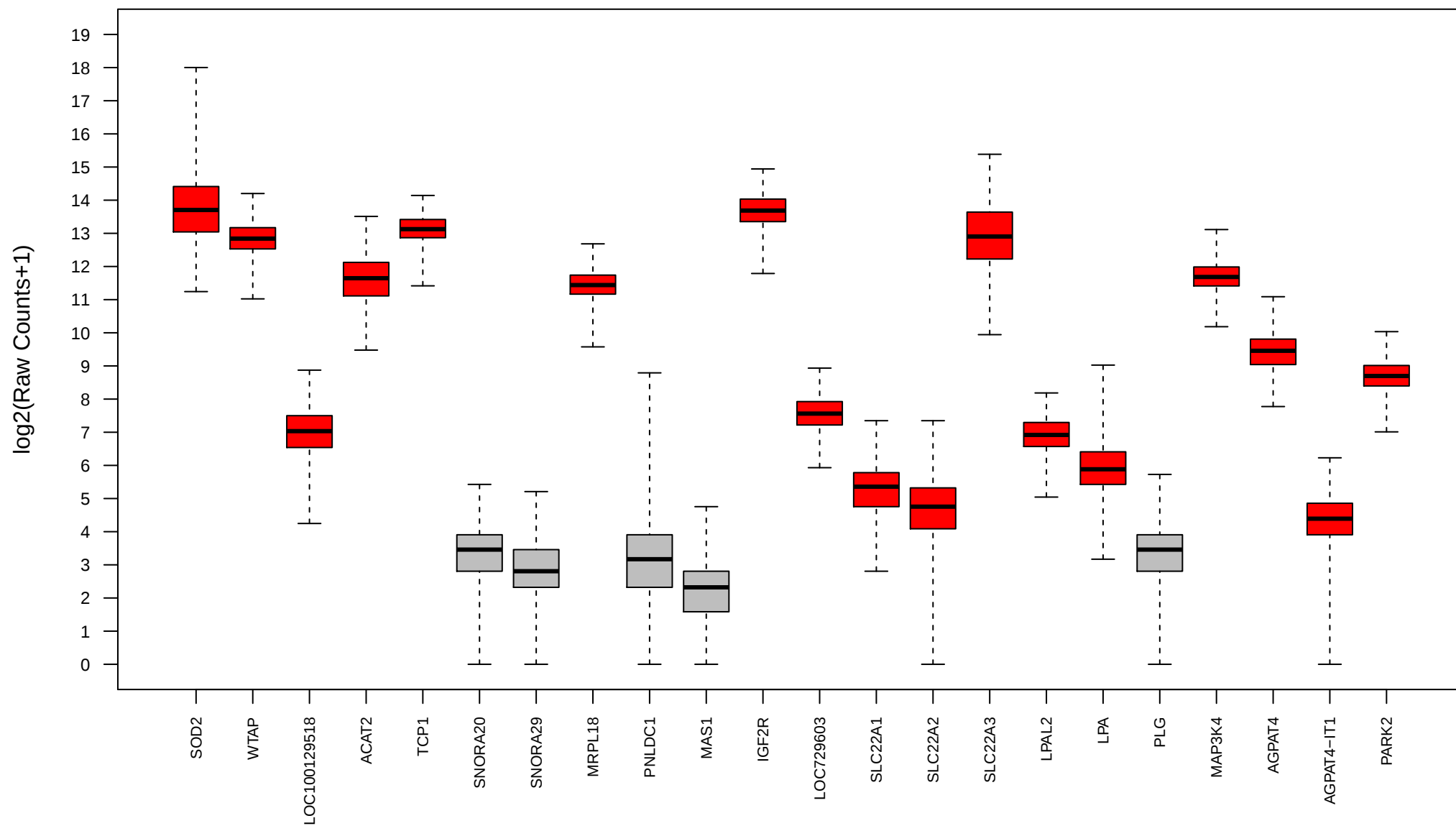
Total Genes: 22



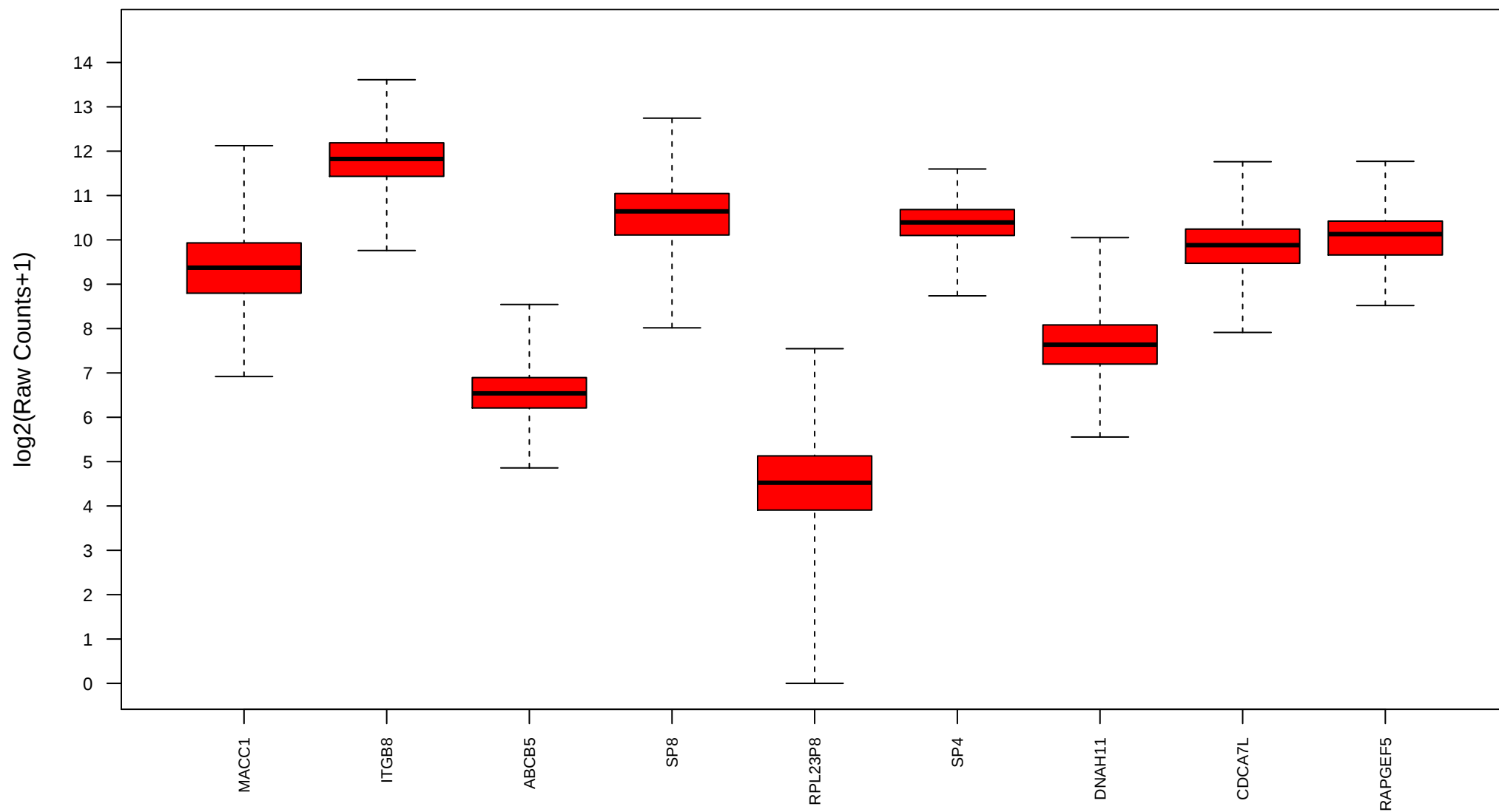
Region45, chr6.160733664.160933664

rs9364554

Total Genes: 22



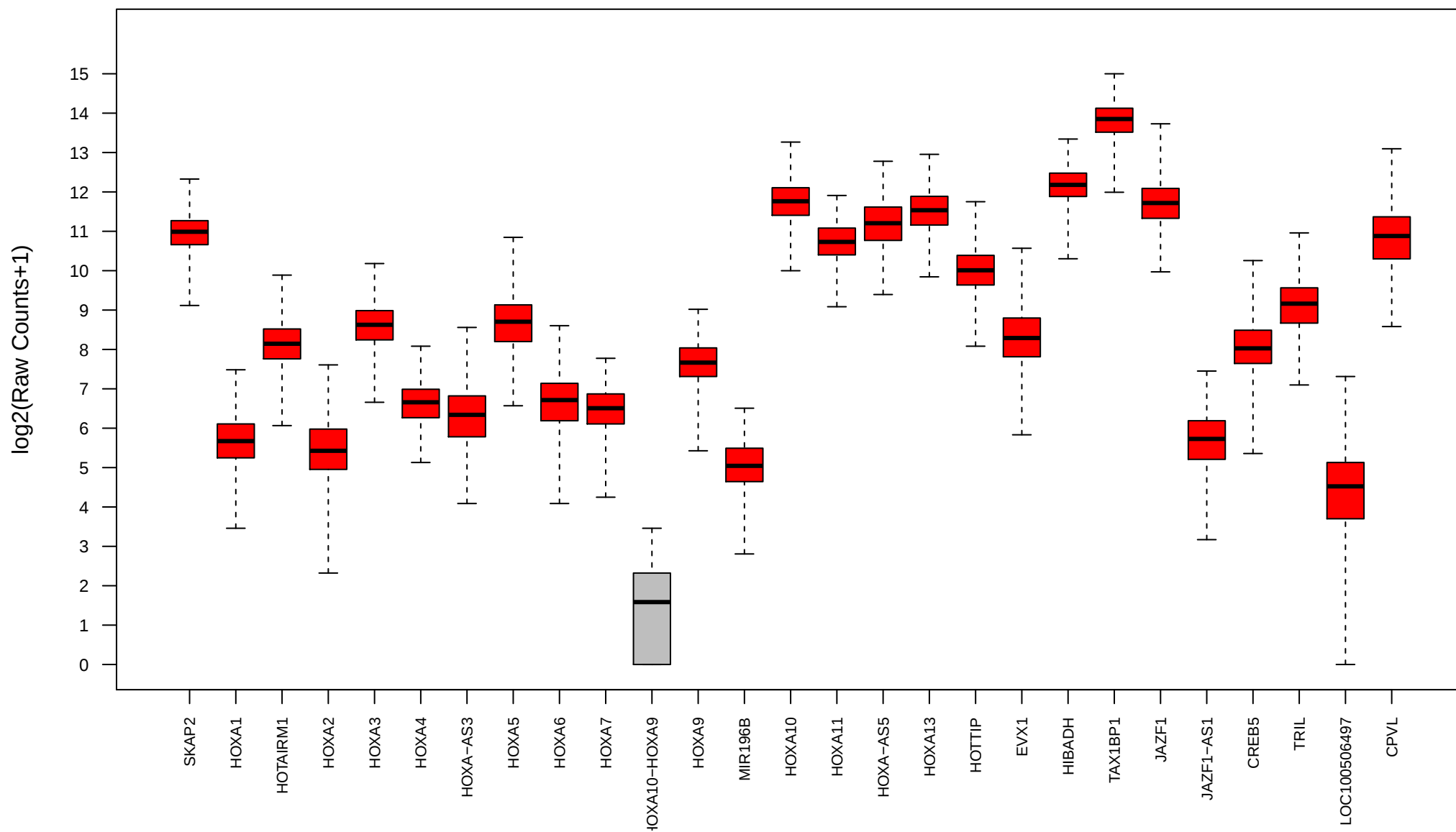
Region46, chr7.20894491.21094491  
rs12155172  
Total Genes: 9



Region47, chr7.27876563.28076563

rs10486567

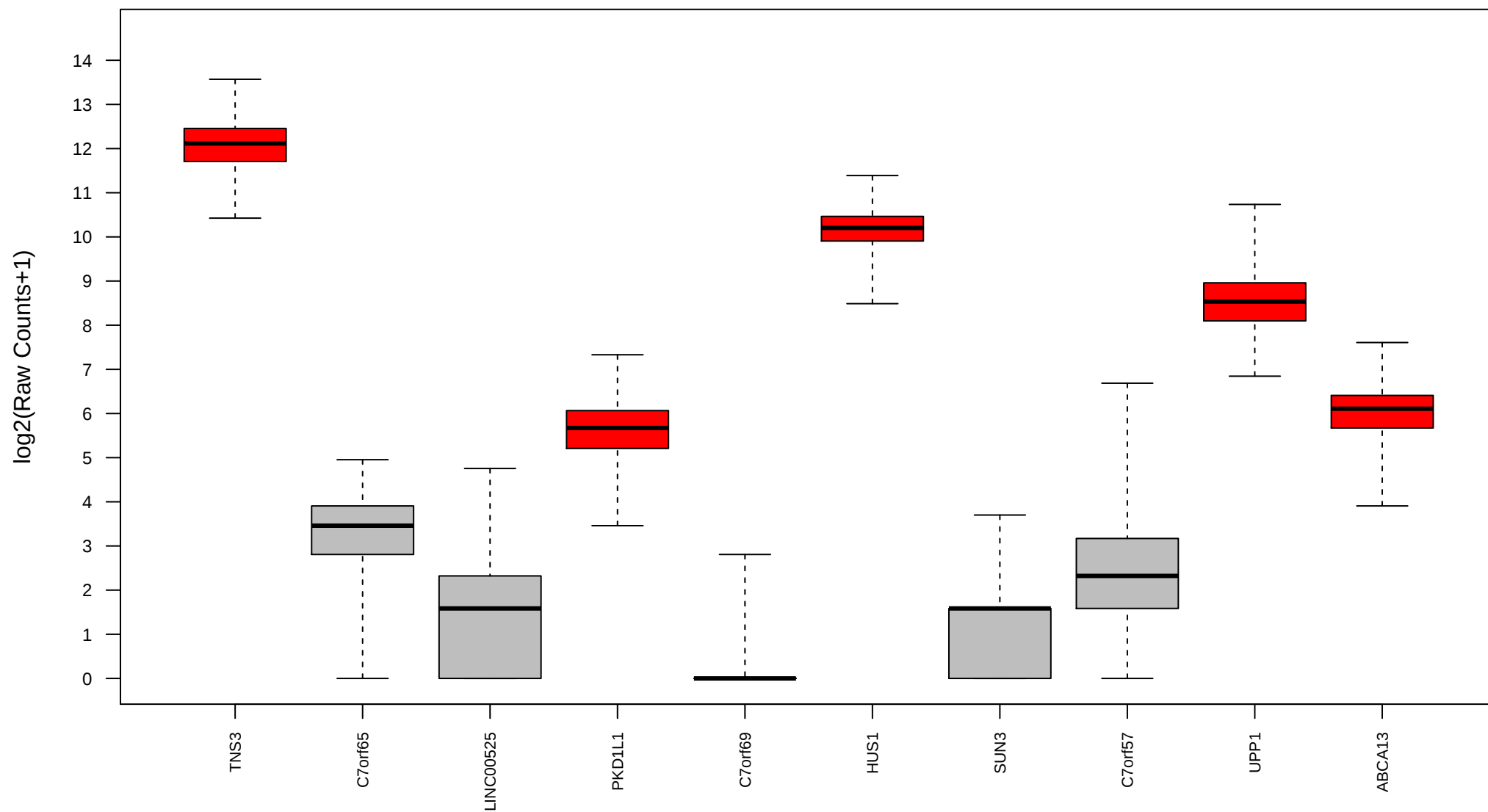
Total Genes: 27



Region48, chr7.47337244.47537244

rs56232506

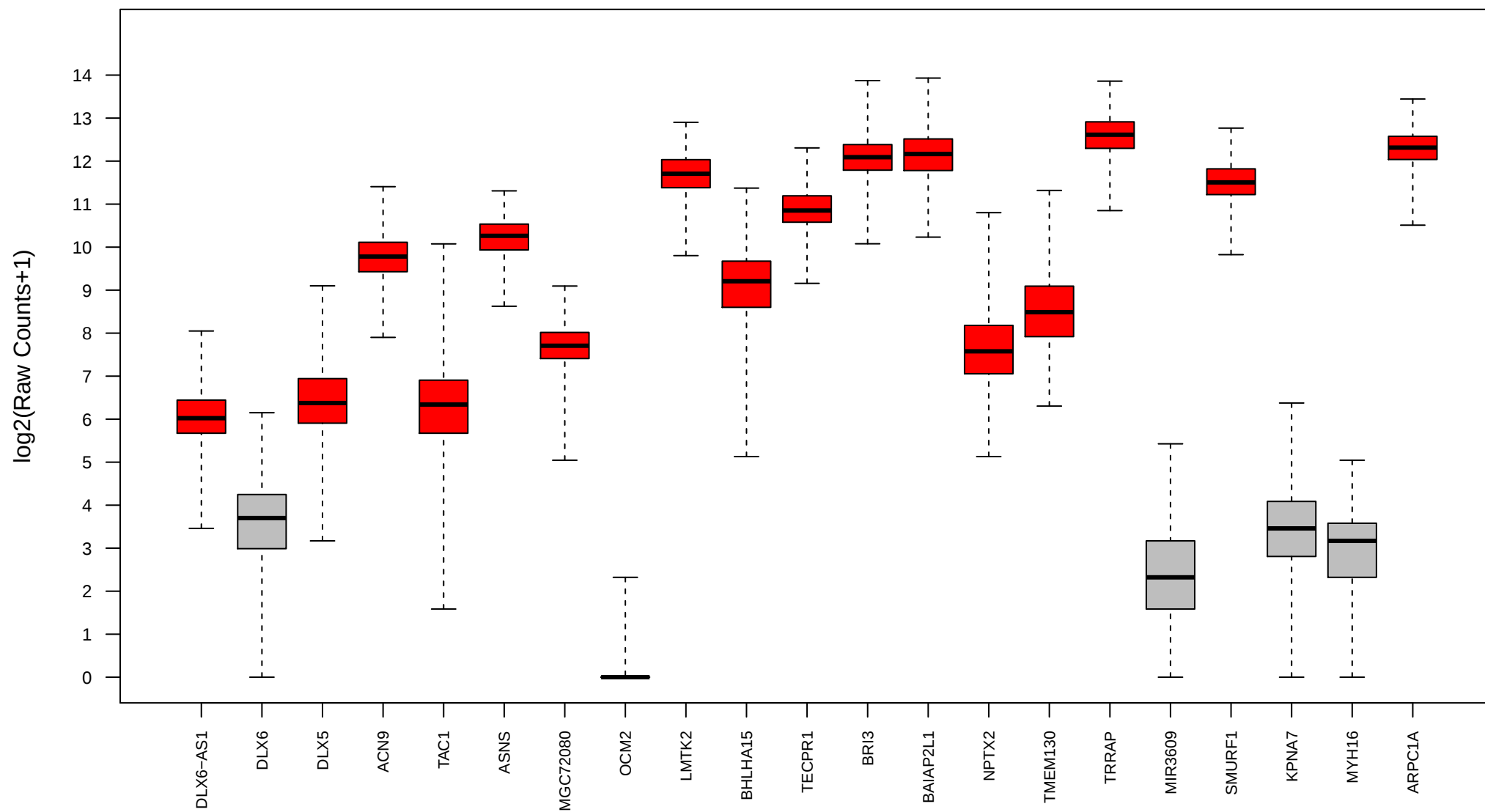
Total Genes: 10



Region49, chr7.97716327.97916327

rs6465657

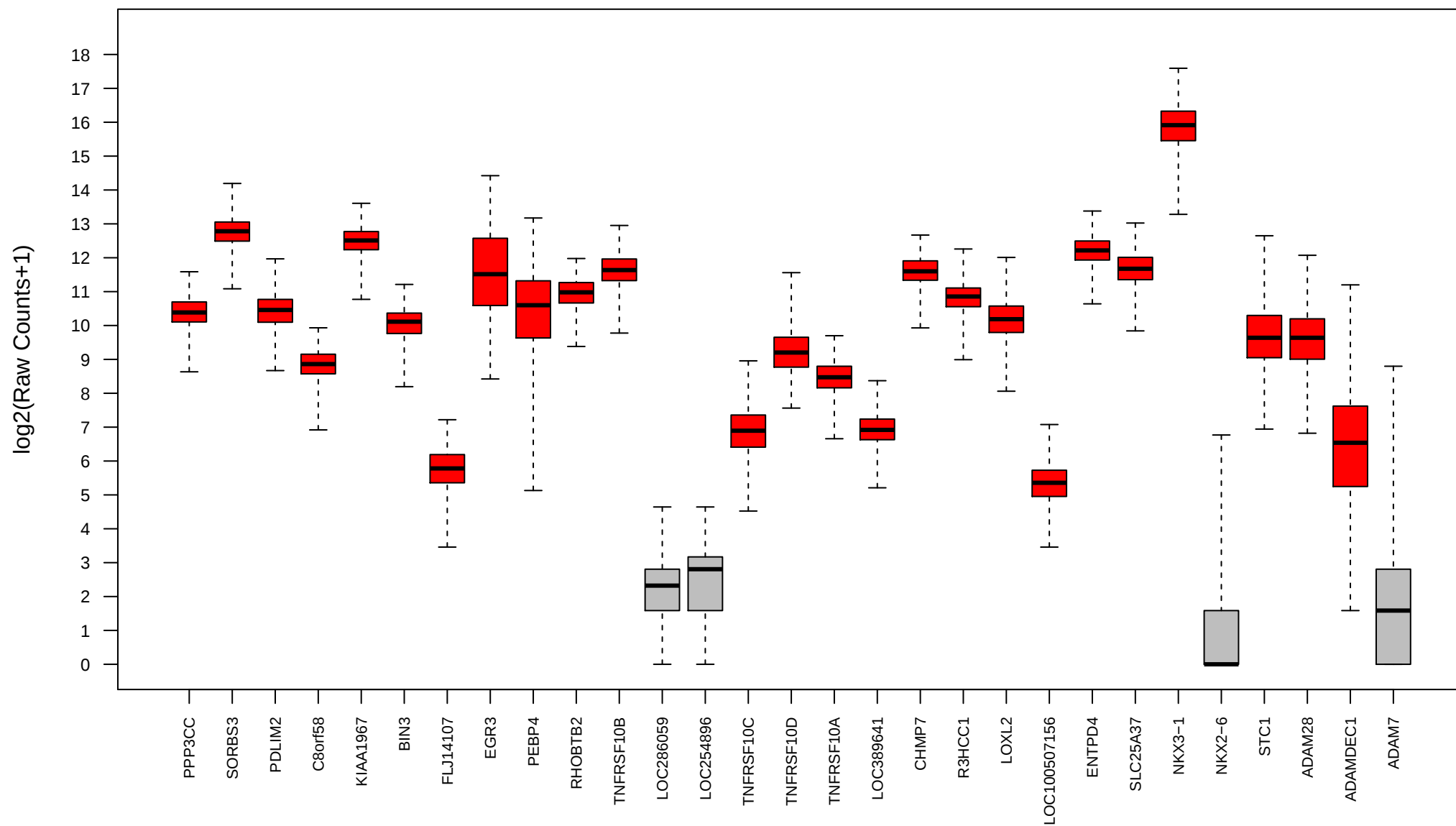
Total Genes: 21



Region50, chr8.23338975.23626463

rs2928679,rs1512268

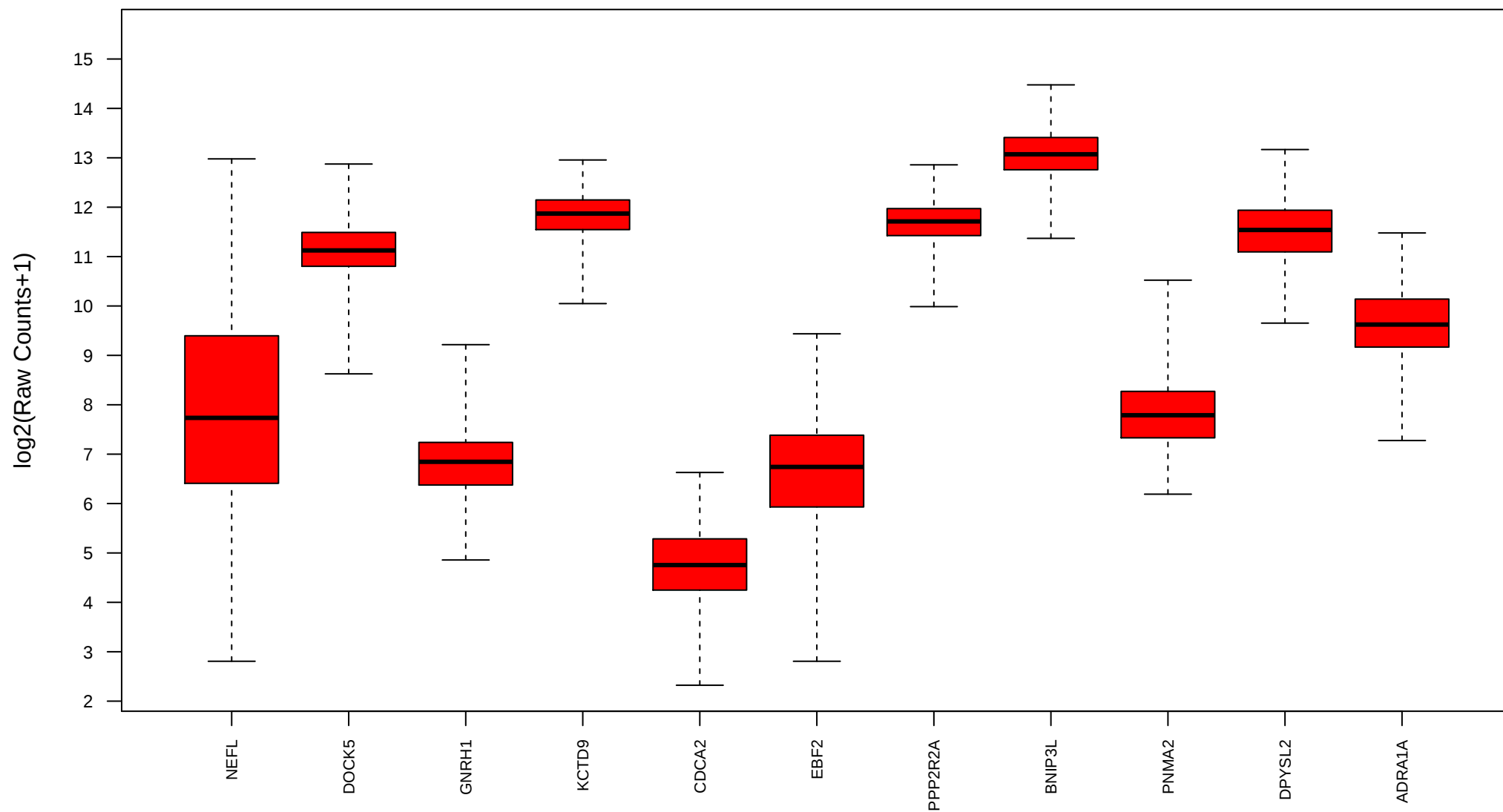
Total Genes: 29



Region51, chr8.25792142.25992142

rs11135910

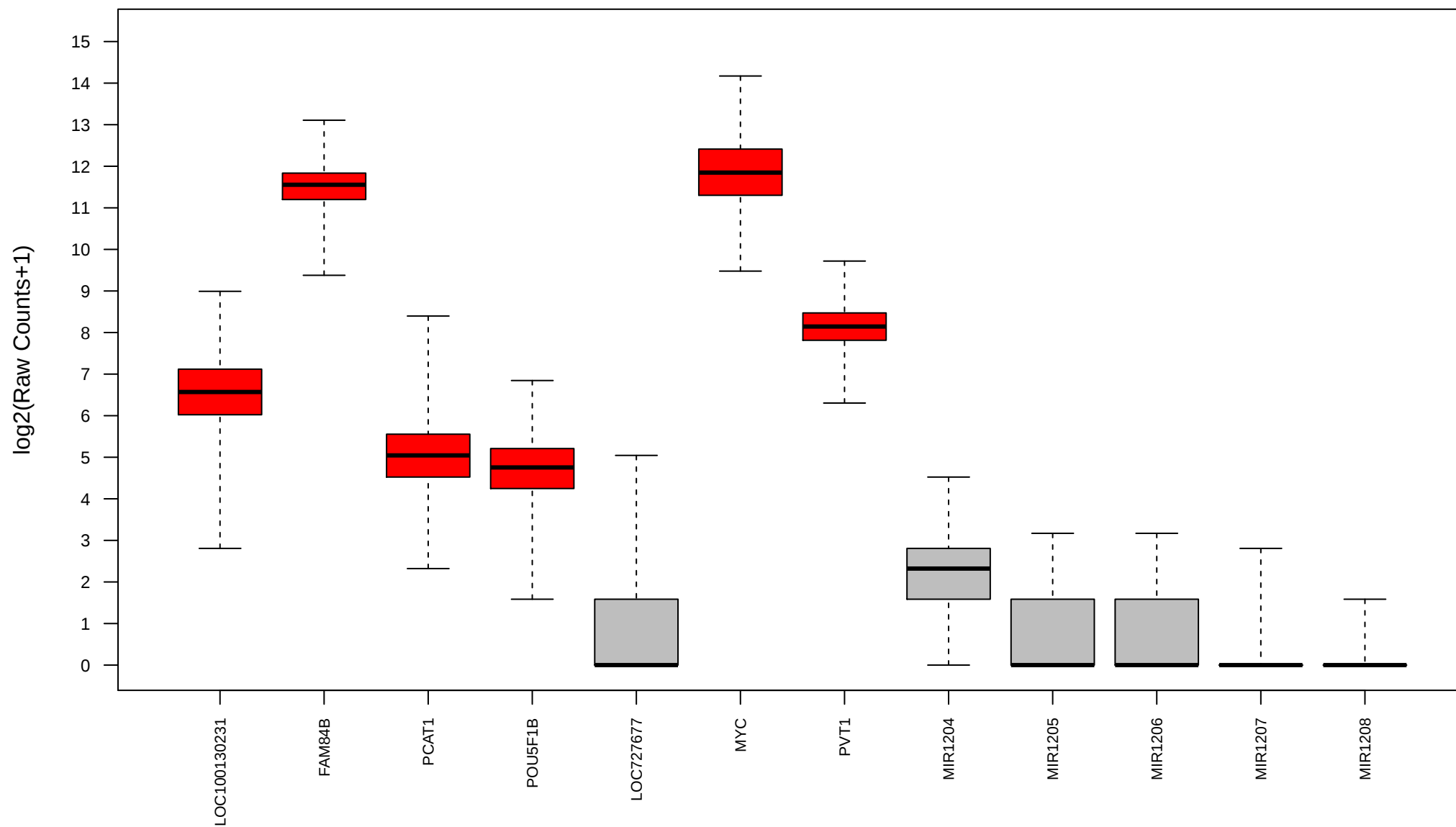
Total Genes: 11



**Region52, chr8.127823720.128723639**

**22 Risk SNPs**

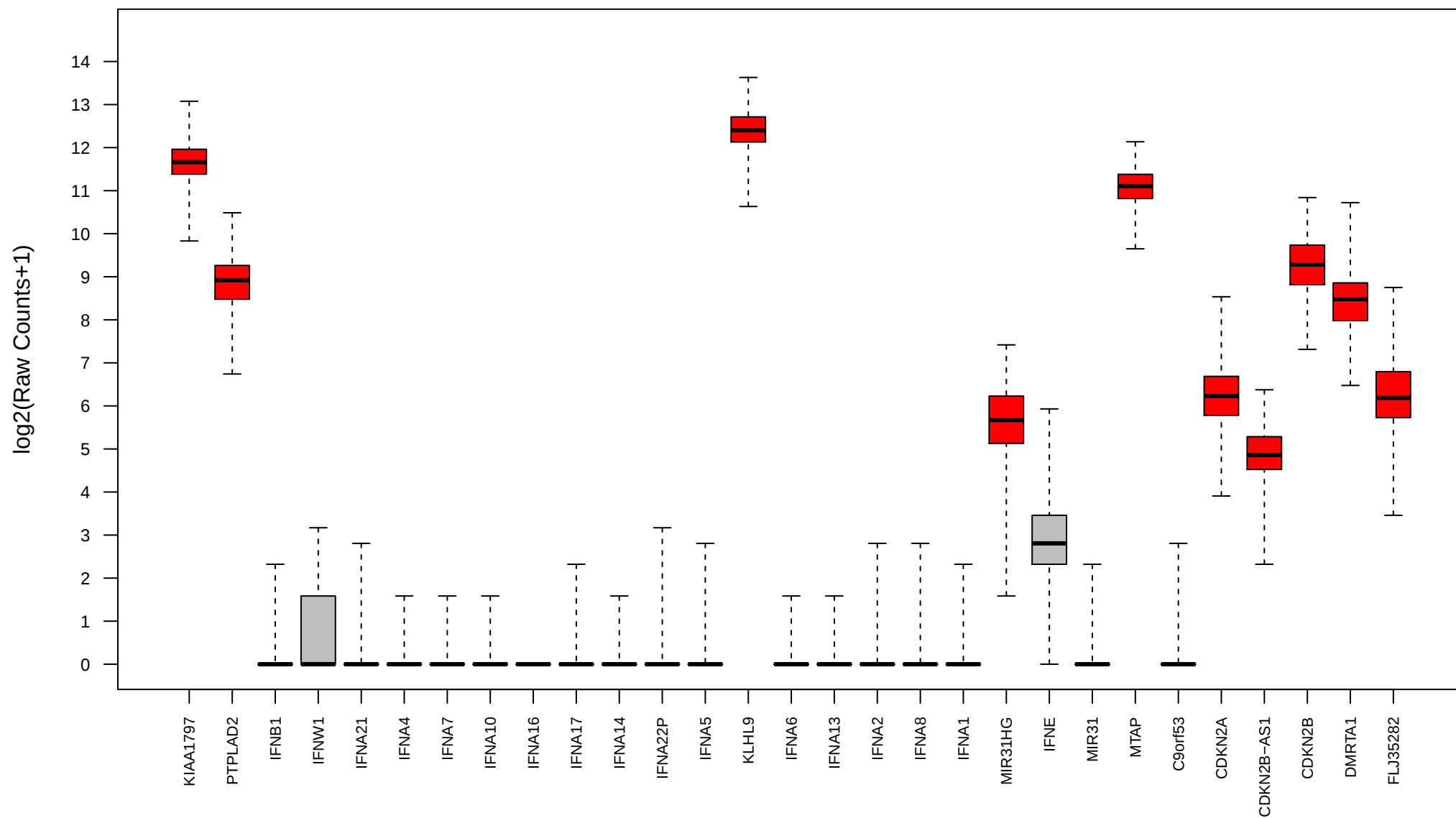
**Total Genes: 12**



Region53, chr9.21941998.22141998

rs17694493

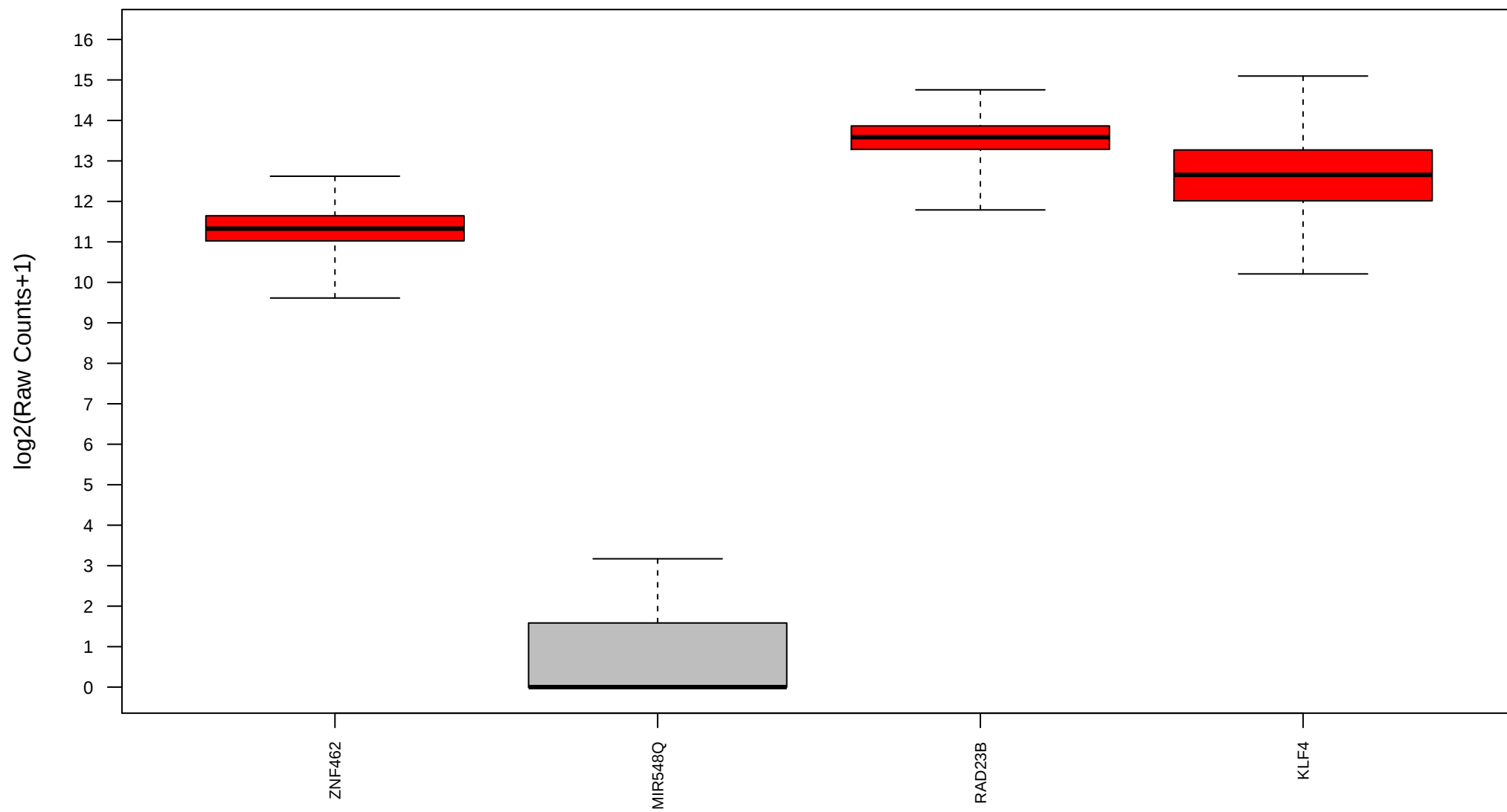
Total Genes: 29



Region54, chr9.110056300.110256300

rs817826

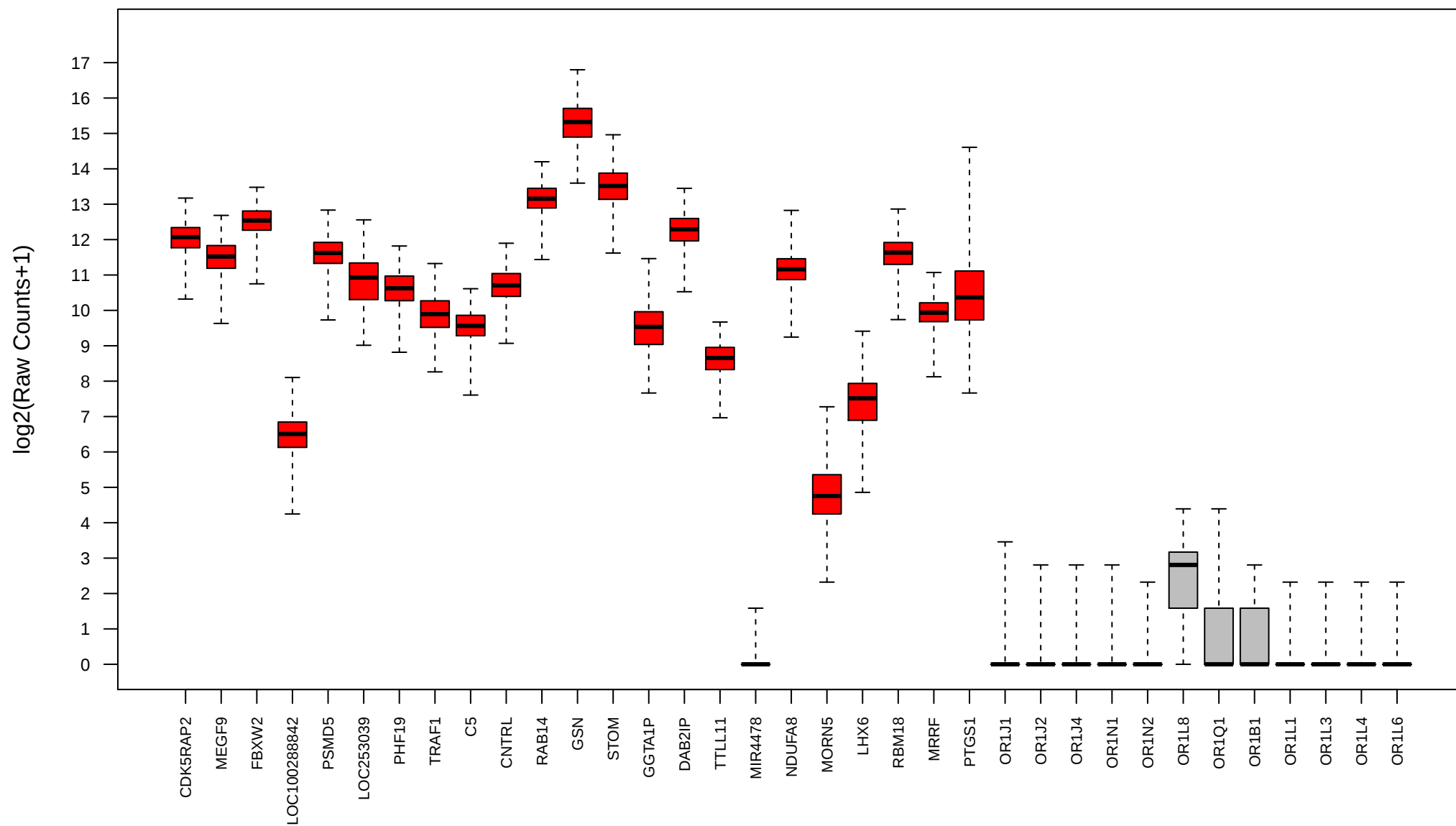
Total Genes: 4



Region55, chr9.124327373.124527373

rs1571801

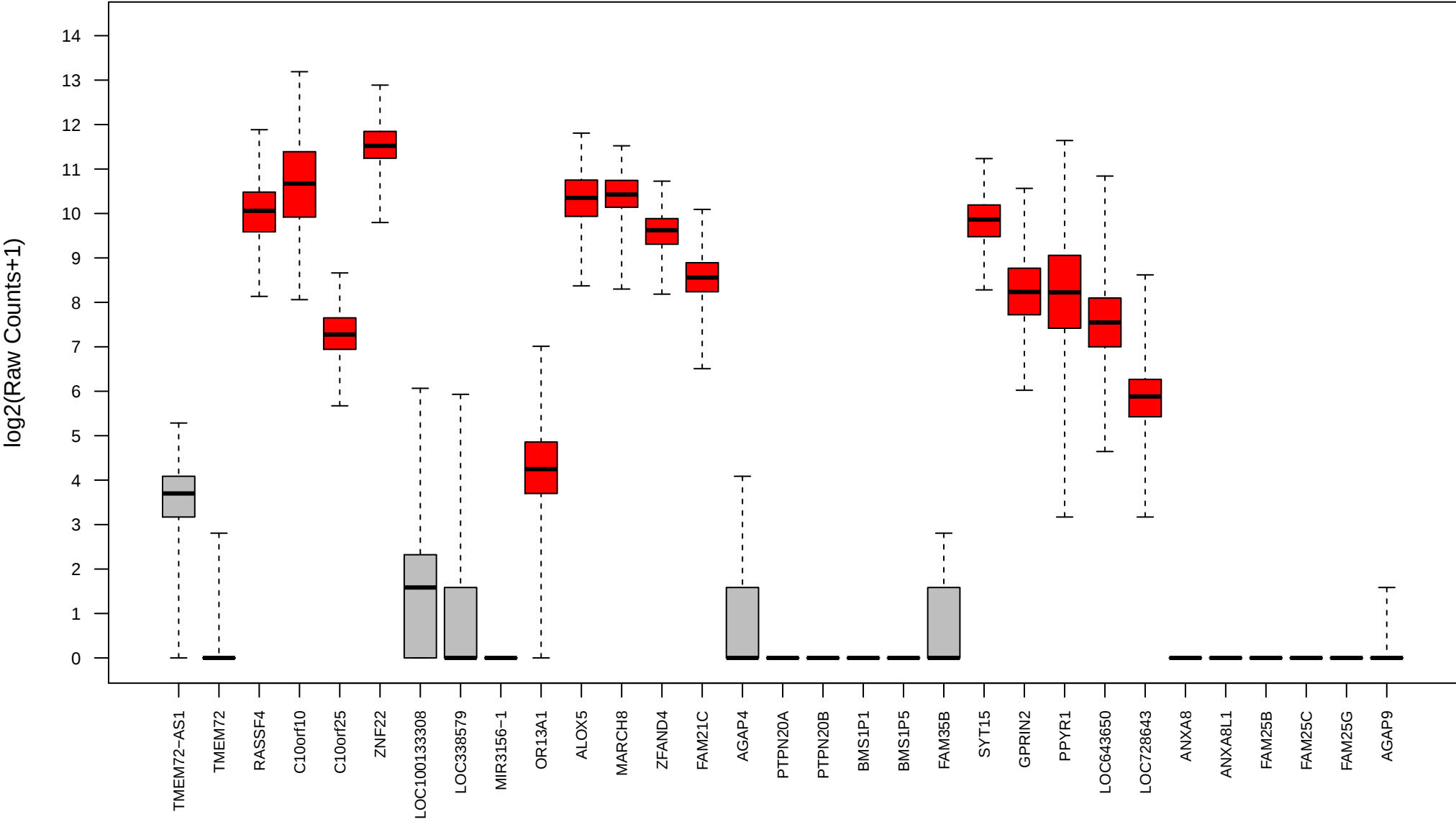
Total Genes: 35



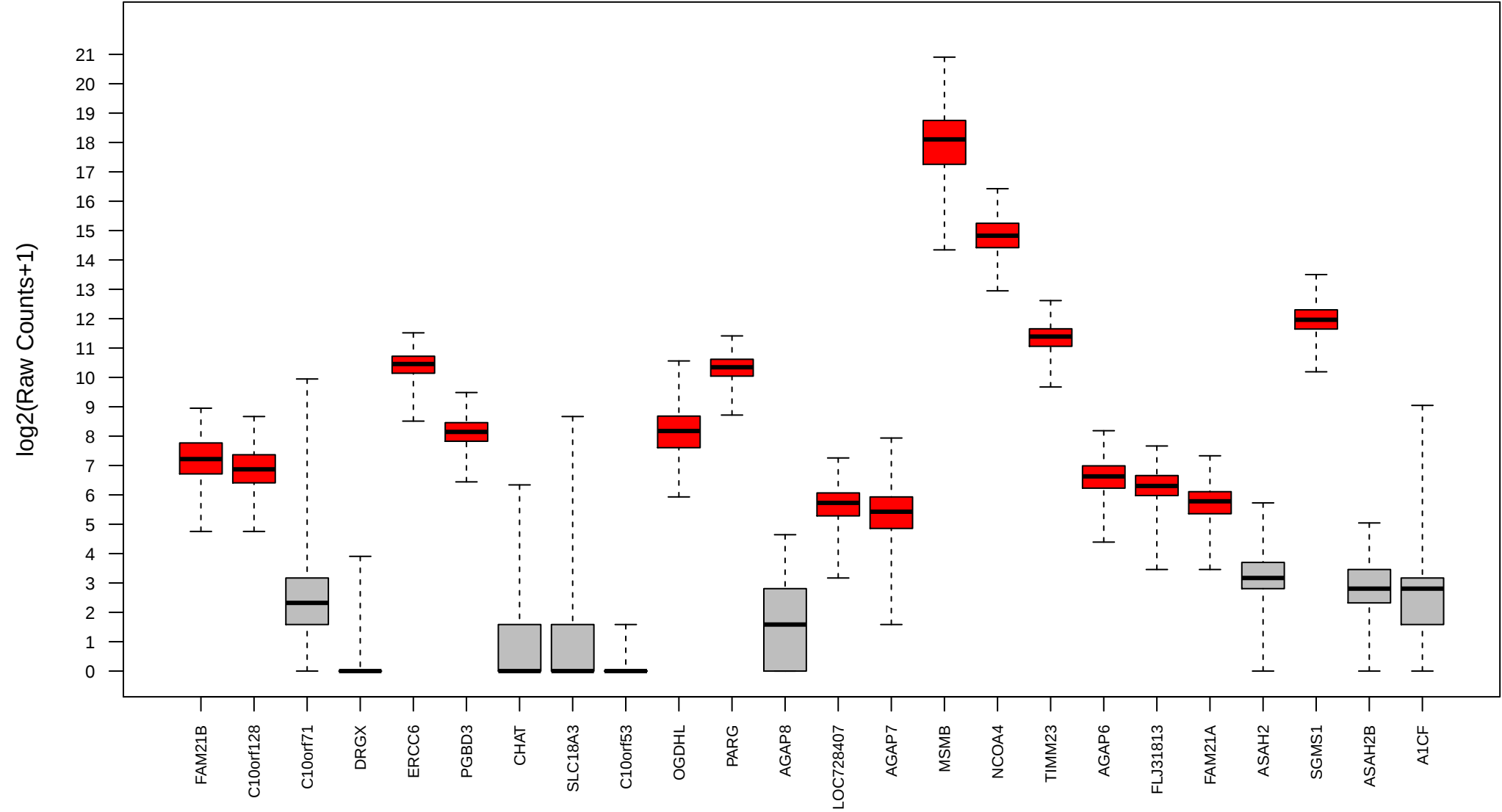
Region56, chr10.45982985.46182985

rs76934034

Total Genes: 31



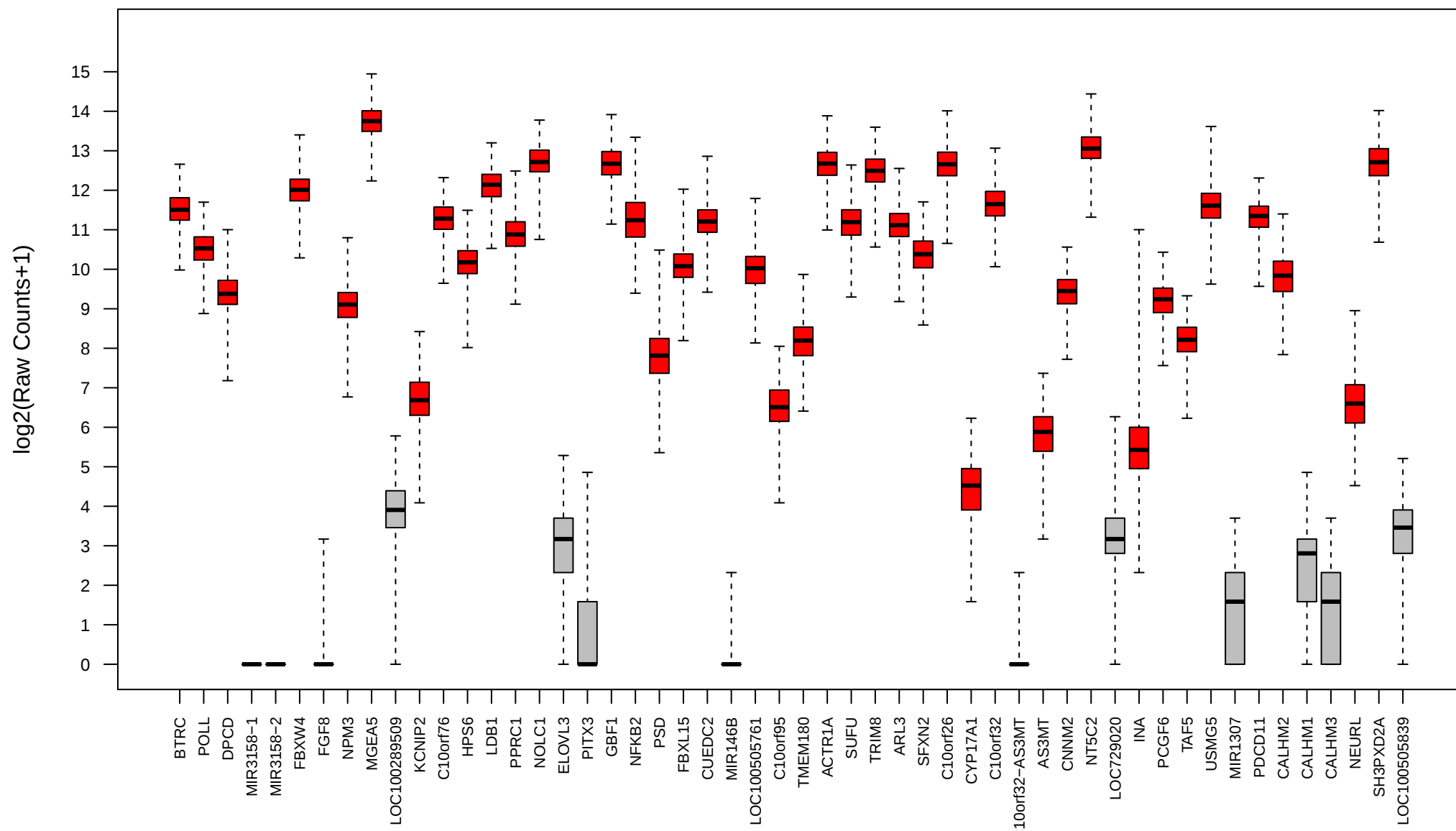
Region57, chr10.51424971.51649496  
rs3123078,rs10993994  
Total Genes: 24



Region58, chr10.104314221.104514221

rs3850699

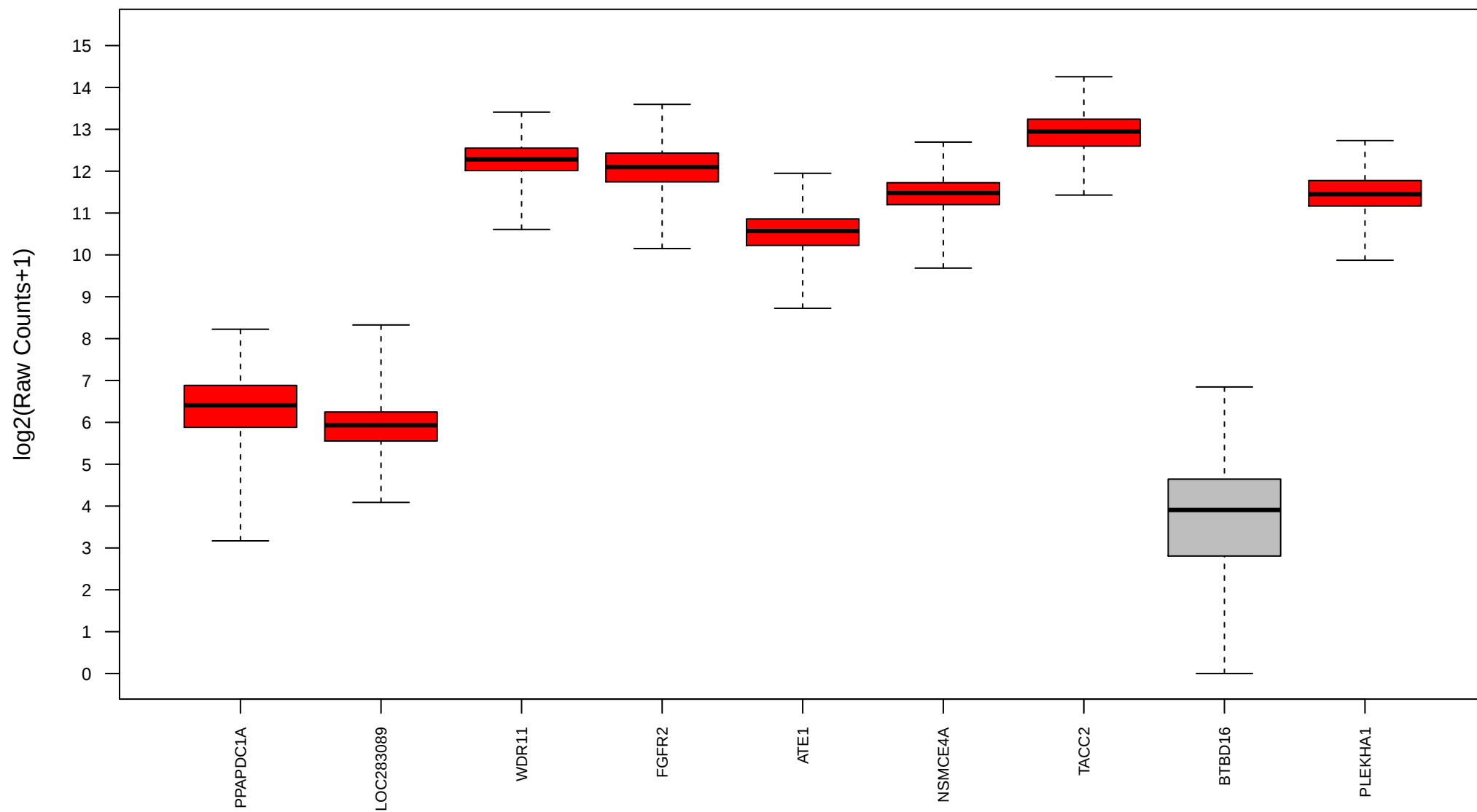
Total Genes: 52



Region59, chr10.122744709.123132519

rs2252004,rs11199874

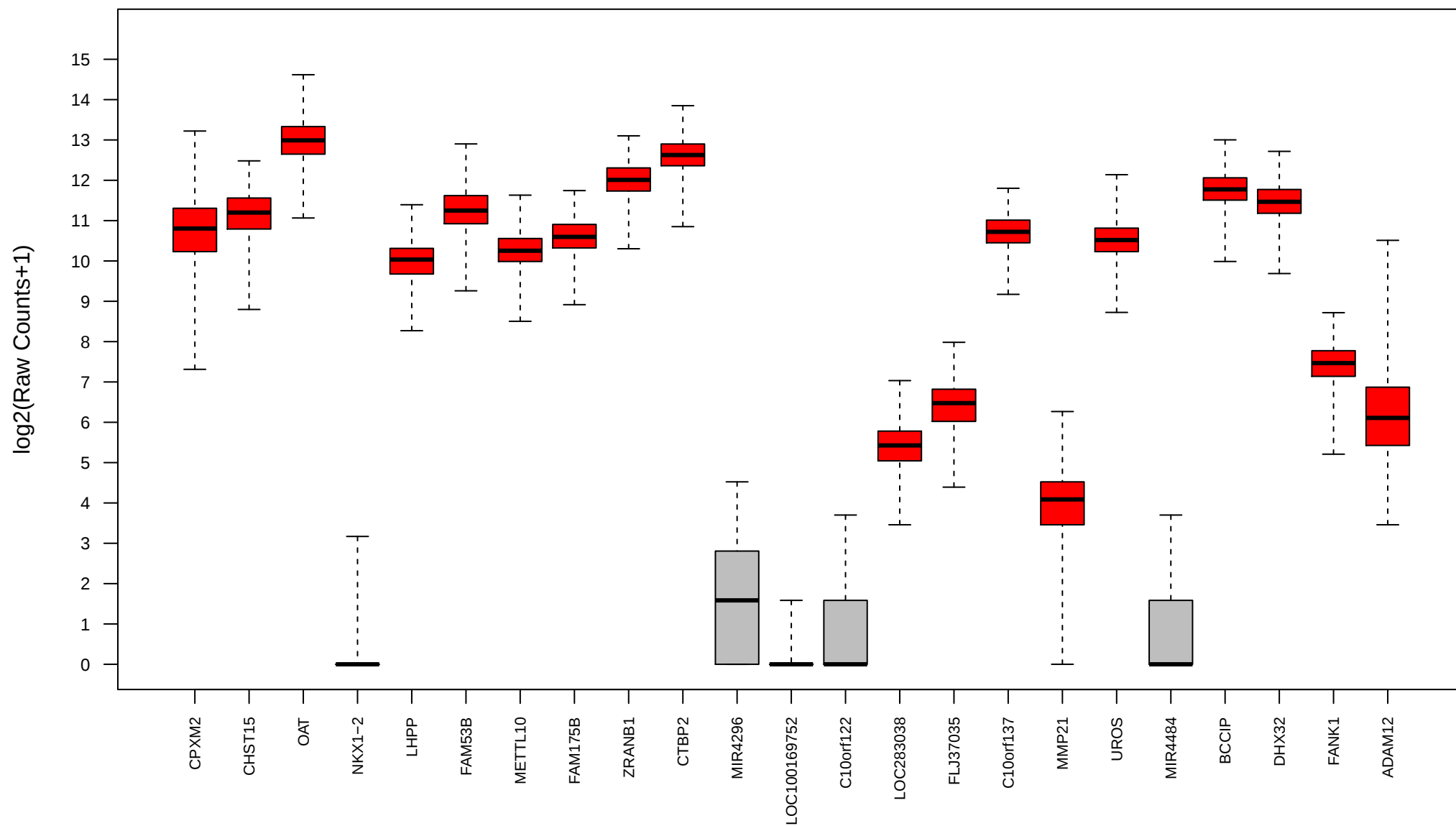
Total Genes: 9



Region60, chr10.126596872.126796872

rs4962416

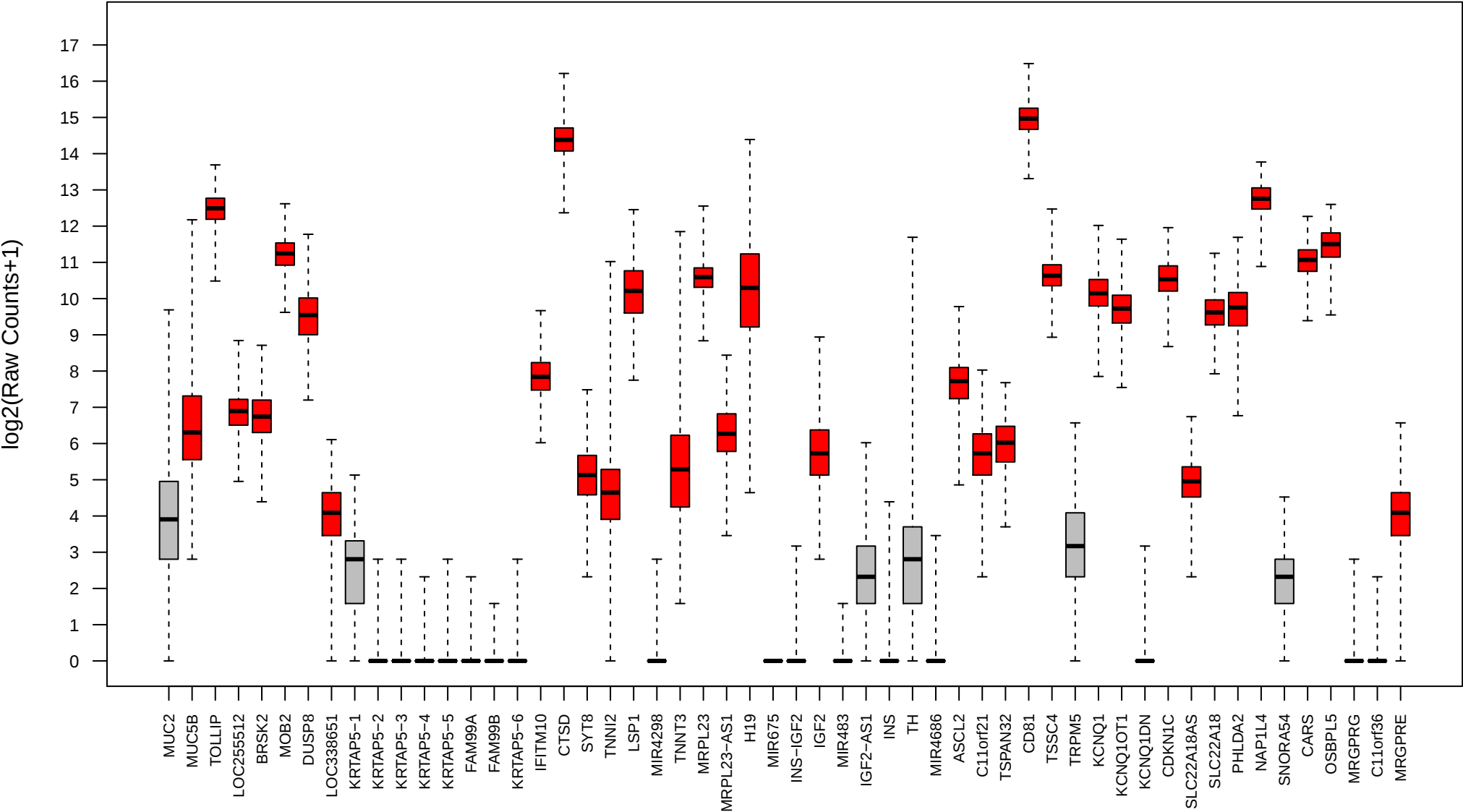
Total Genes: 23



Region61, chr11.2133574.2333574

rs7127900

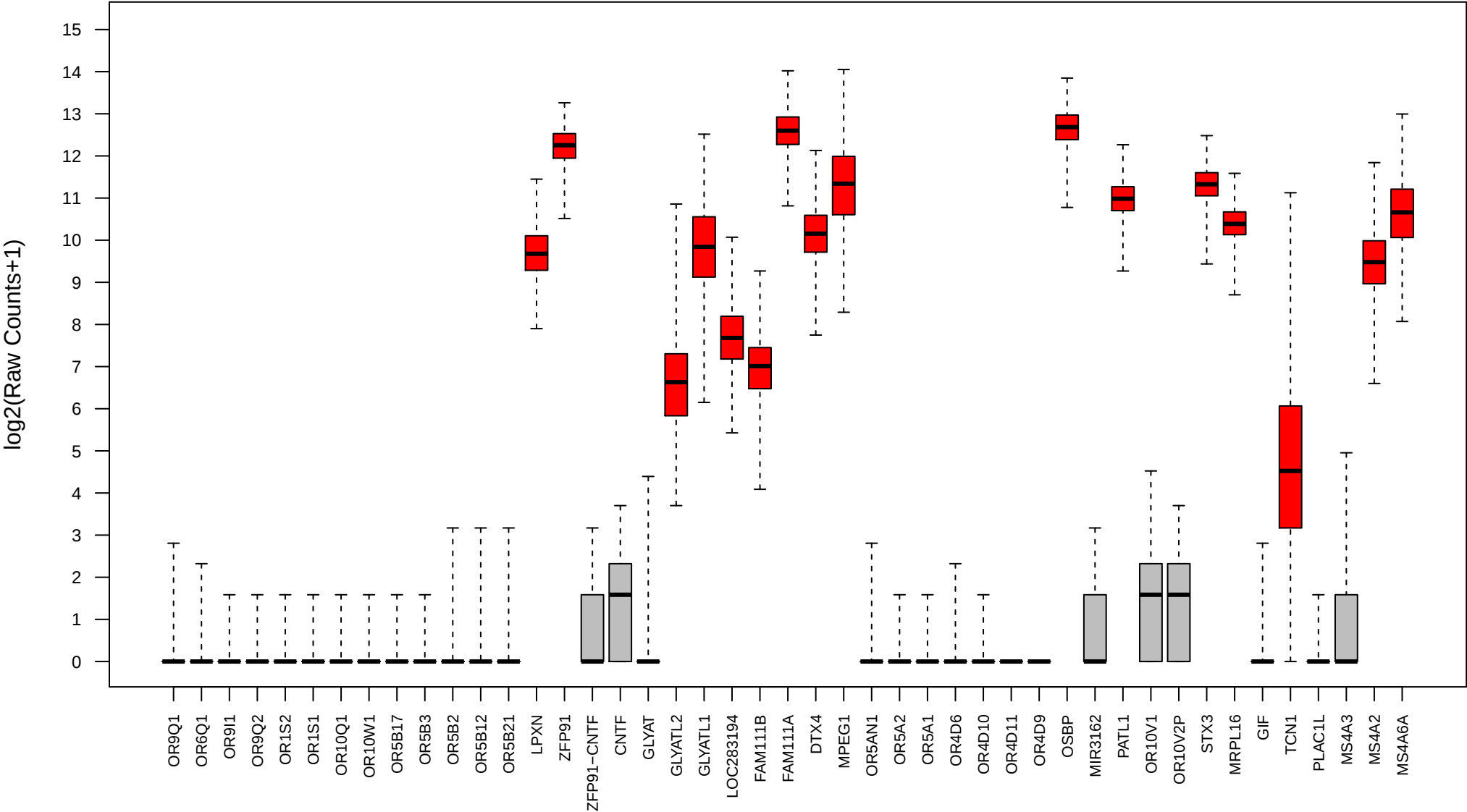
Total Genes: 54



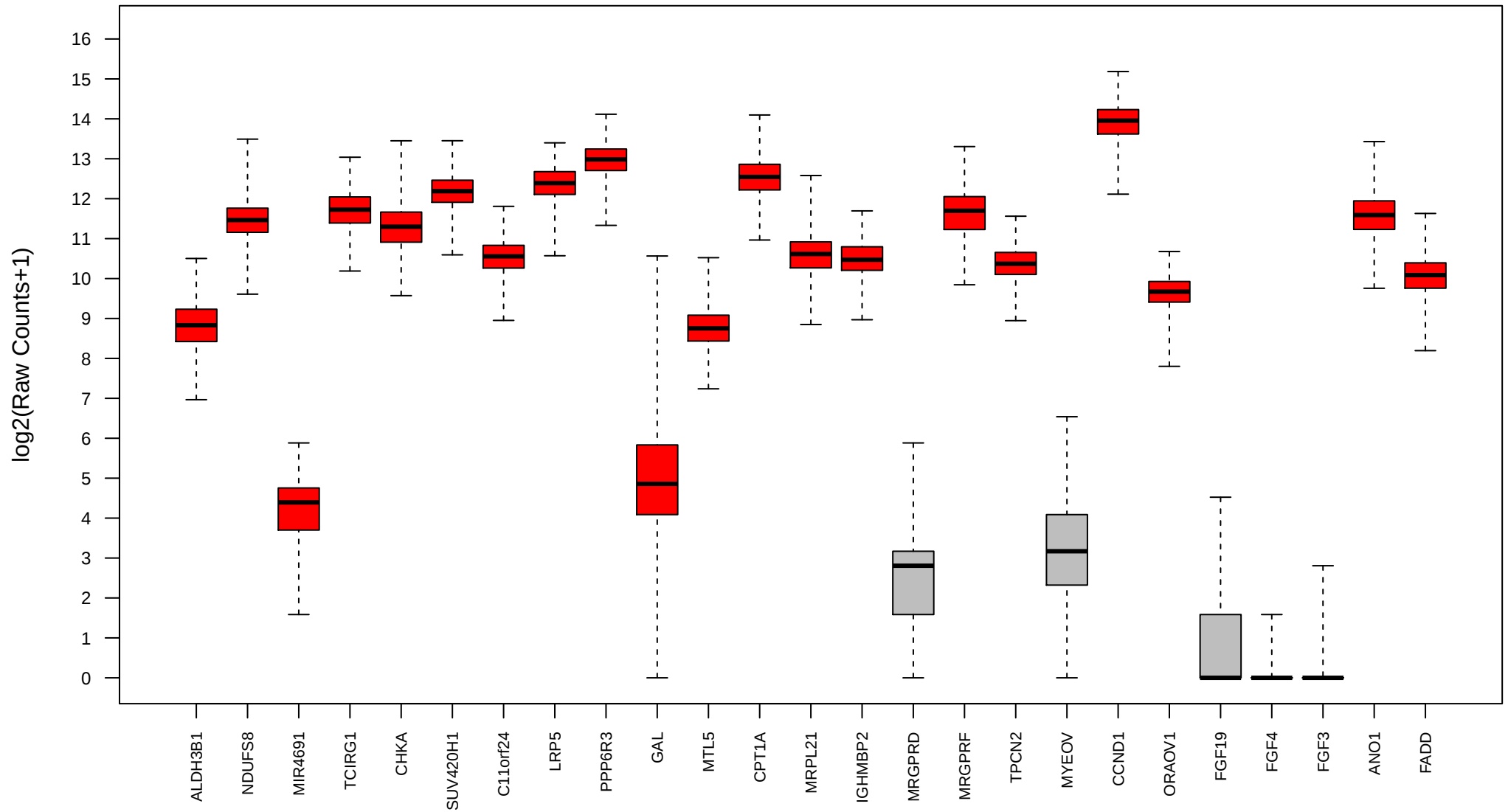
Region62, chr11.58815110.59015110

rs1938781

Total Genes: 45



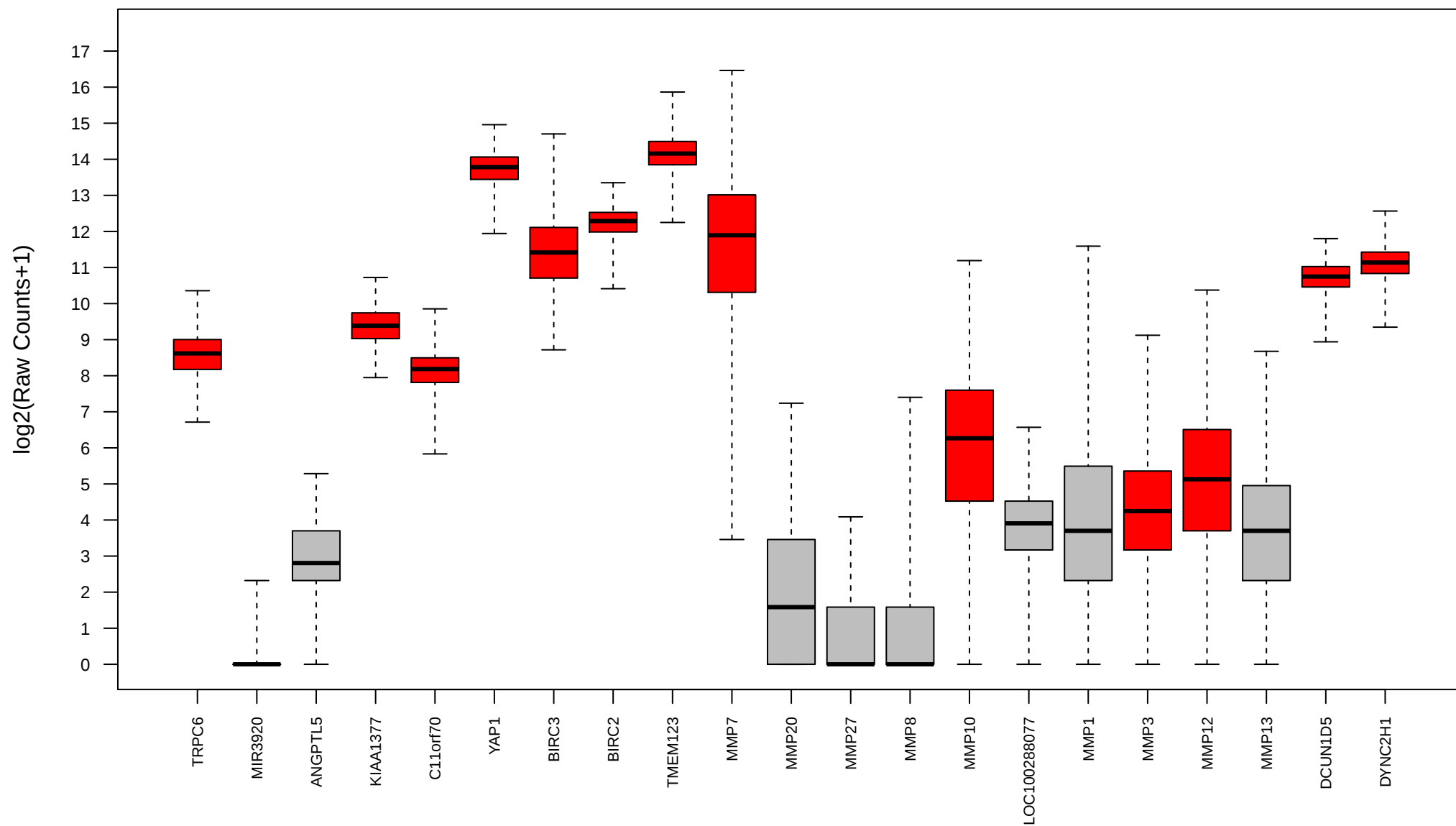
Region63, chr11.68835419.69095958  
rs11228565,rs7931342,rs10896449,rs12418451,rs7130881  
Total Genes: 25



Region64, chr11.102301661.102501661

rs11568818

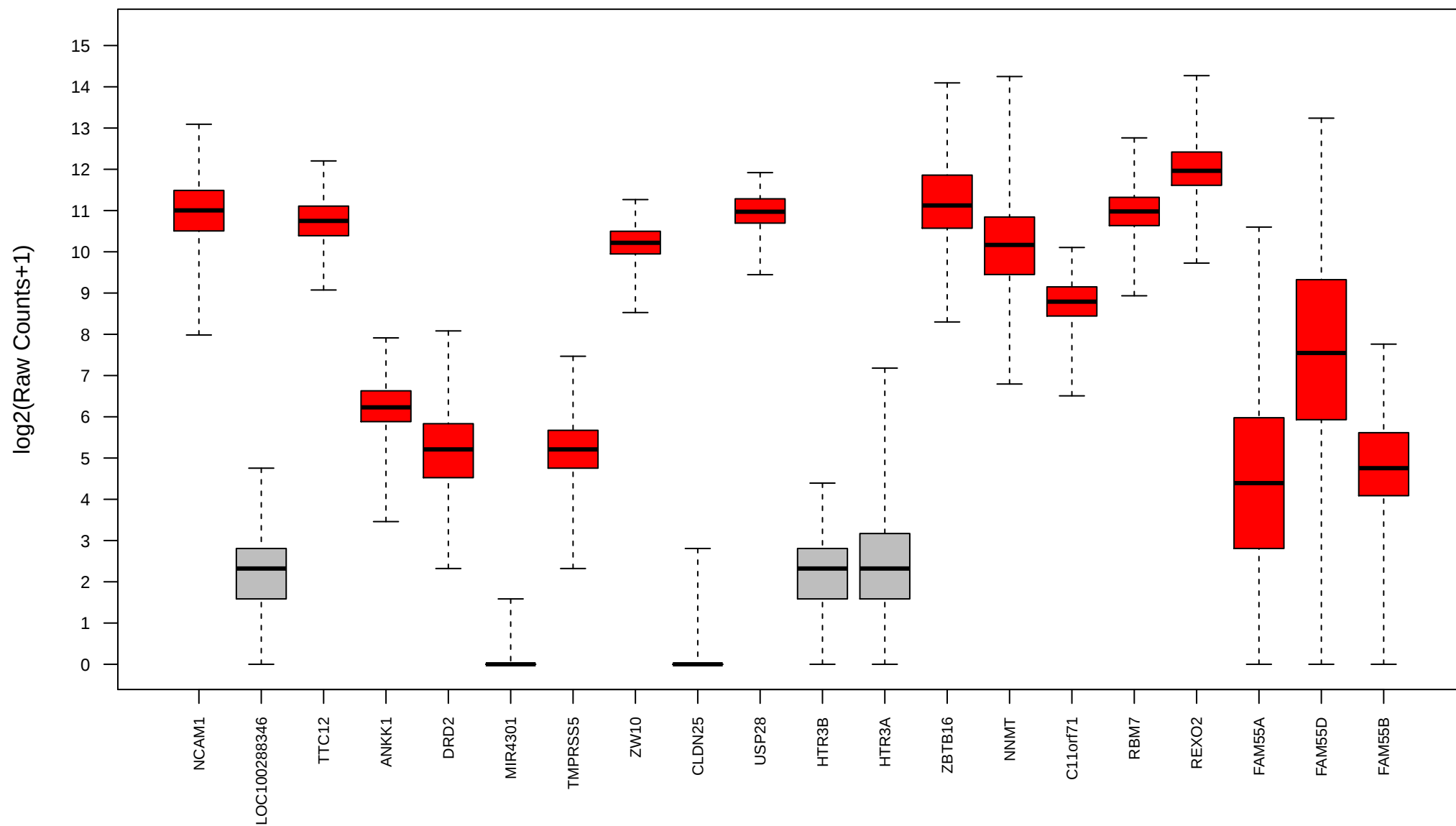
Total Genes: 21



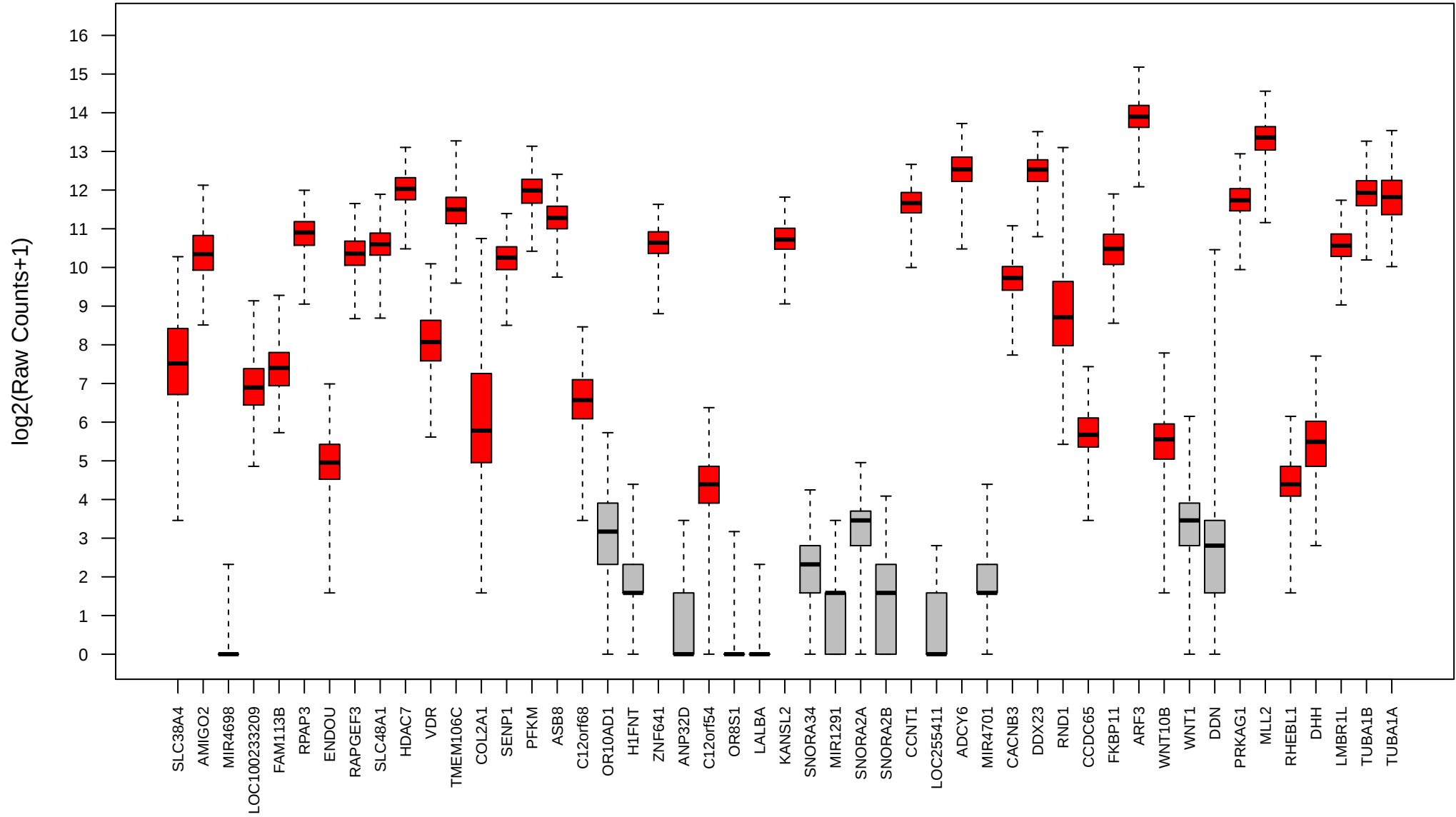
Region65, chr11.113707181.113907181

rs11214775

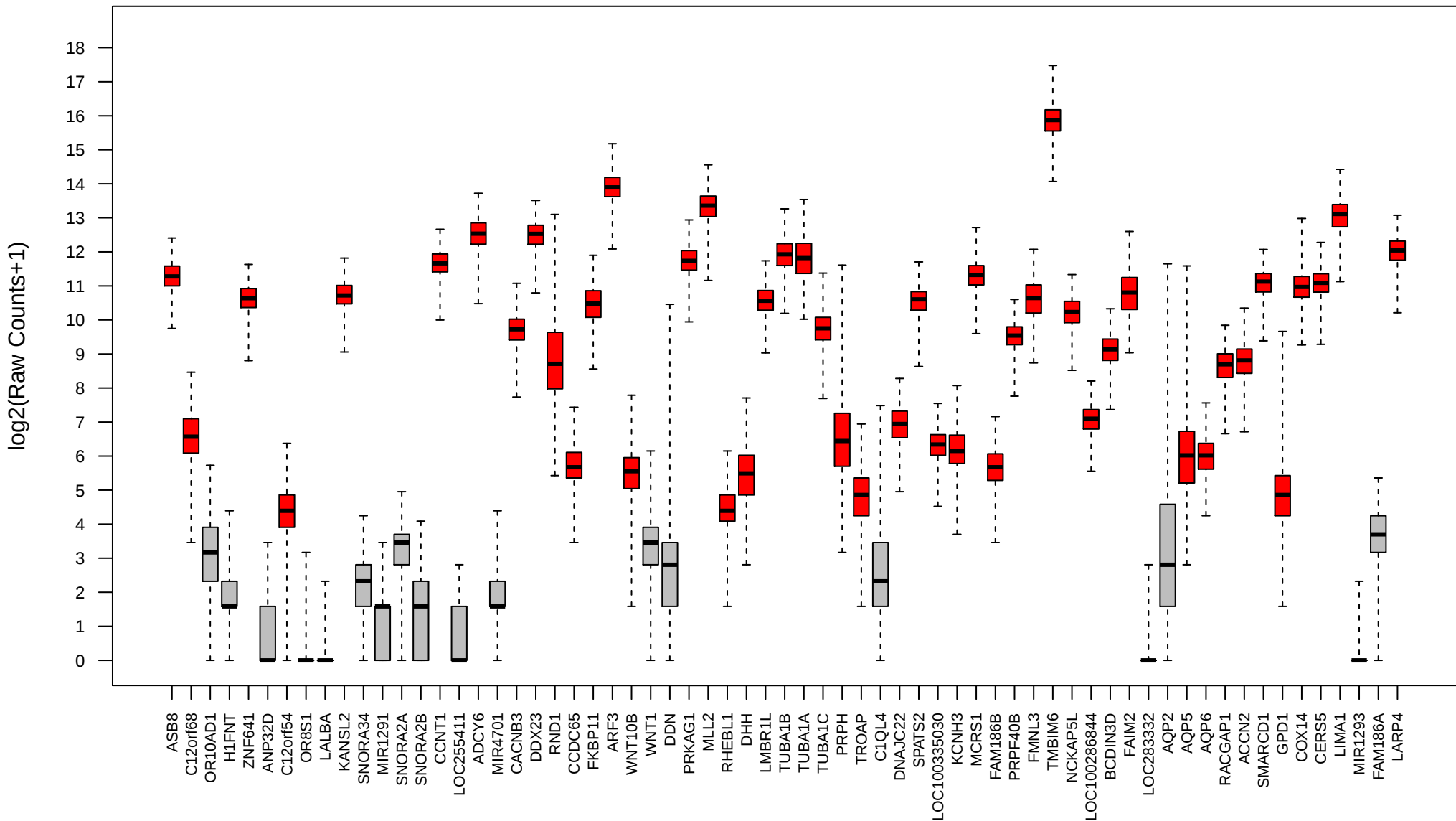
Total Genes: 20



Region66, chr12.48138757.48519618  
rs80130819,rs731236  
Total Genes: 49



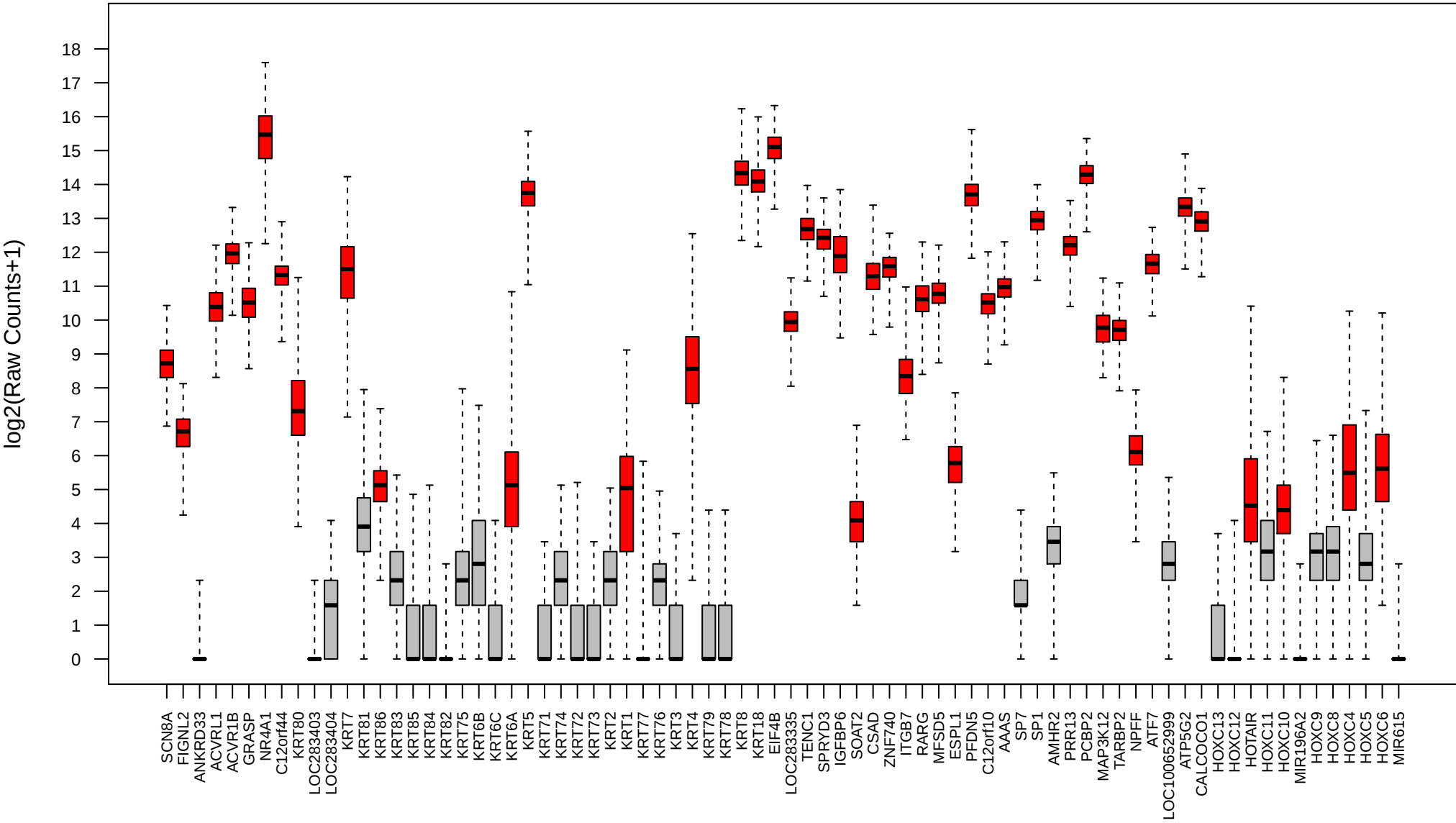
Region67, chr12.49576010.49776010  
rs10875943  
Total Genes: 65



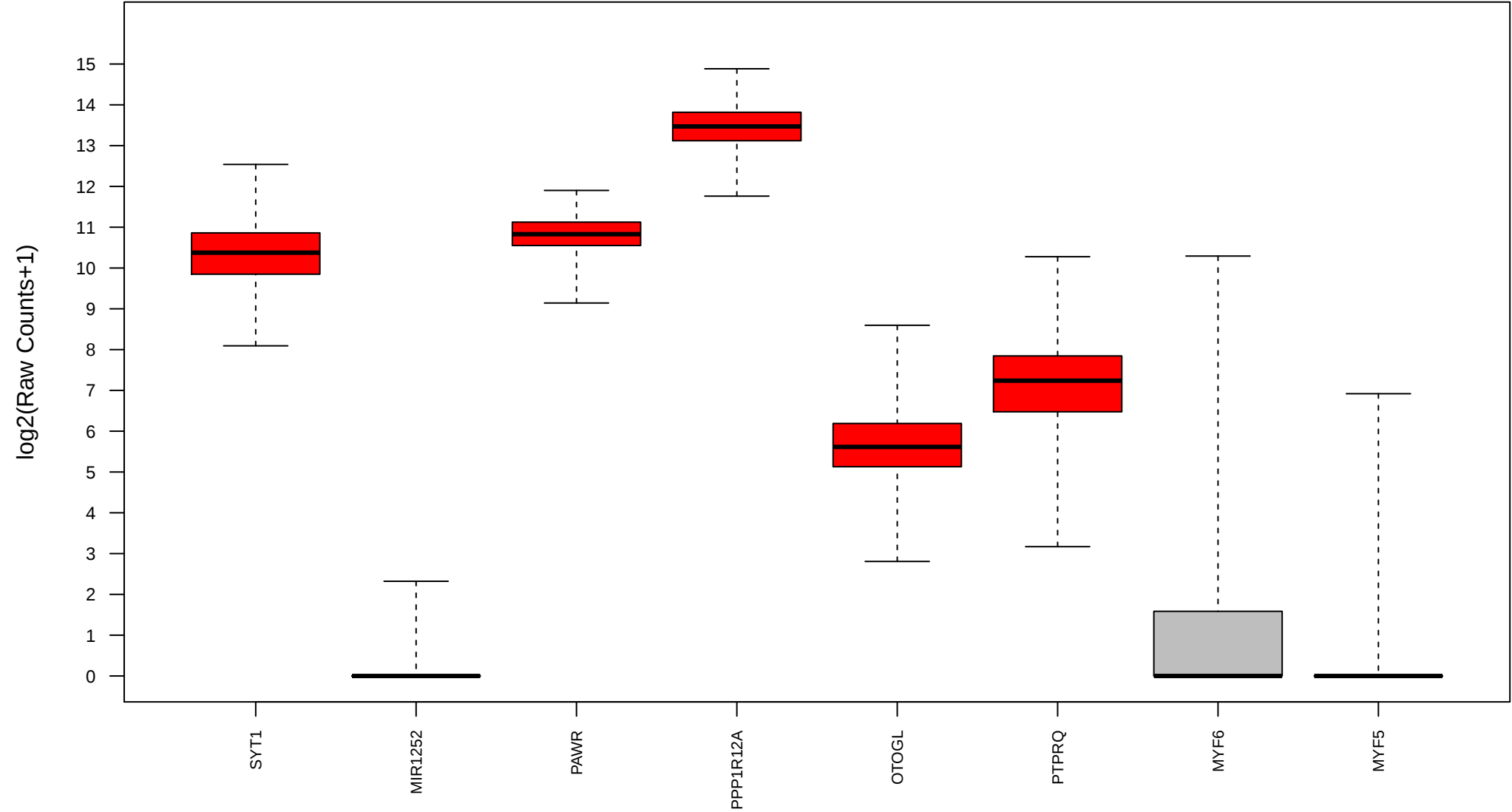
Region68, chr12.53173904.53373904

rs902774

Total Genes: 76



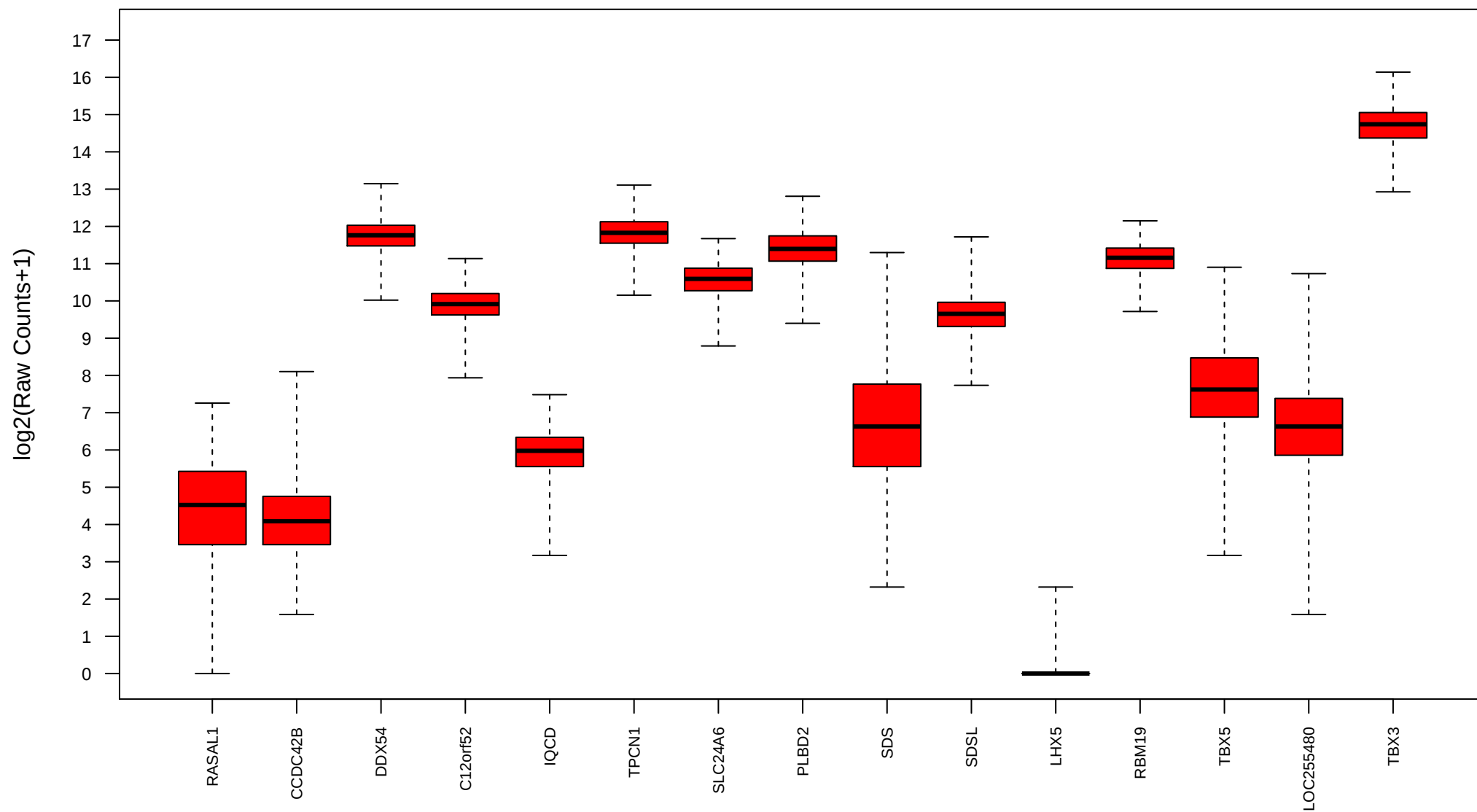
Region69, chr12.79988578.80188578  
rs12827748  
Total Genes: 8



Region70, chr12.114585571.114785571

rs1270884

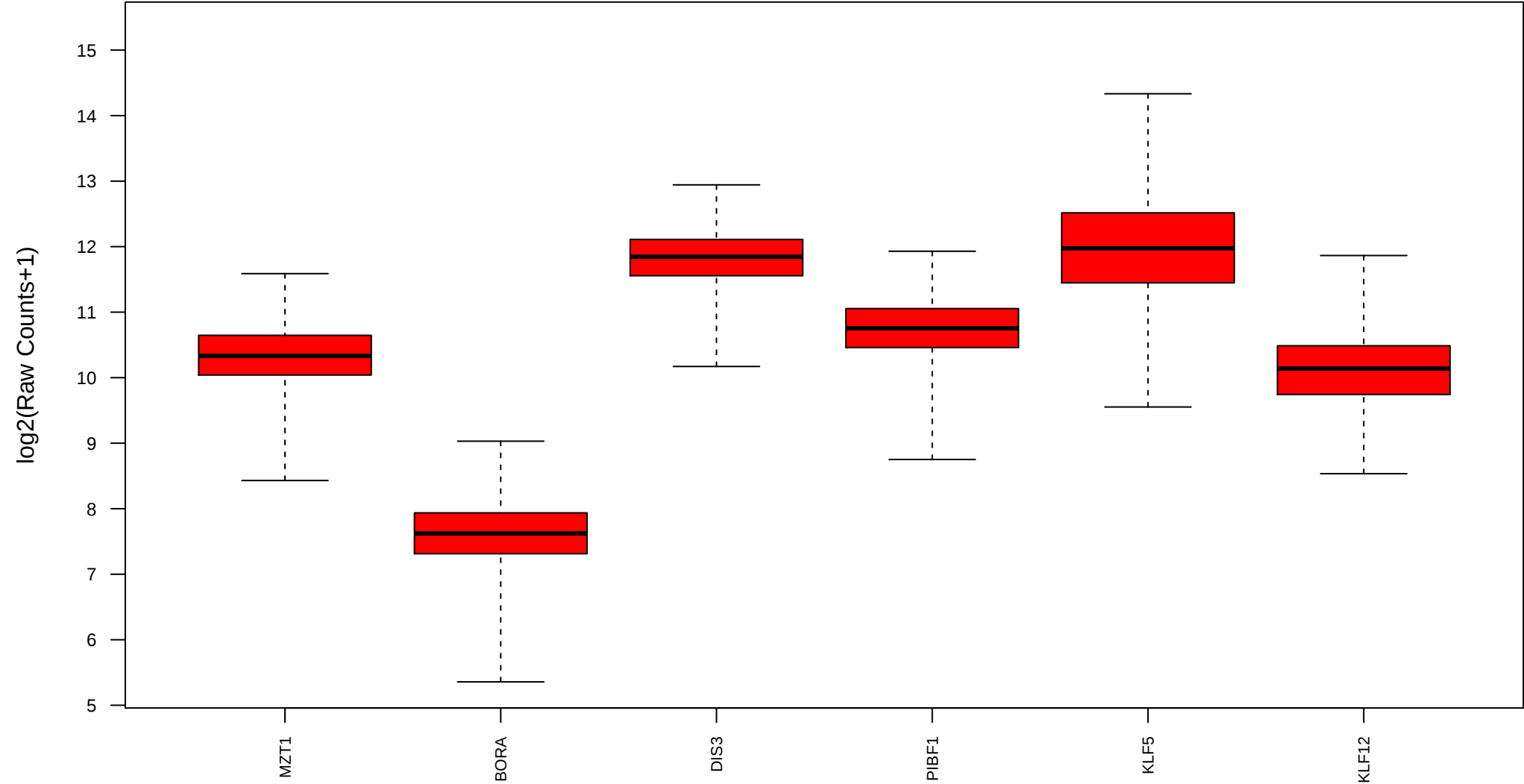
Total Genes: 15



**Region71, chr13.73628139.73828139**

**rs9600079**

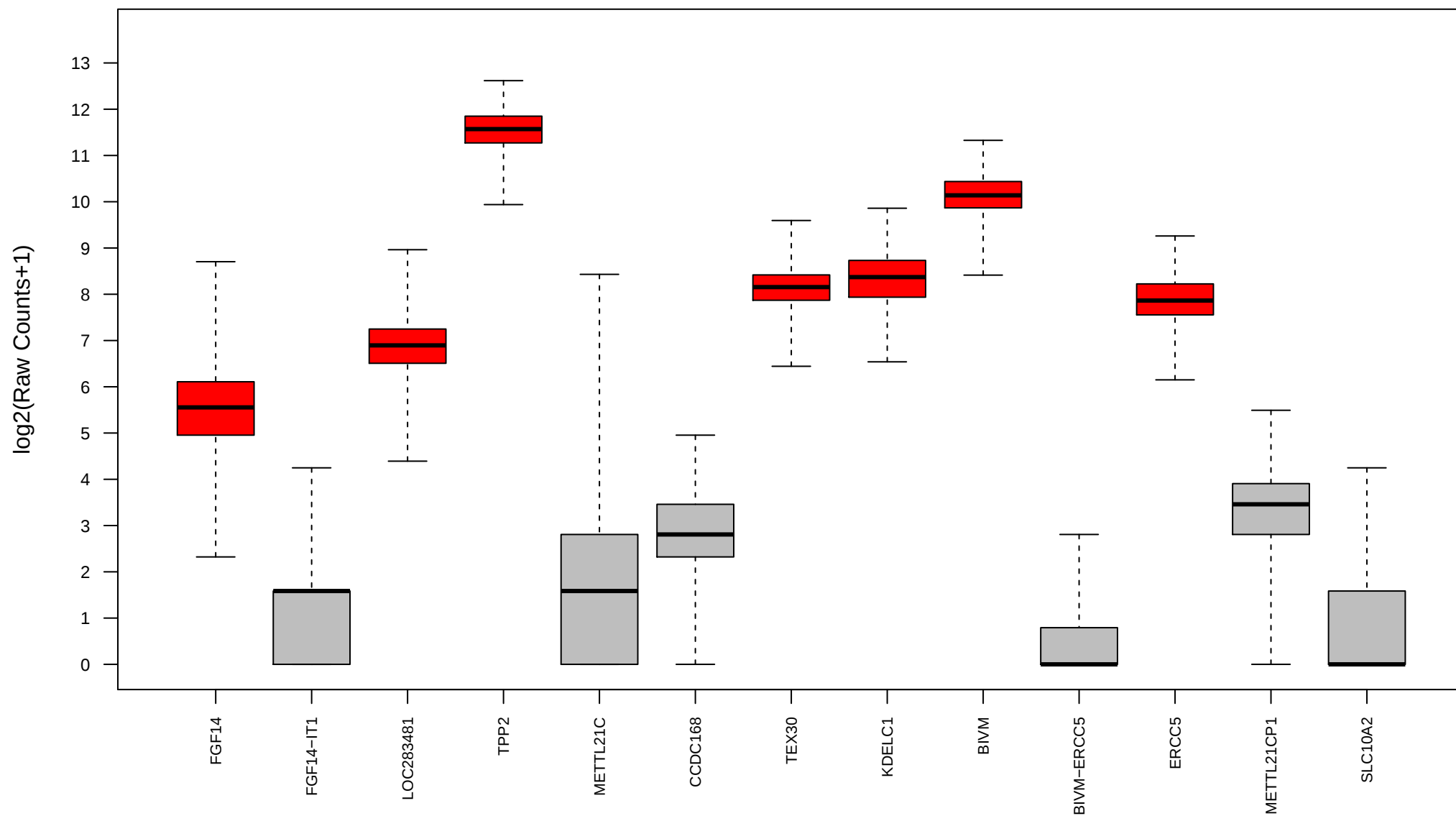
**Total Genes: 6**



Region72, chr13.103828007.104028007

rs1529276

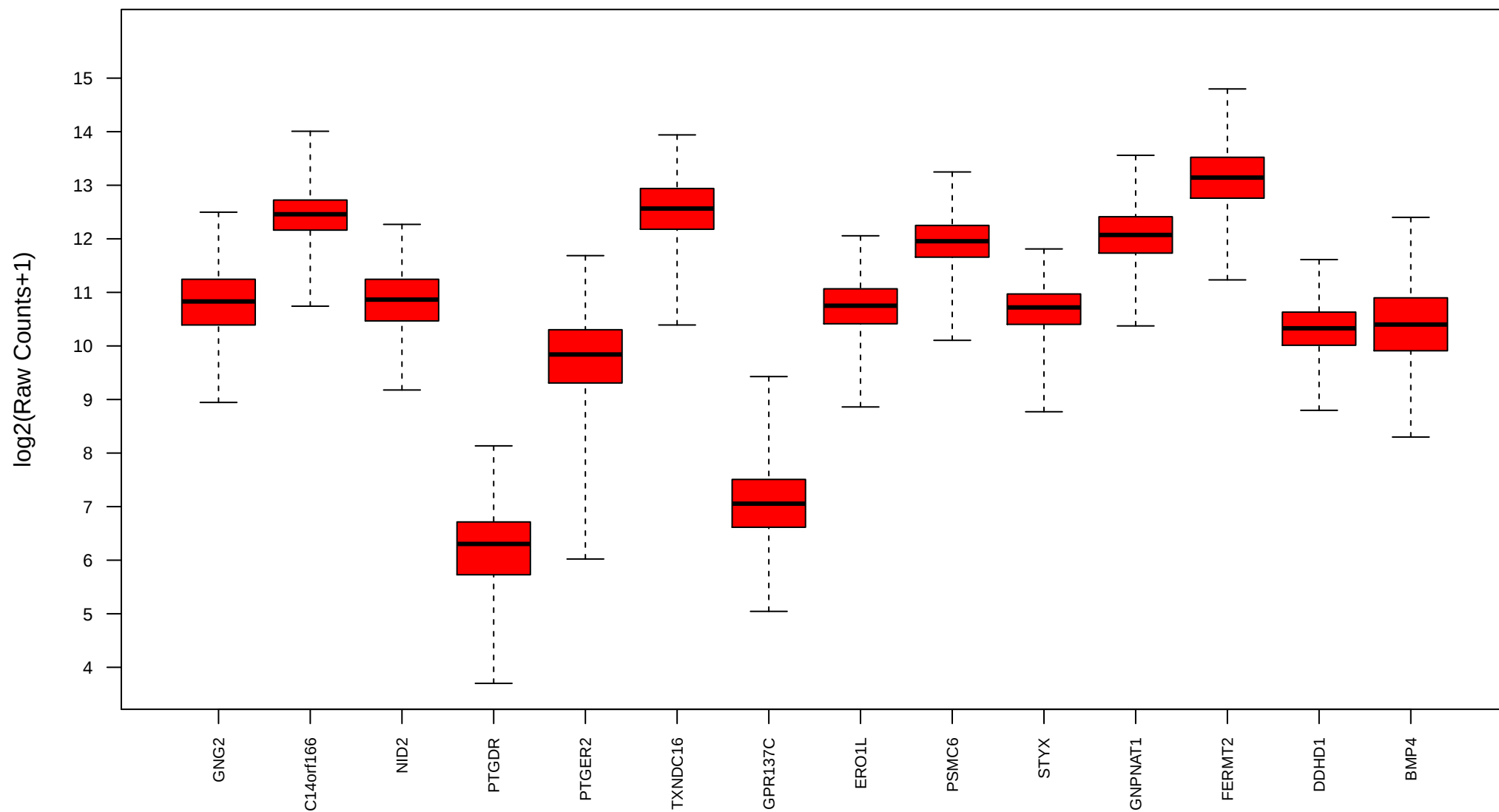
Total Genes: 13



Region73, chr14.53272330.53472330

rs8008270

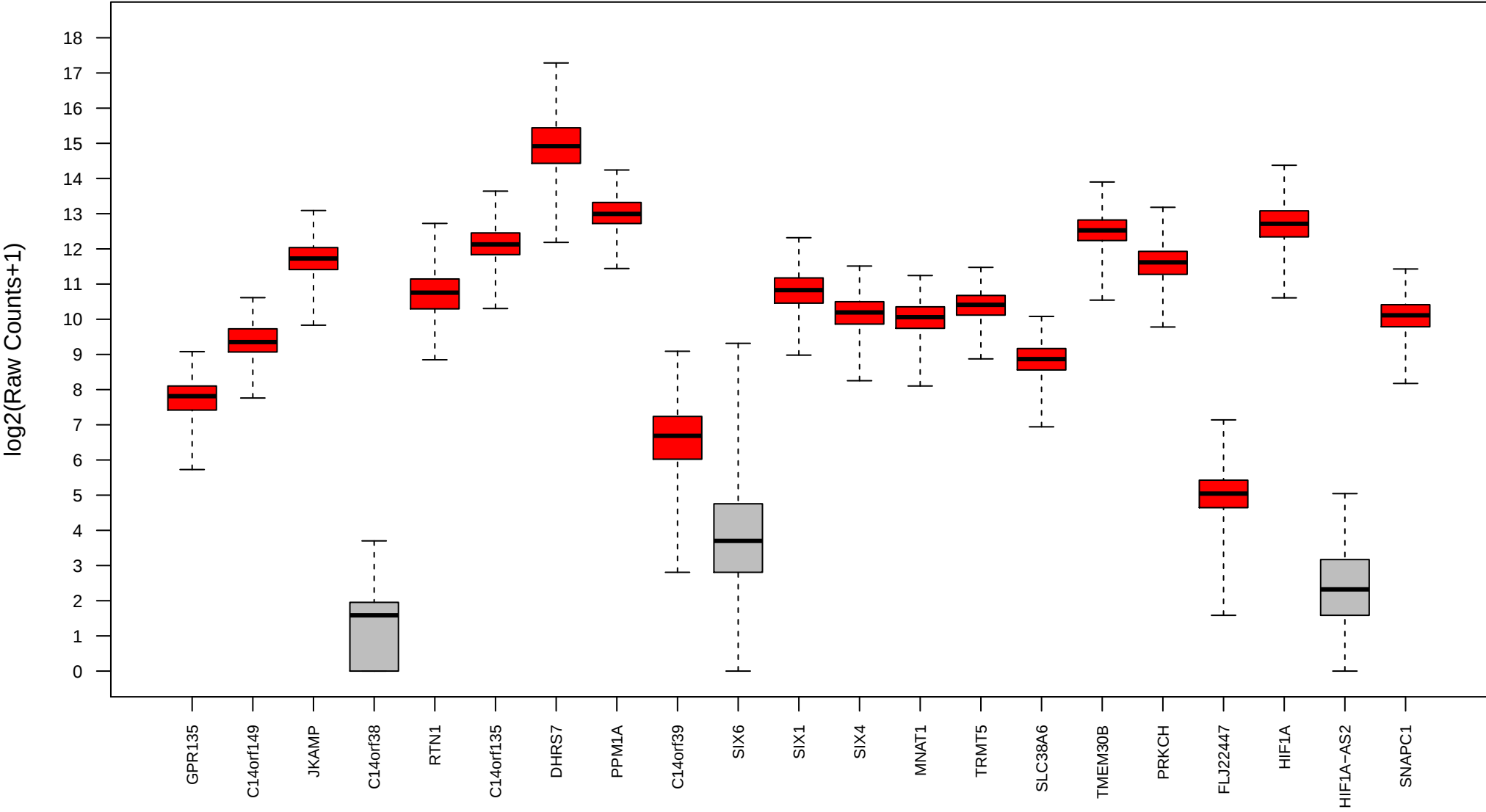
Total Genes: 14



Region74, chr14.61022526.61222526

rs7153648

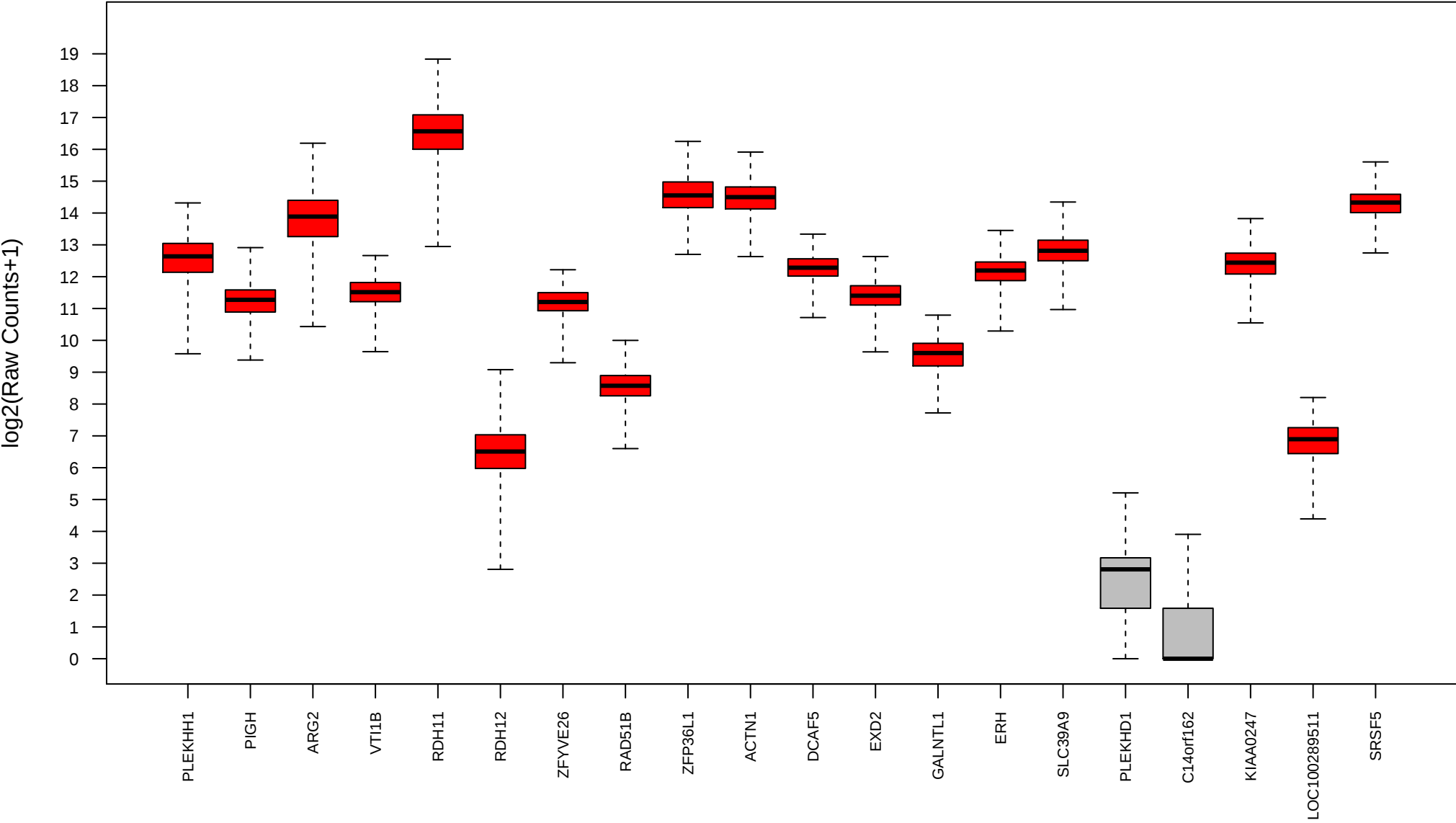
Total Genes: 21



Region75, chr14.69026744.69226744

rs7141529

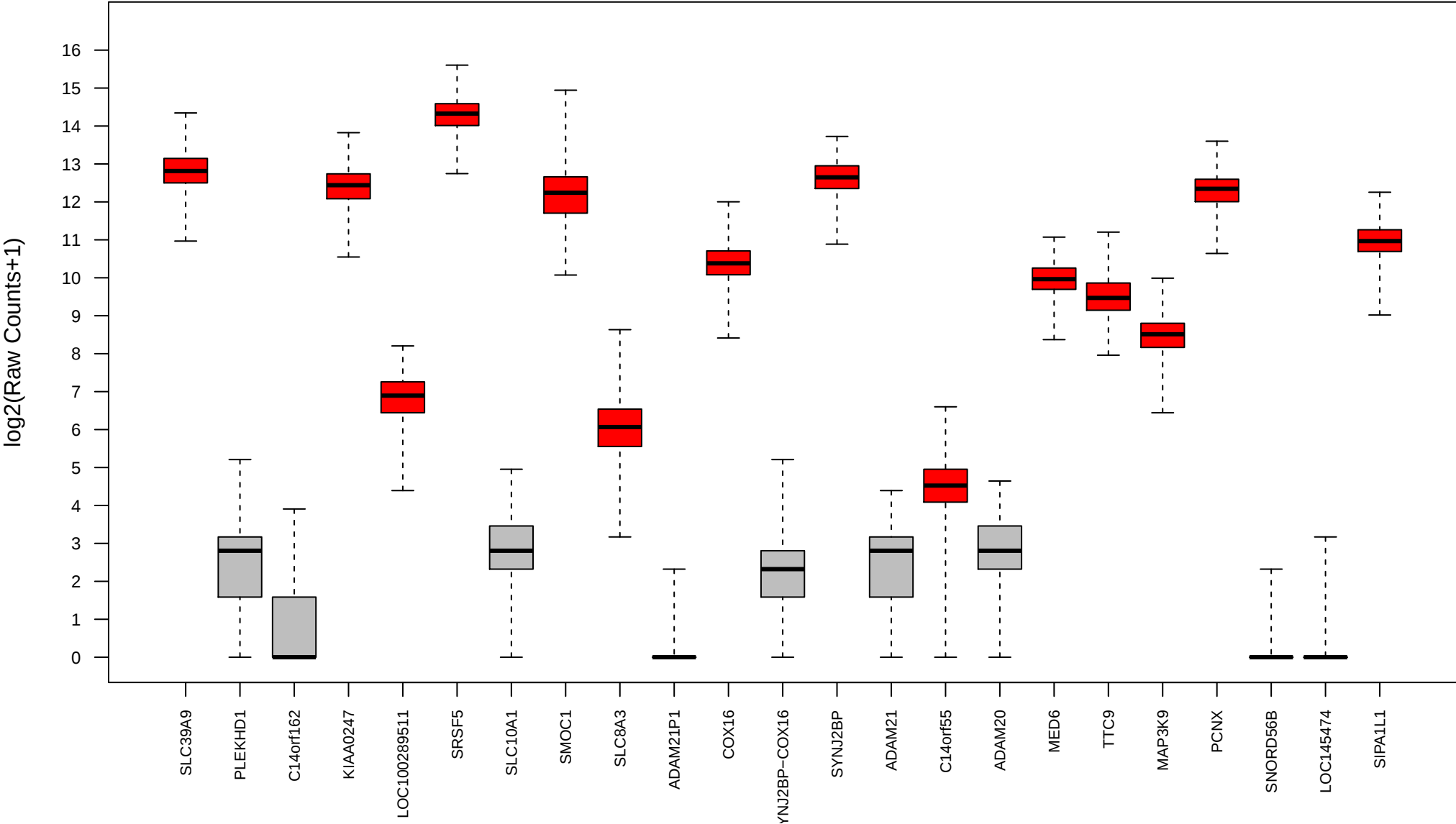
Total Genes: 20



Region76, chr14.70992256.71192256

rs8014671

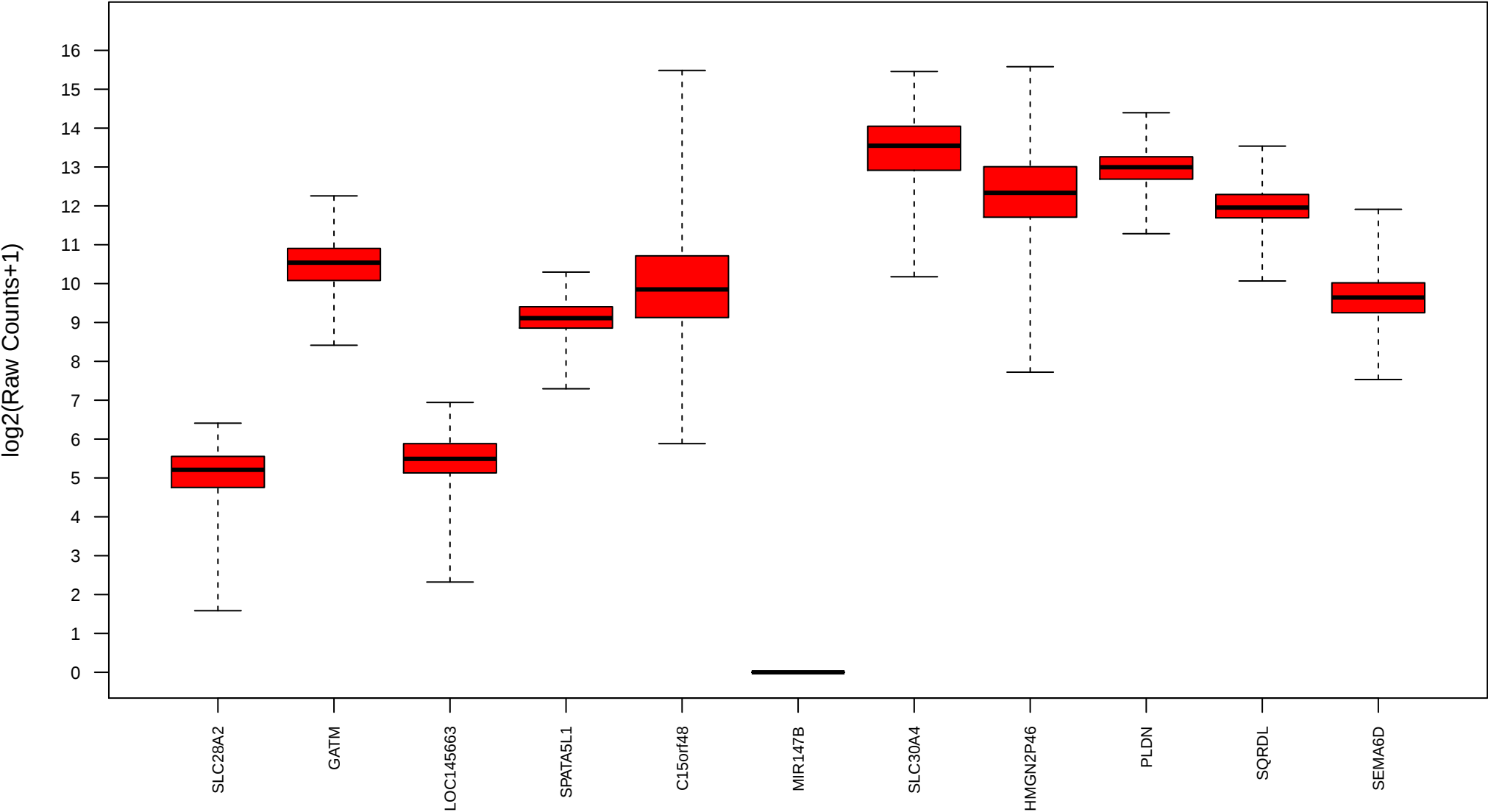
Total Genes: 23



Region77, chr15.46539808.46739808

rs4775302

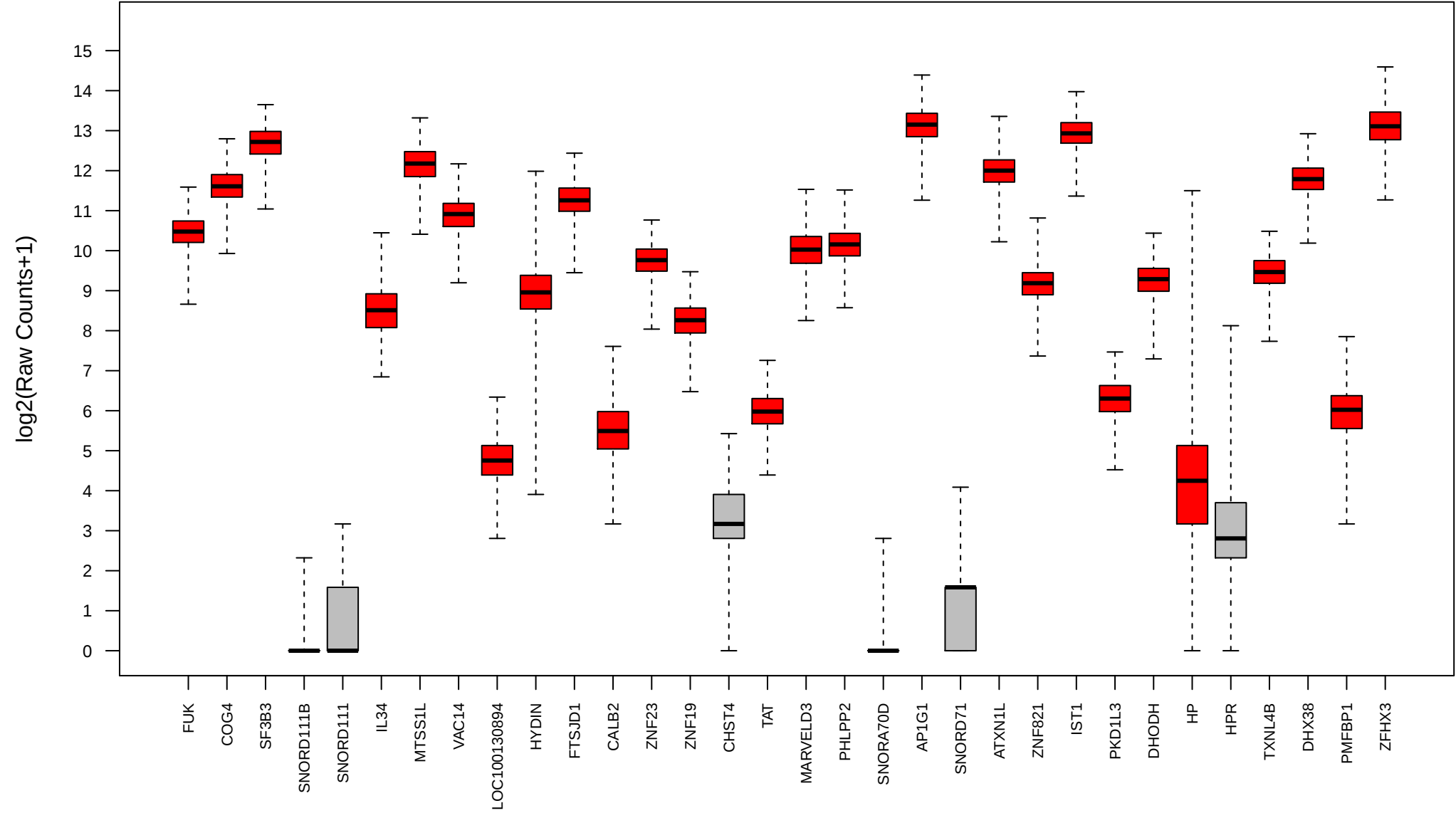
Total Genes: 11



Region78, chr16.71591329.71791329

rs12051443

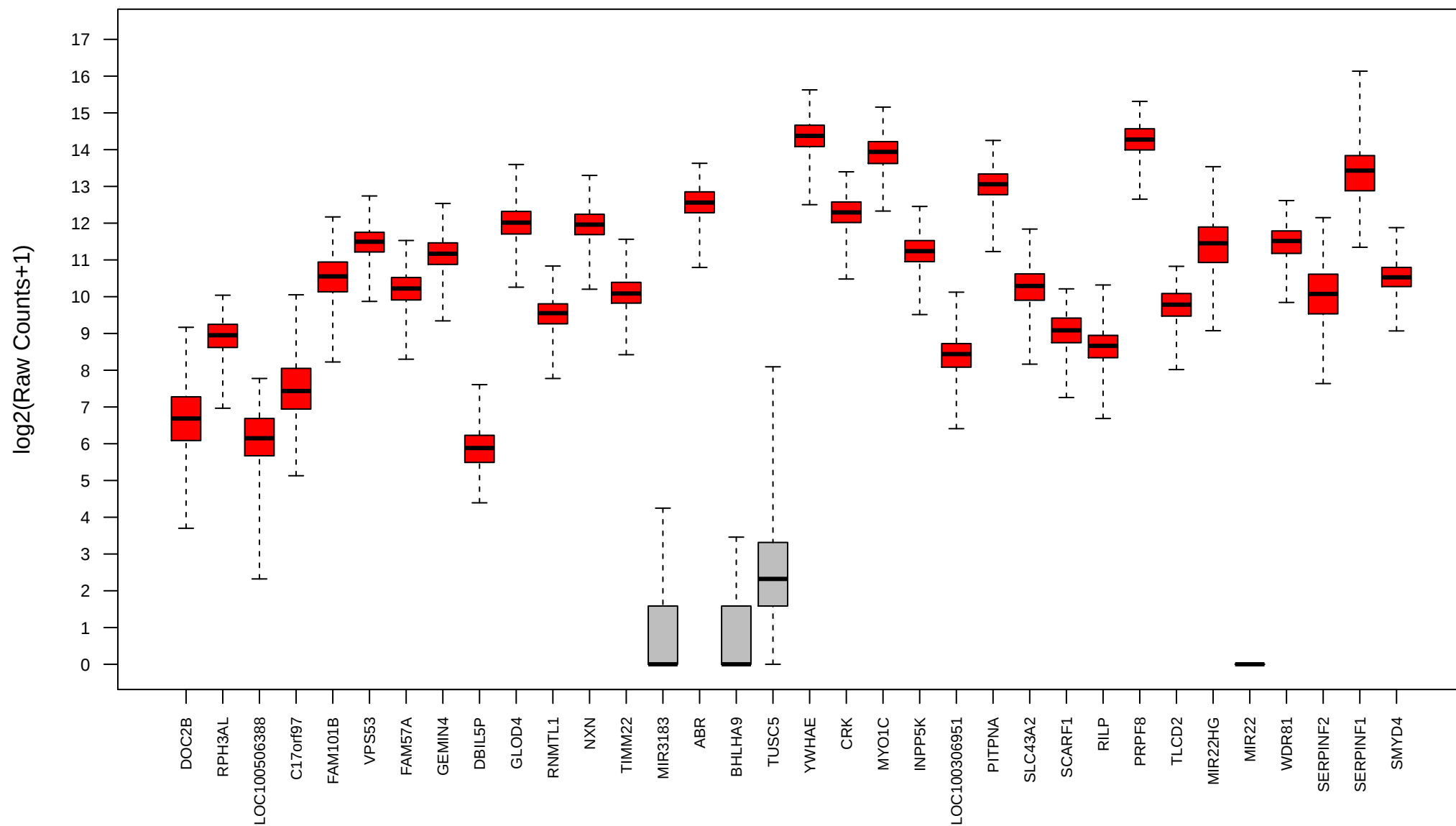
Total Genes: 32



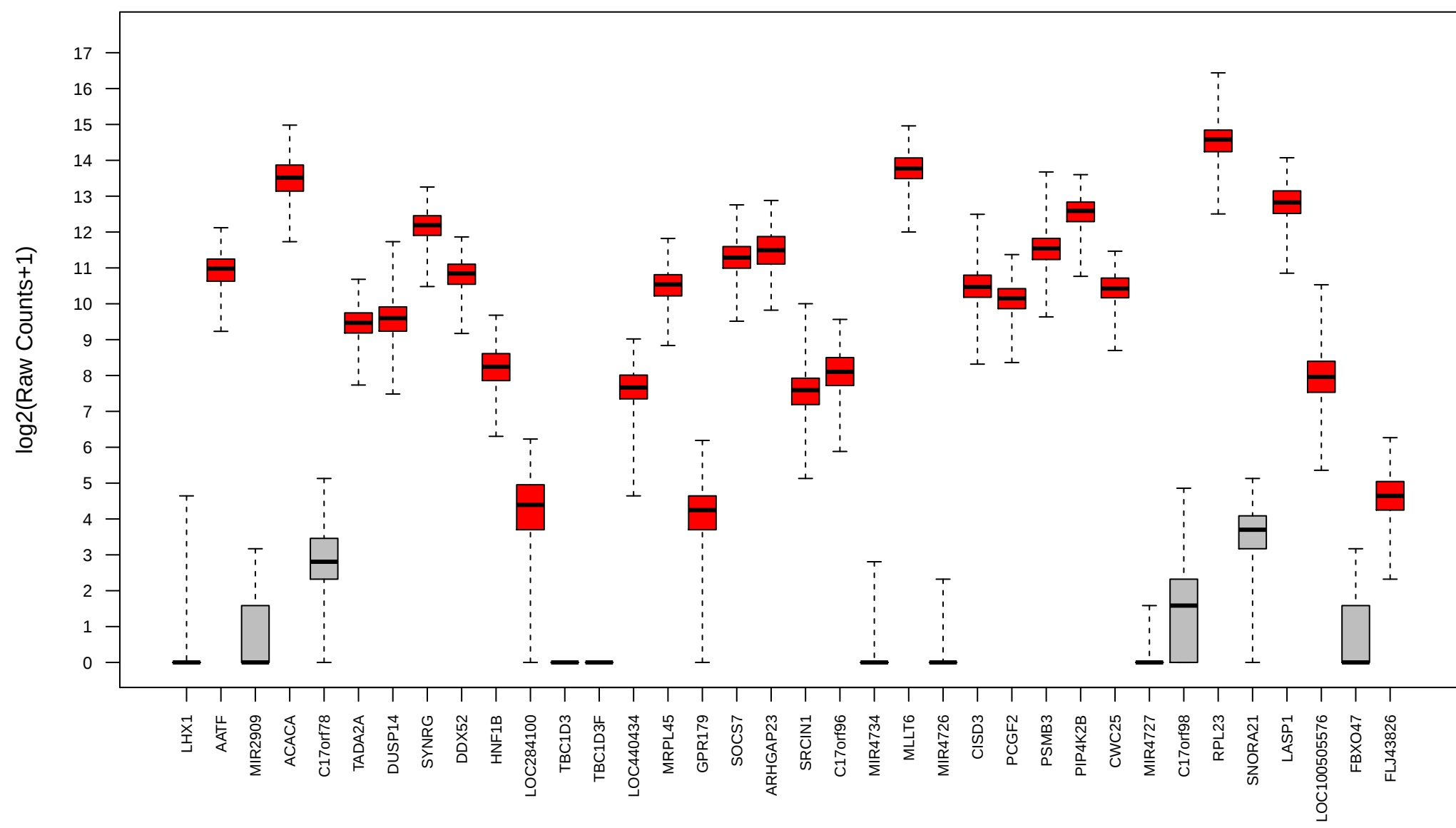
Region79, chr17.518965.718965

rs684232

Total Genes: 34



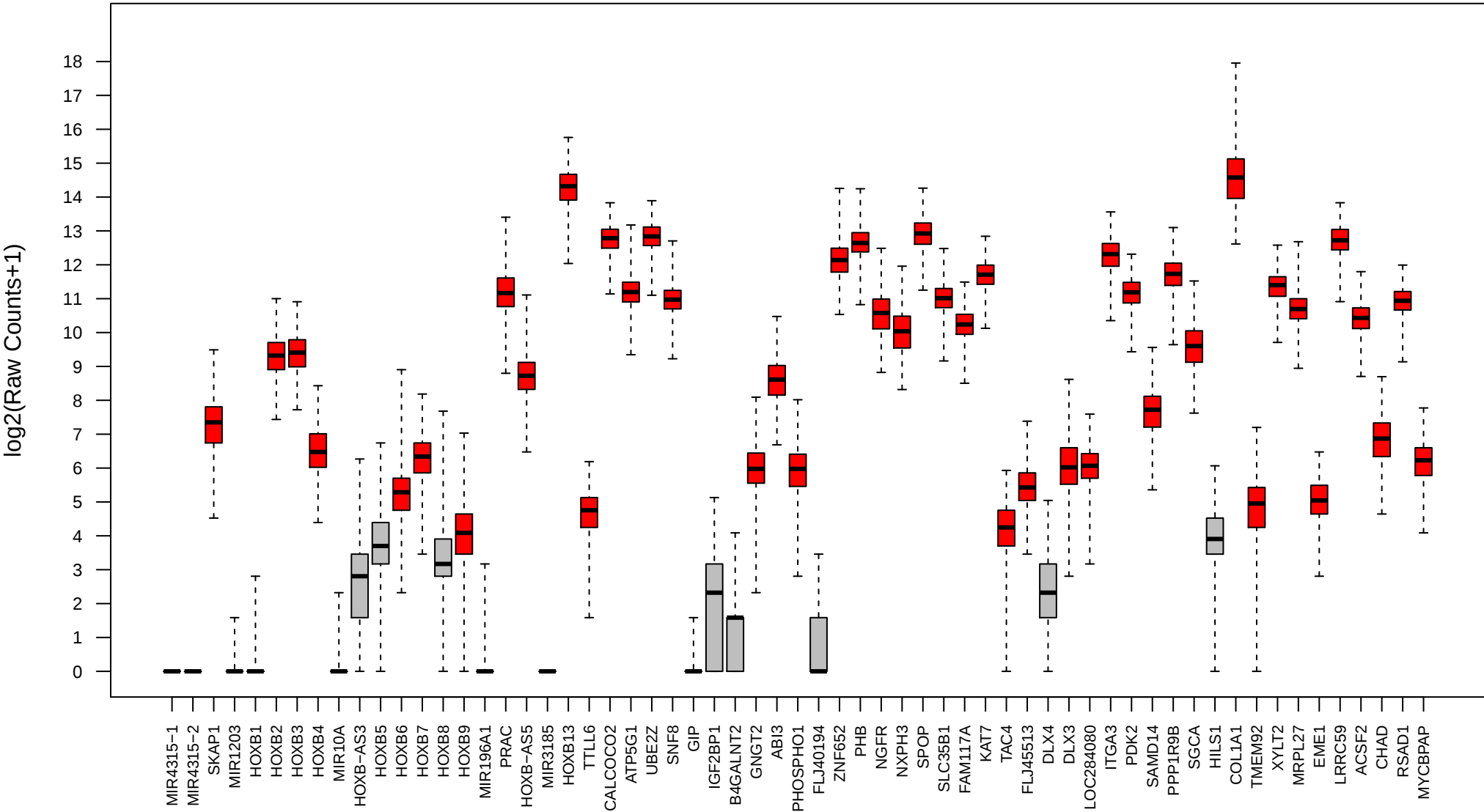
Region80, chr17.35974979.36201156  
rs11649743,rs4430796,rs7501939  
Total Genes: 36



Region81, chr17.47245186.47536749

rs11650494

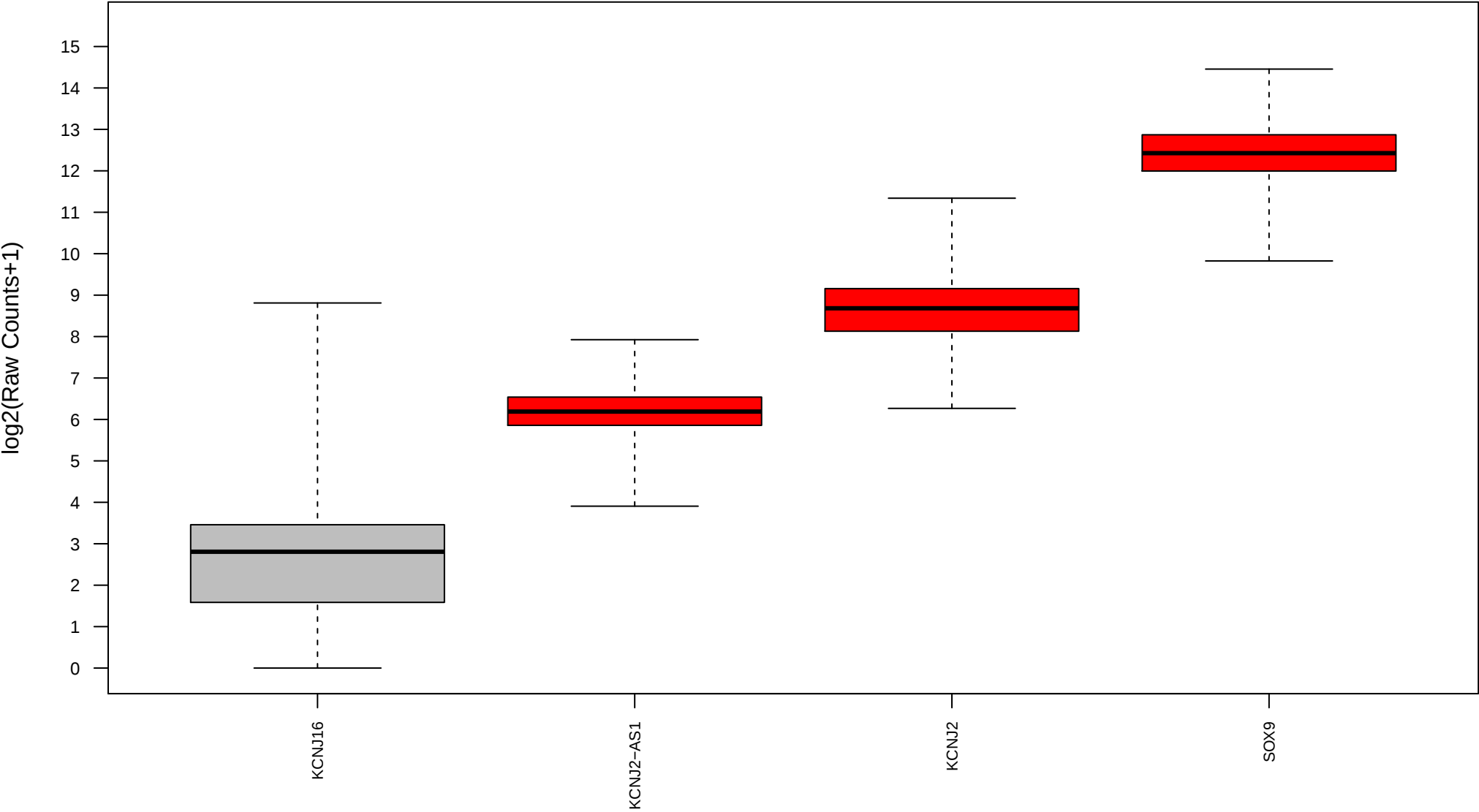
Total Genes: 61



Region82, chr17.69008753.69208753

rs1859962

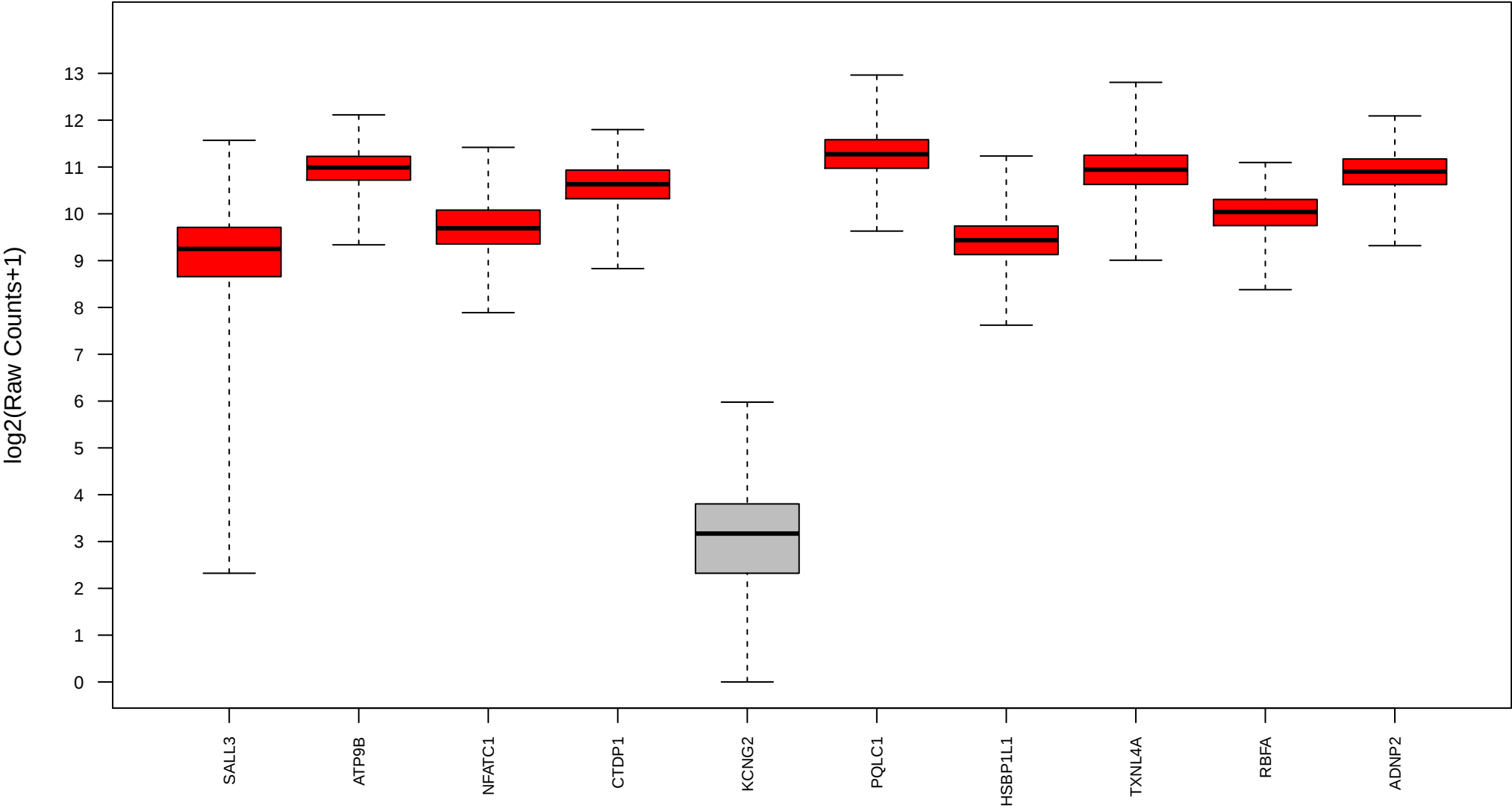
Total Genes: 4



Region83, chr18.76673973.76873973

rs7241993

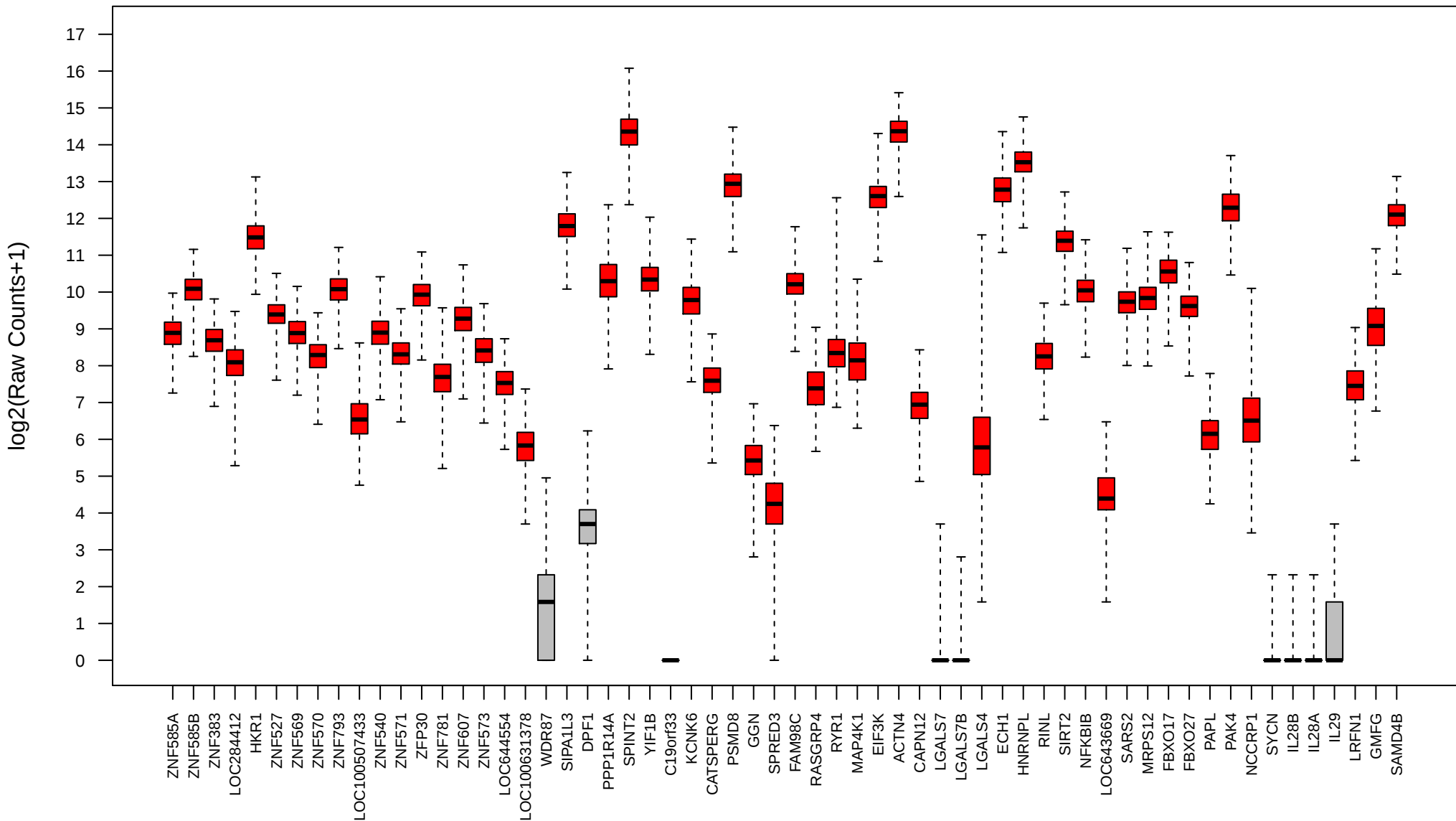
Total Genes: 10



Region84, chr19.38635613.38835613

rs8102476

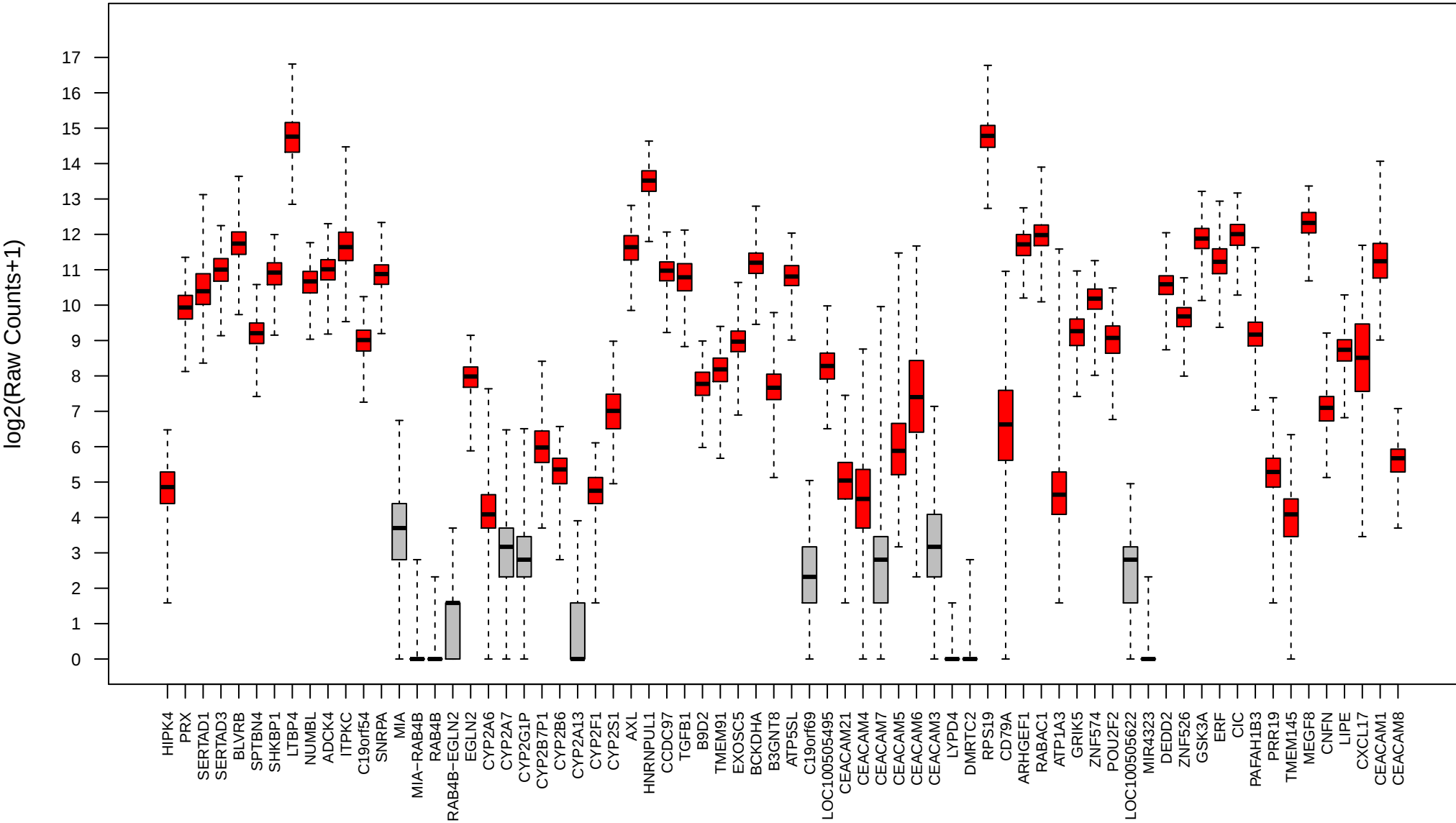
Total Genes: 60



Region85, chr19.41885587.42085624

rs11672691,rs887391

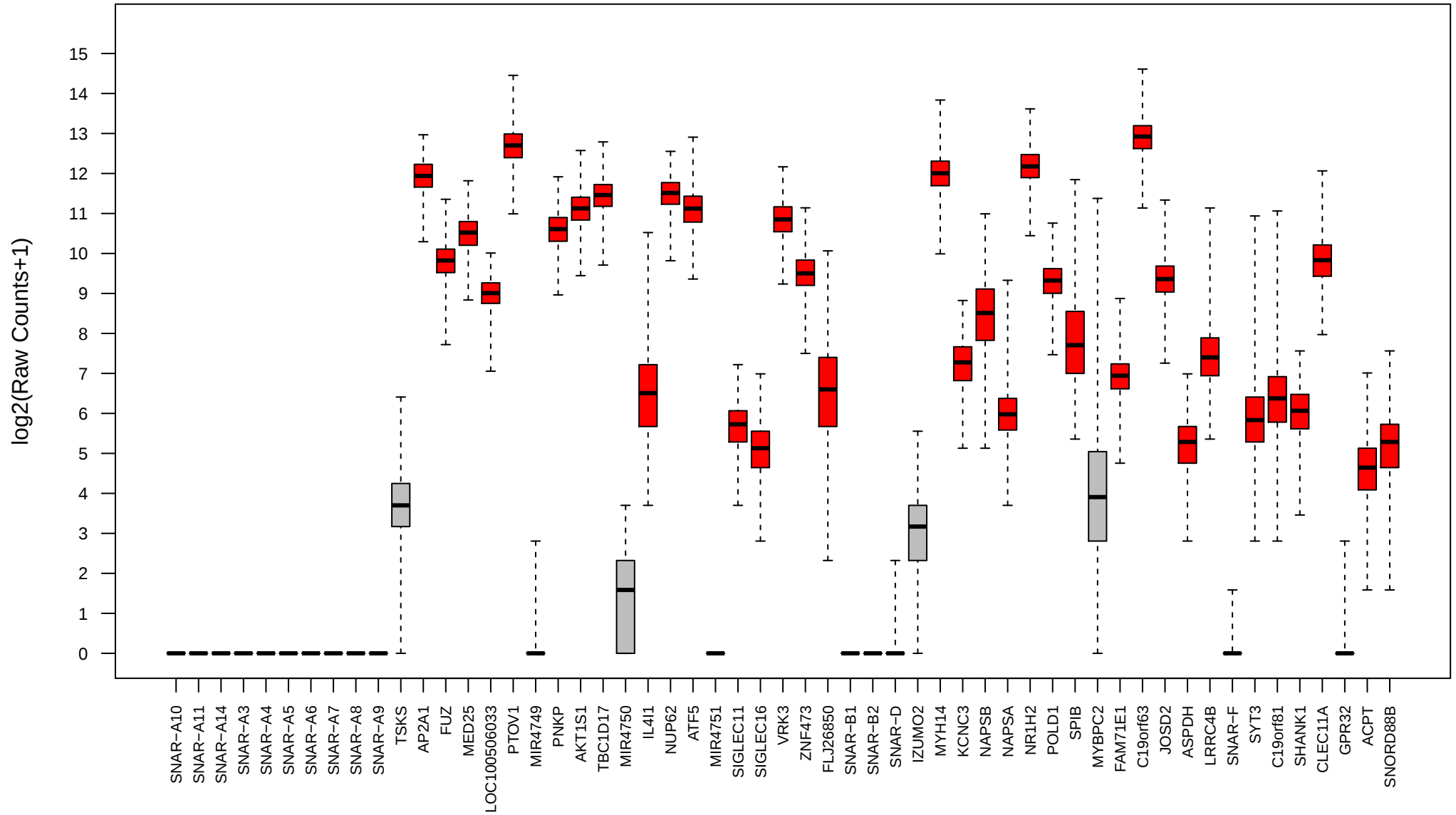
Total Genes: 70



# Region86A, chr19.51264623.51464623

rs2735839

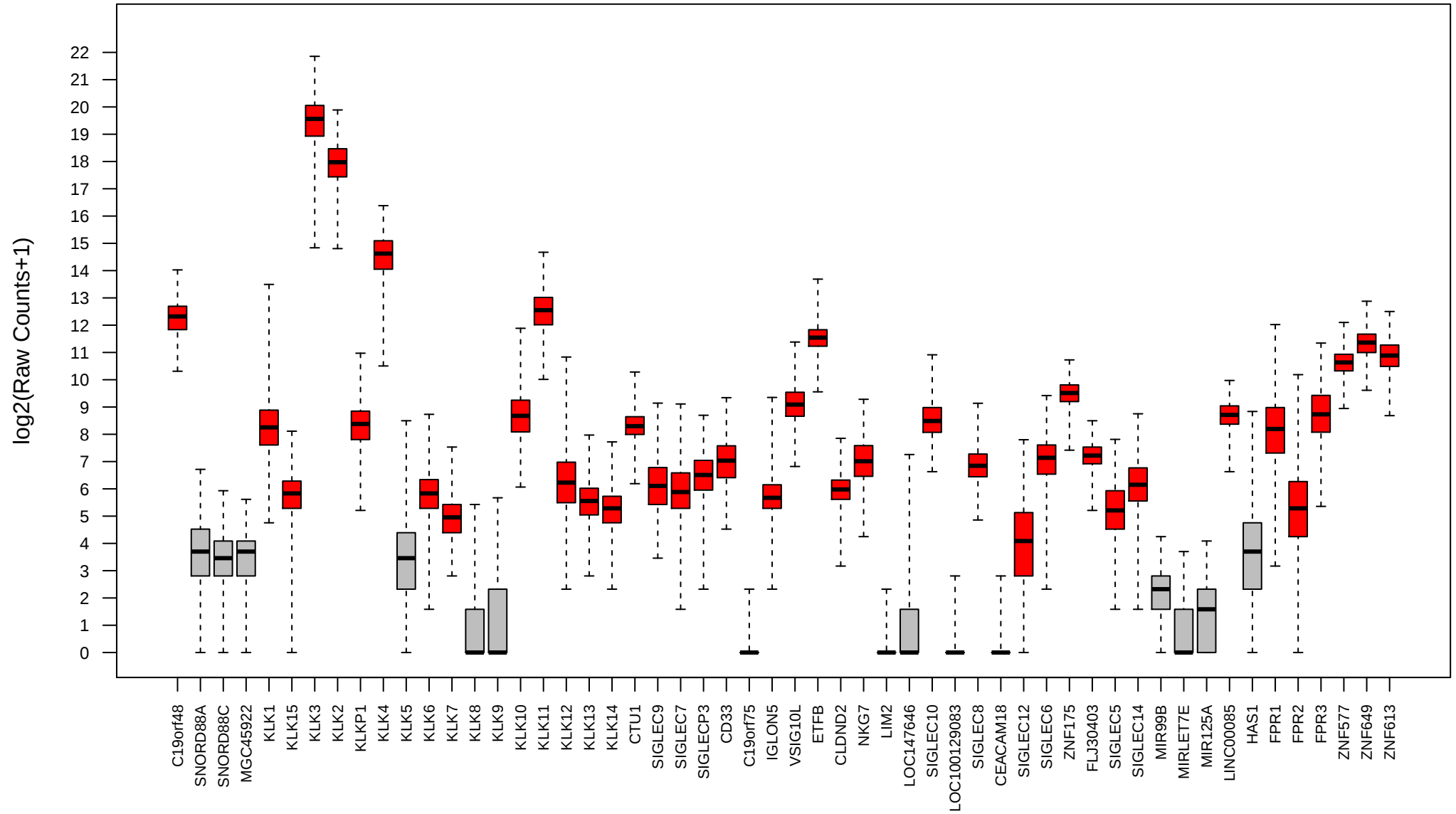
Total Genes: 109



Region86B, chr19.51264623.51464623

rs2735839

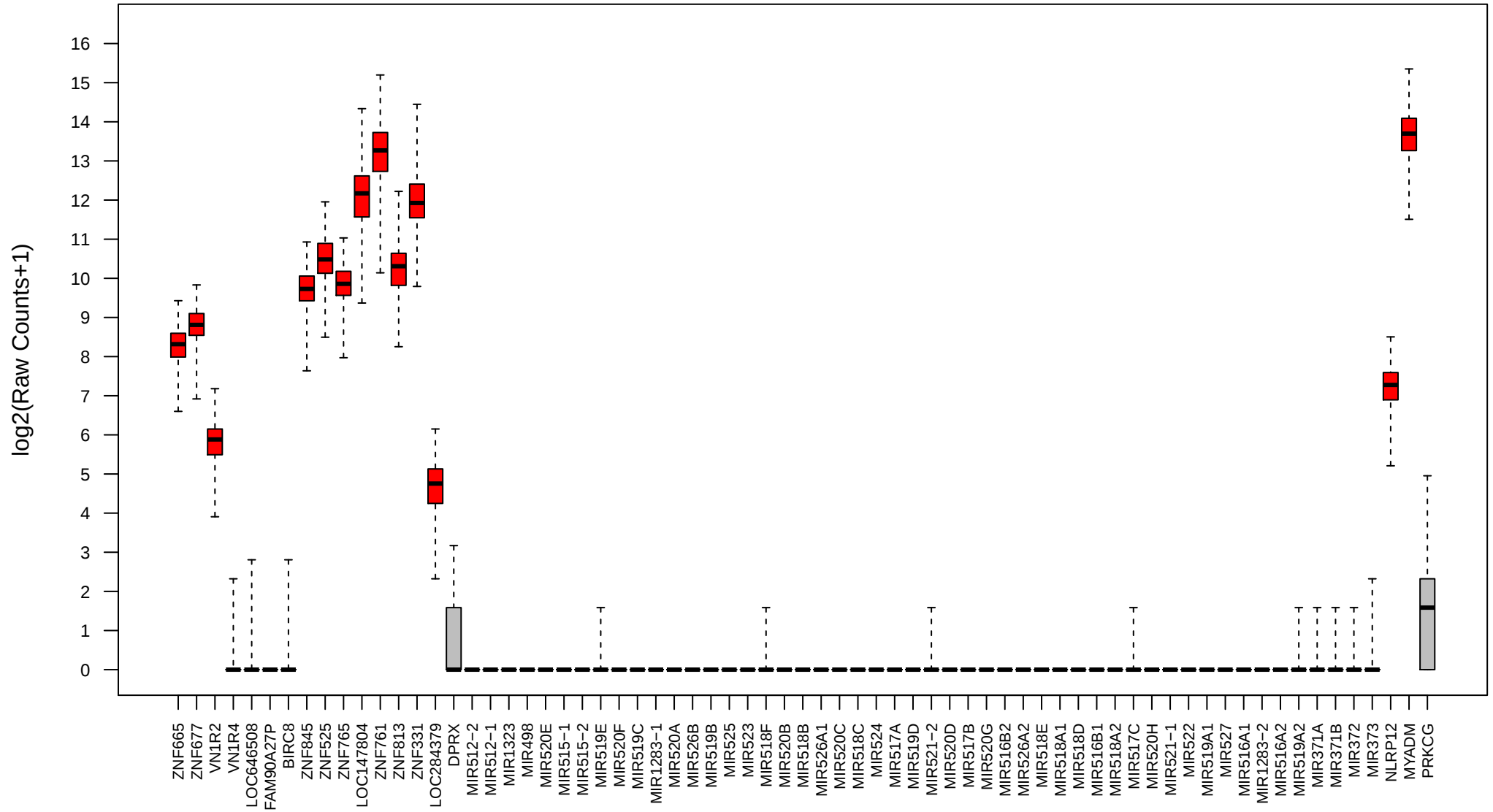
Total Genes: 109



Region87A, chr19.54697848.54897848

rs103294

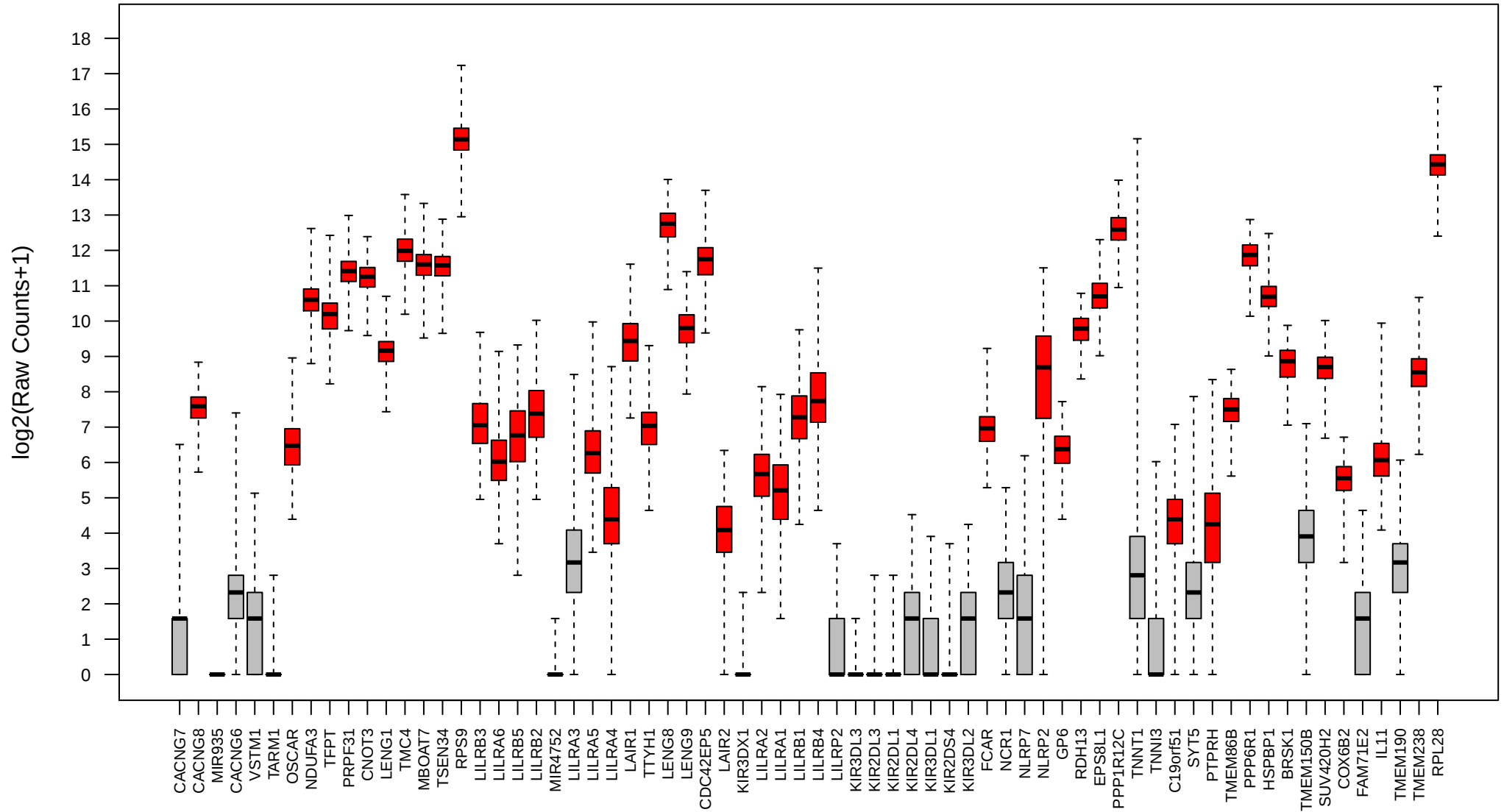
Total Genes: 137



Region87B, chr19.54697848.54897848

rs103294

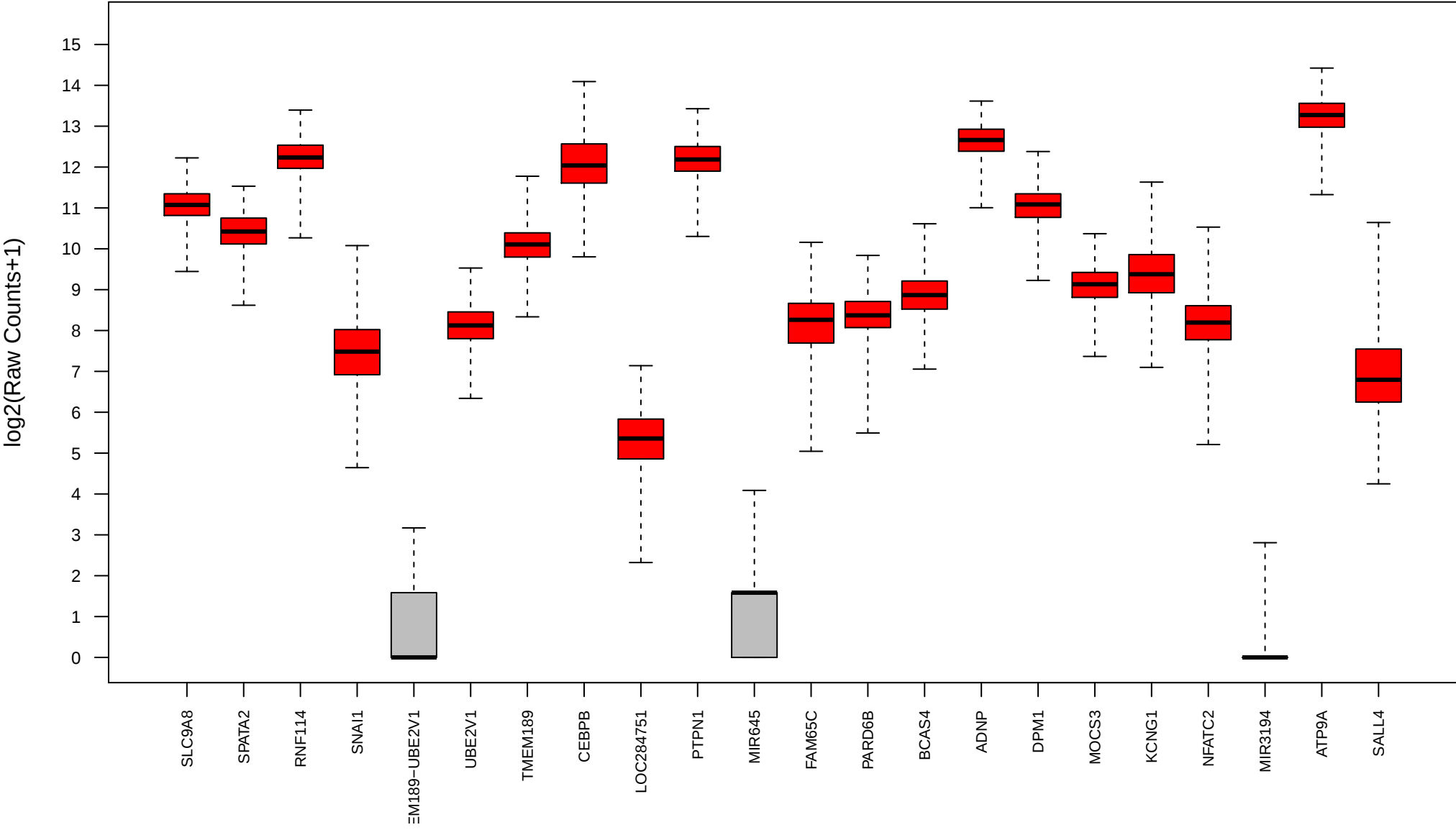
Total Genes: 137



Region88, chr20.49427922.49627922

rs12480328

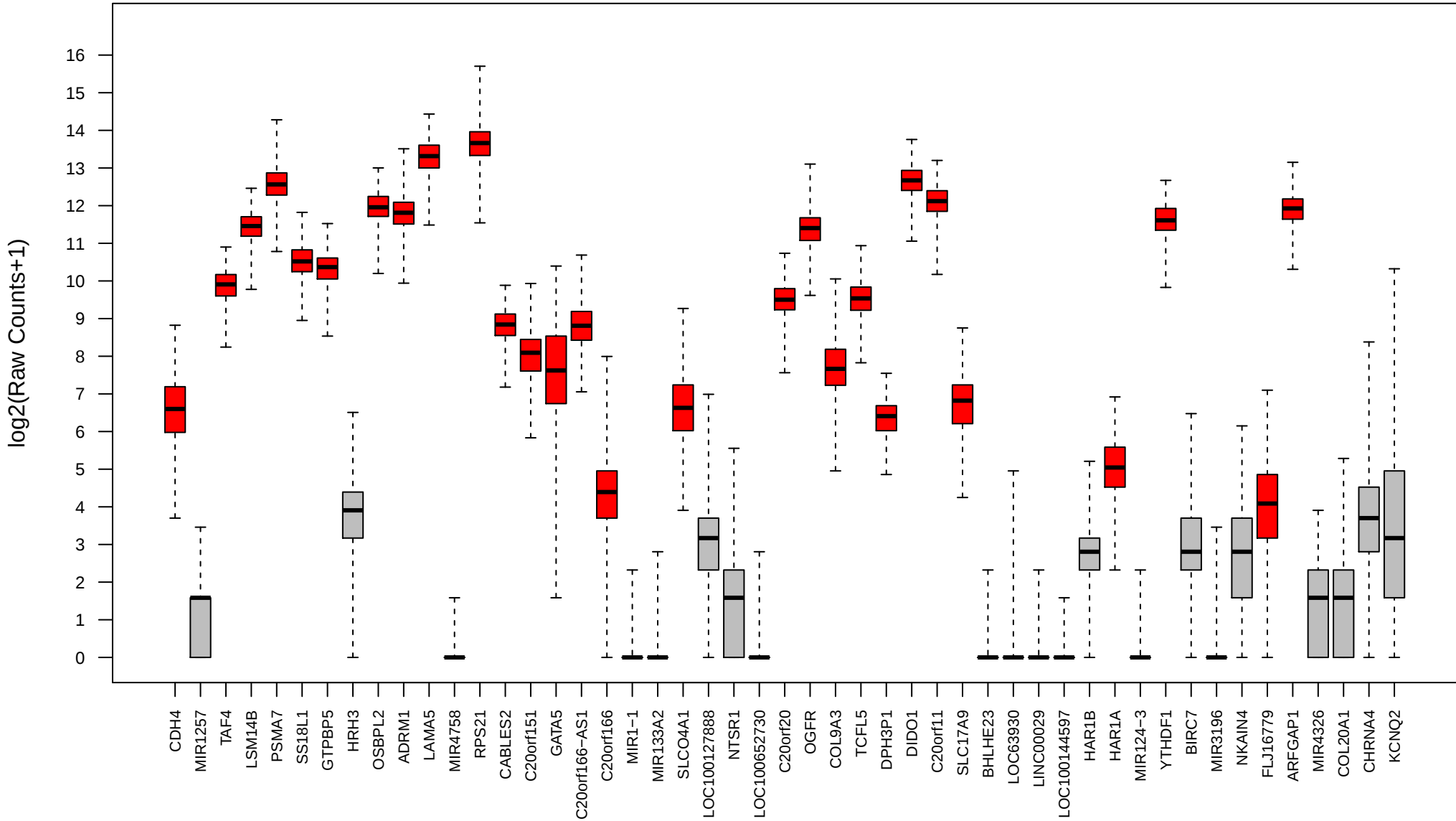
Total Genes: 22



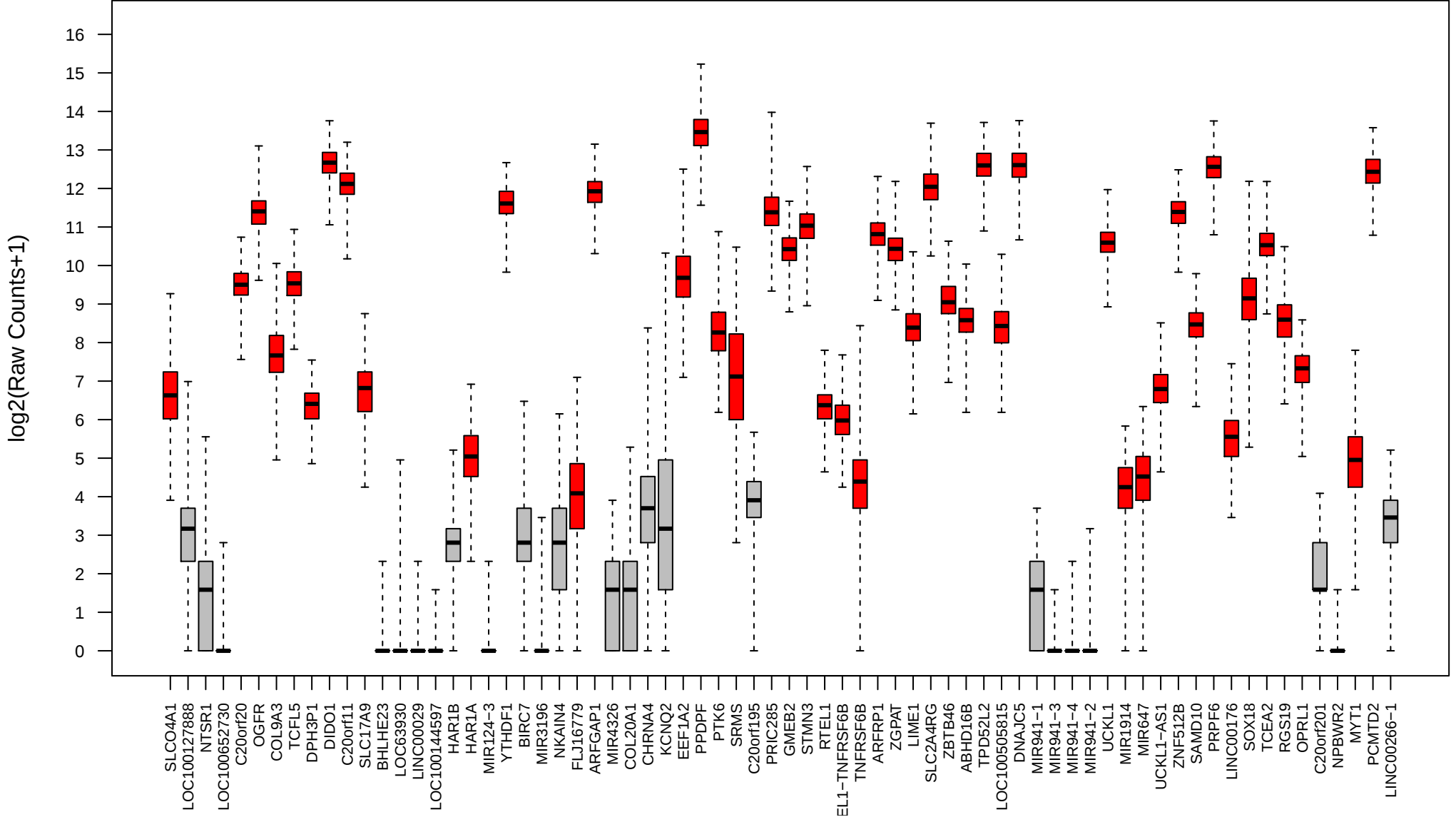
Region89, chr20.60915611.61115611

rs2427345

Total Genes: 49



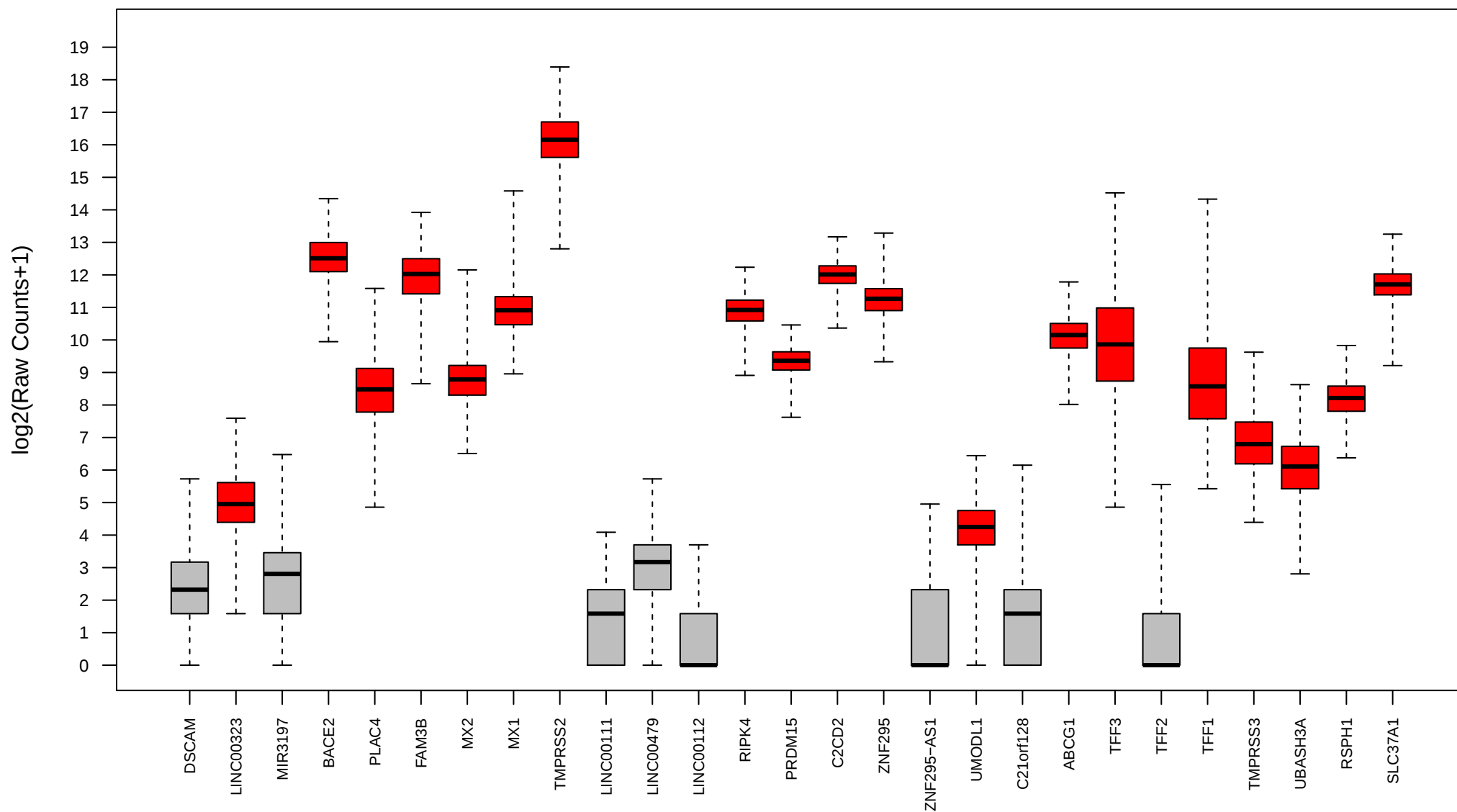
Region90, chr20.62262563.62462563  
rs6062509  
Total Genes: 70



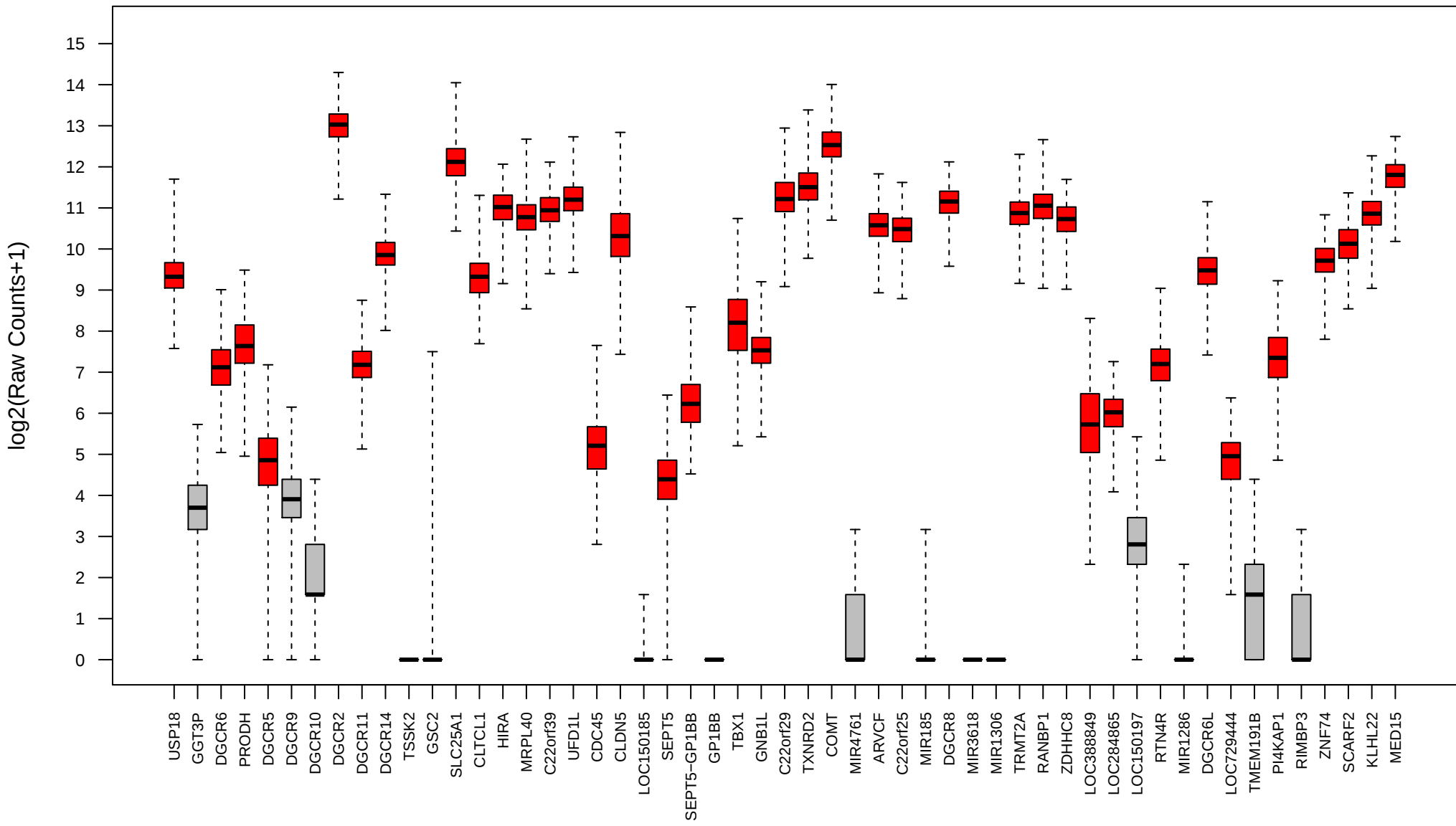
Region91, chr21.42801421.43001421

rs1041449

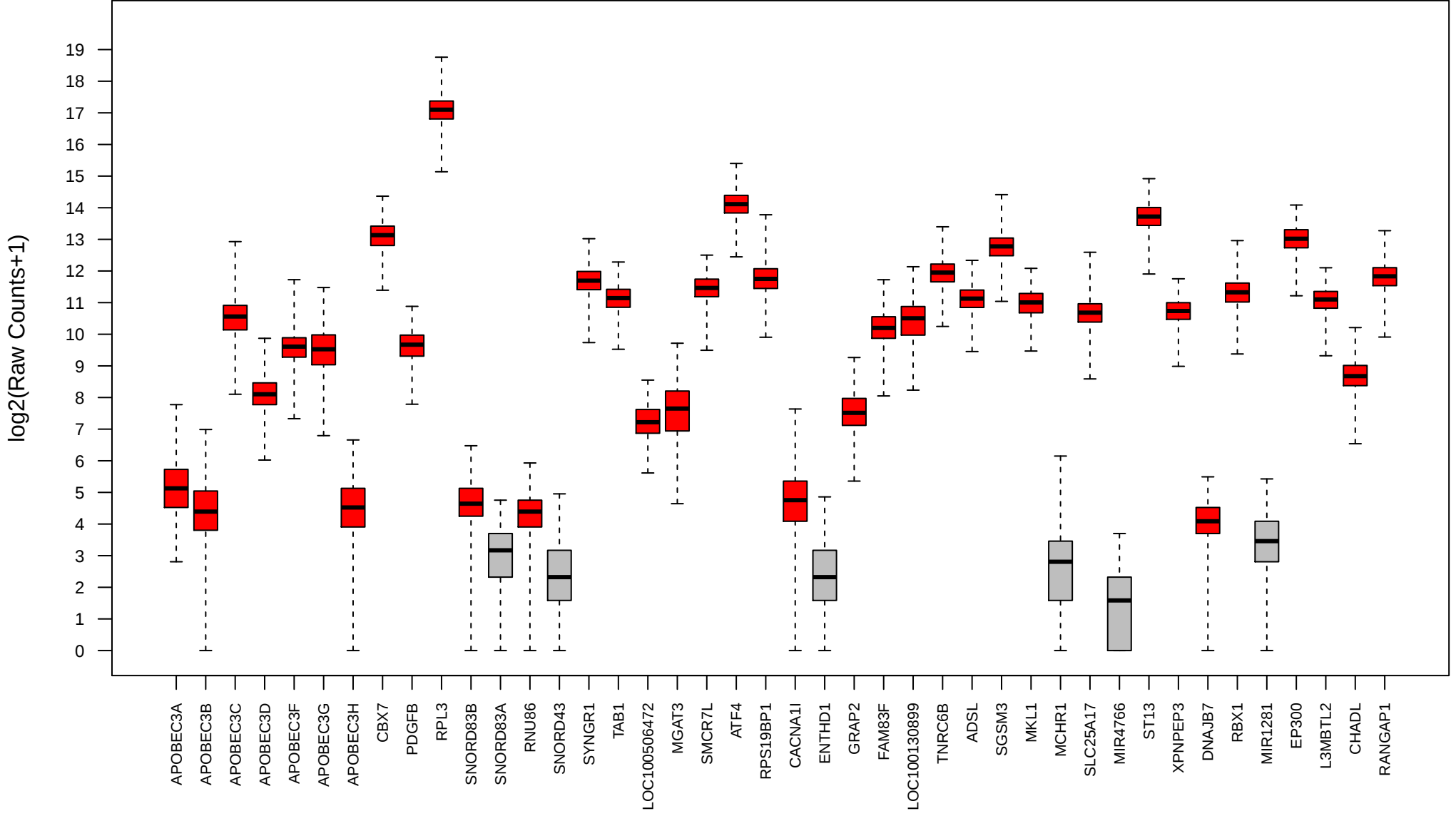
Total Genes: 27



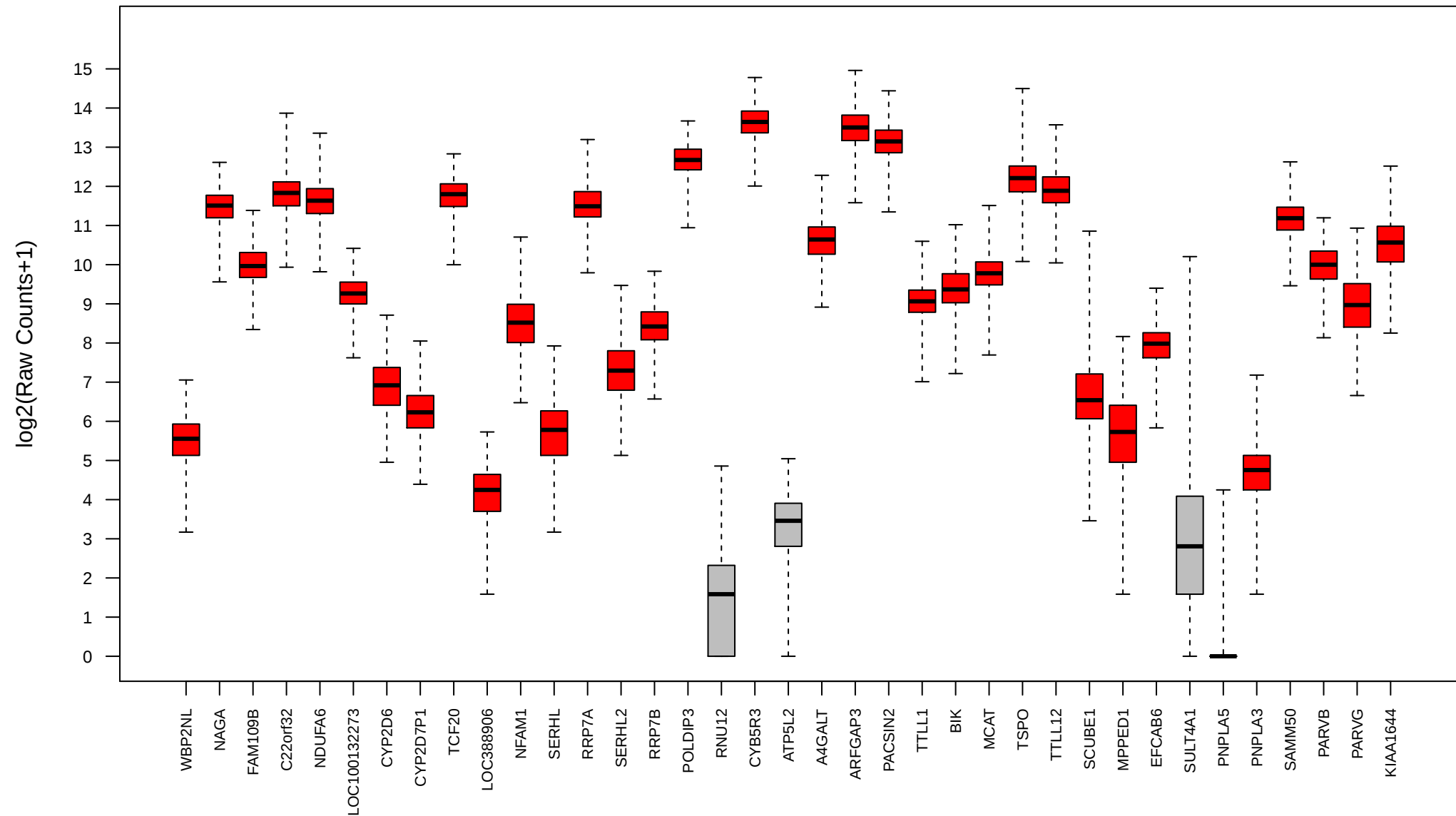
Region92, chr22.19657892.19857892  
rs2238776  
Total Genes: 53



Region93, chr22.40336973.40552119  
rs11704416,rs9623117  
Total Genes: 42



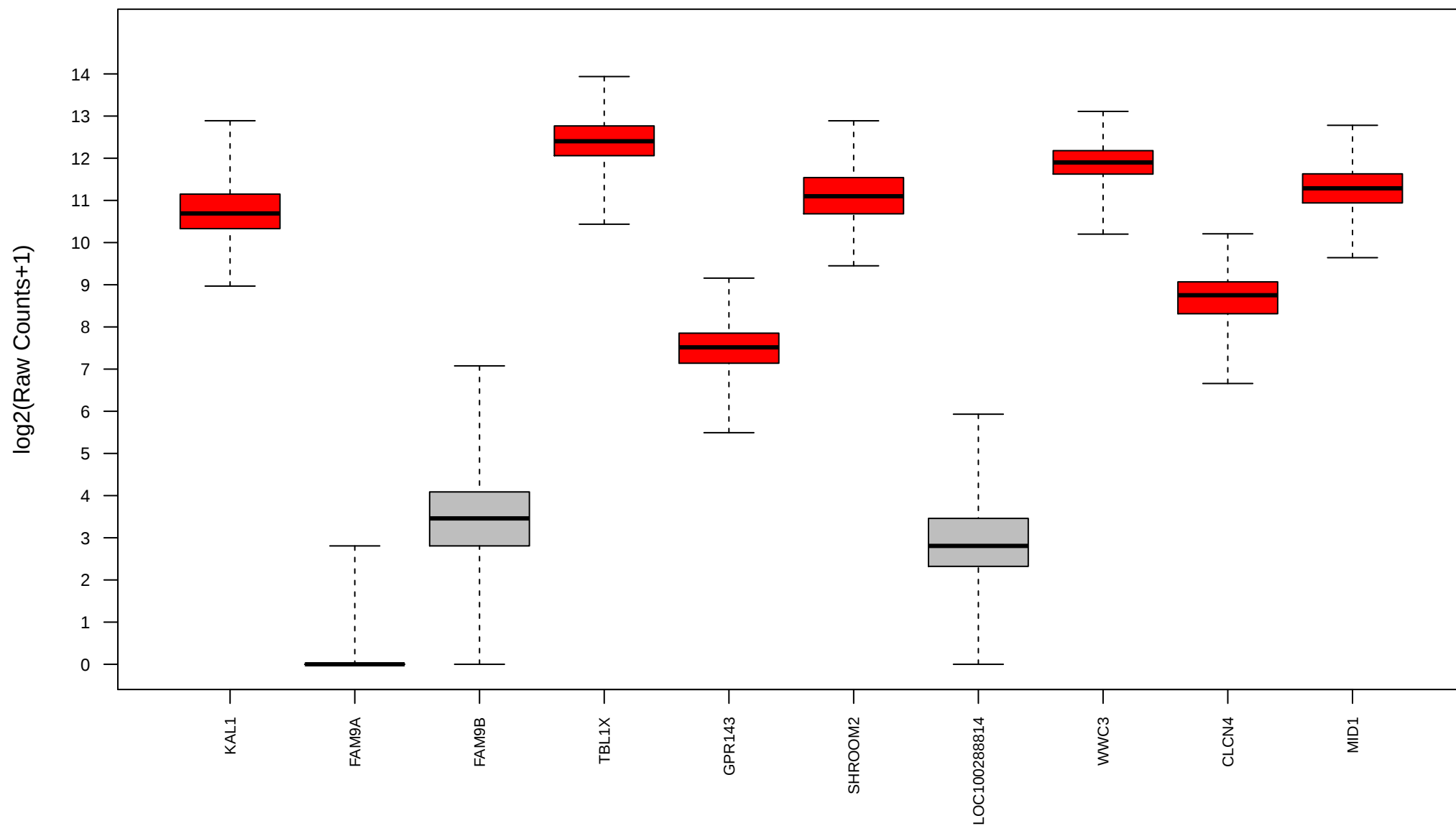
Region94, chr22.43400212.43618275  
rs5759167,rs742134  
Total Genes: 37



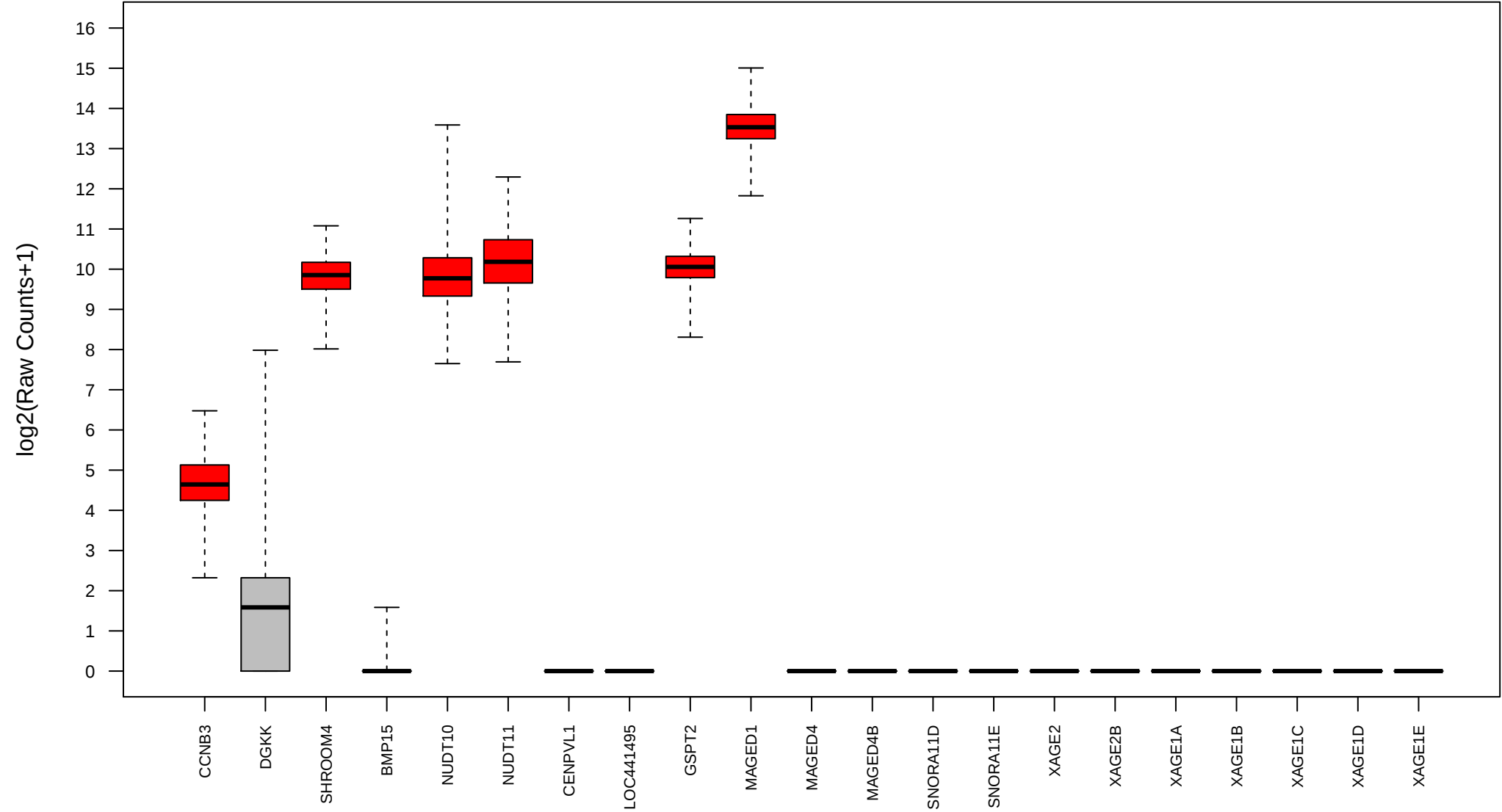
Region95, chr23.9714135.9914135

rs2405942

Total Genes: 10



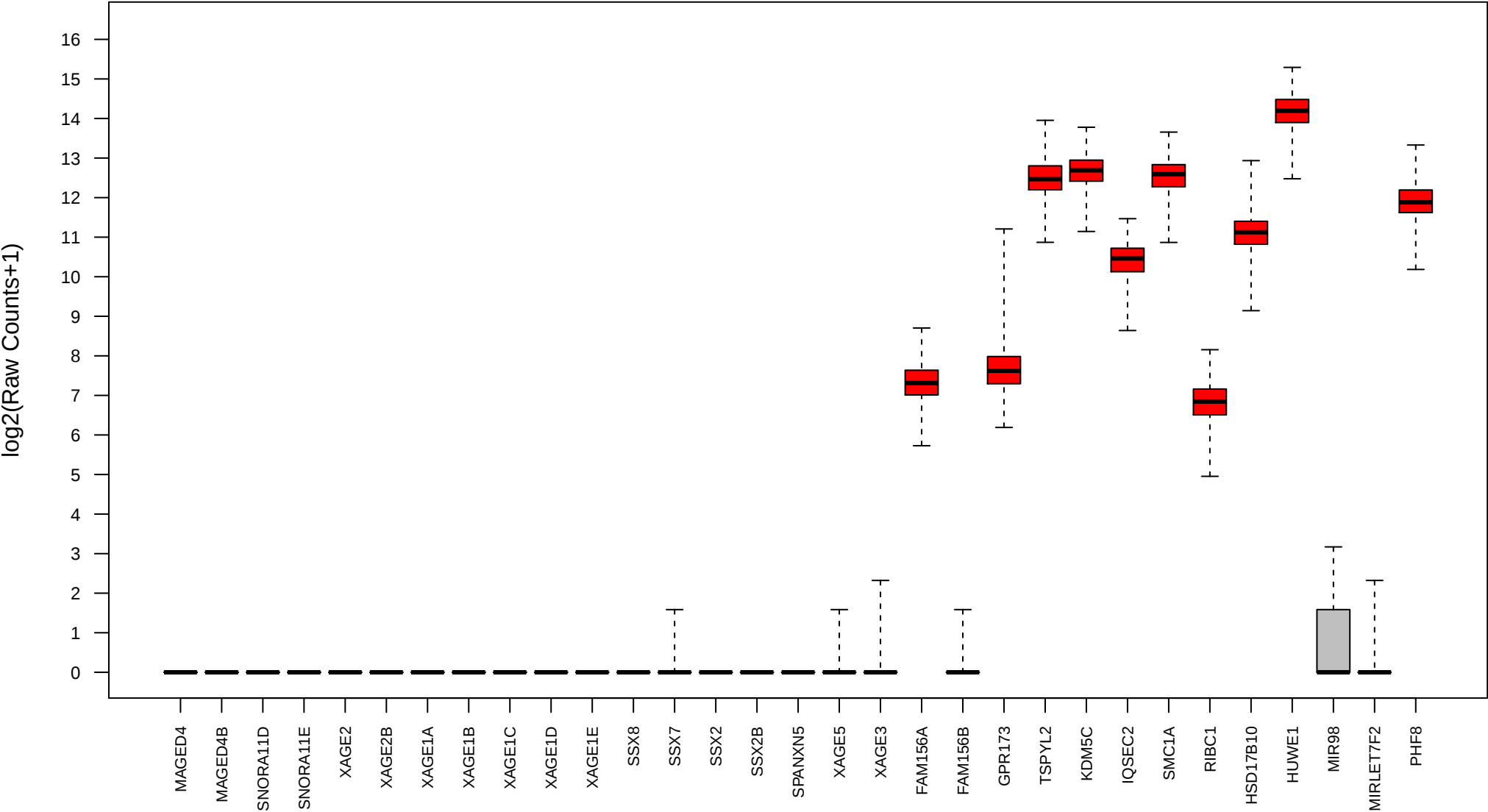
Region96, chr23.51110057.51341672  
rs1327301,rs5945572,rs5945619  
Total Genes: 21



Region97, chr23.52796949.52996949

rs2807031

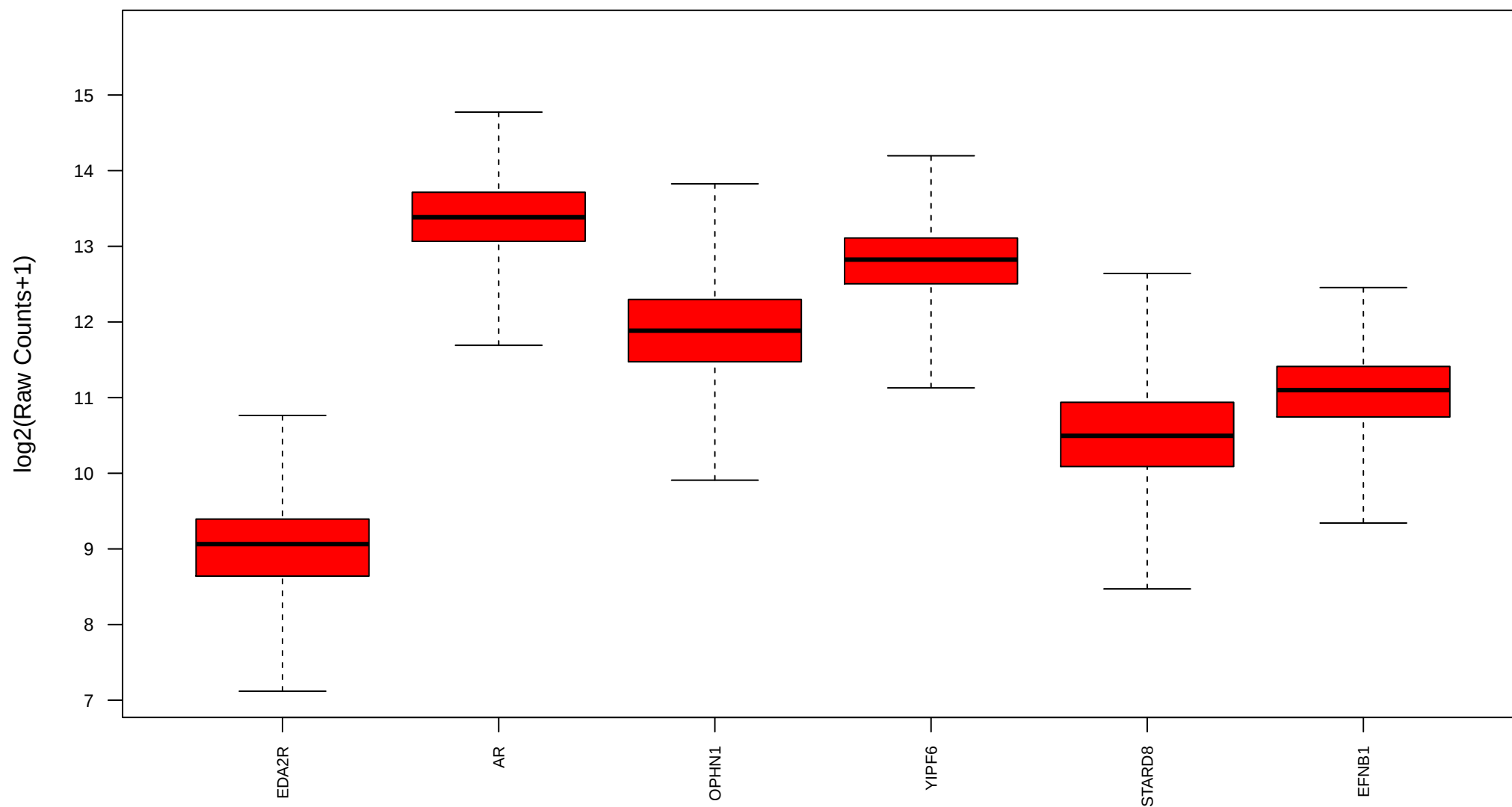
Total Genes: 31



Region98, chr23.66921550.67121550

rs5919432

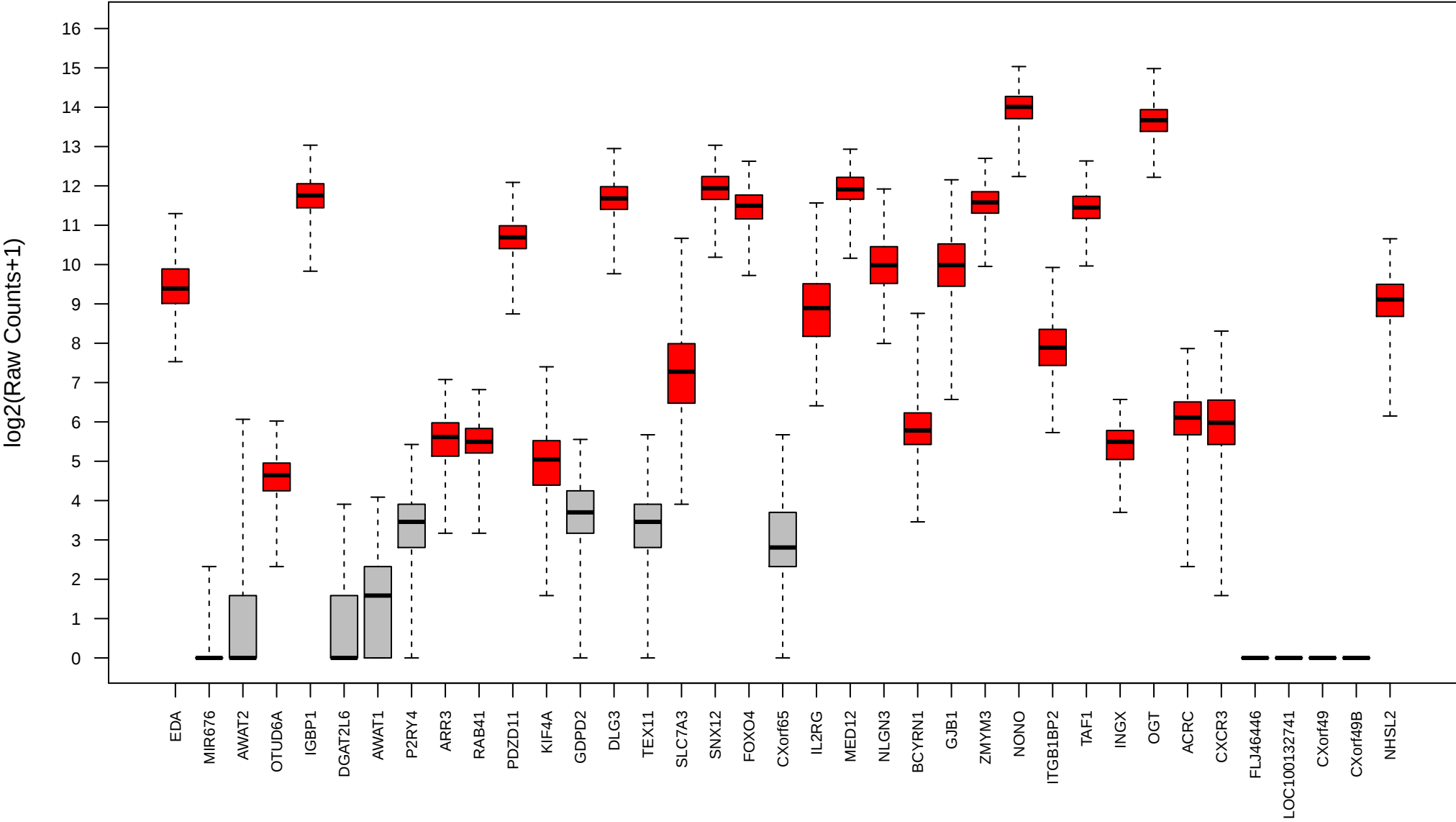
Total Genes: 6



Region99, chr23.70039850.70239850

rs6625711

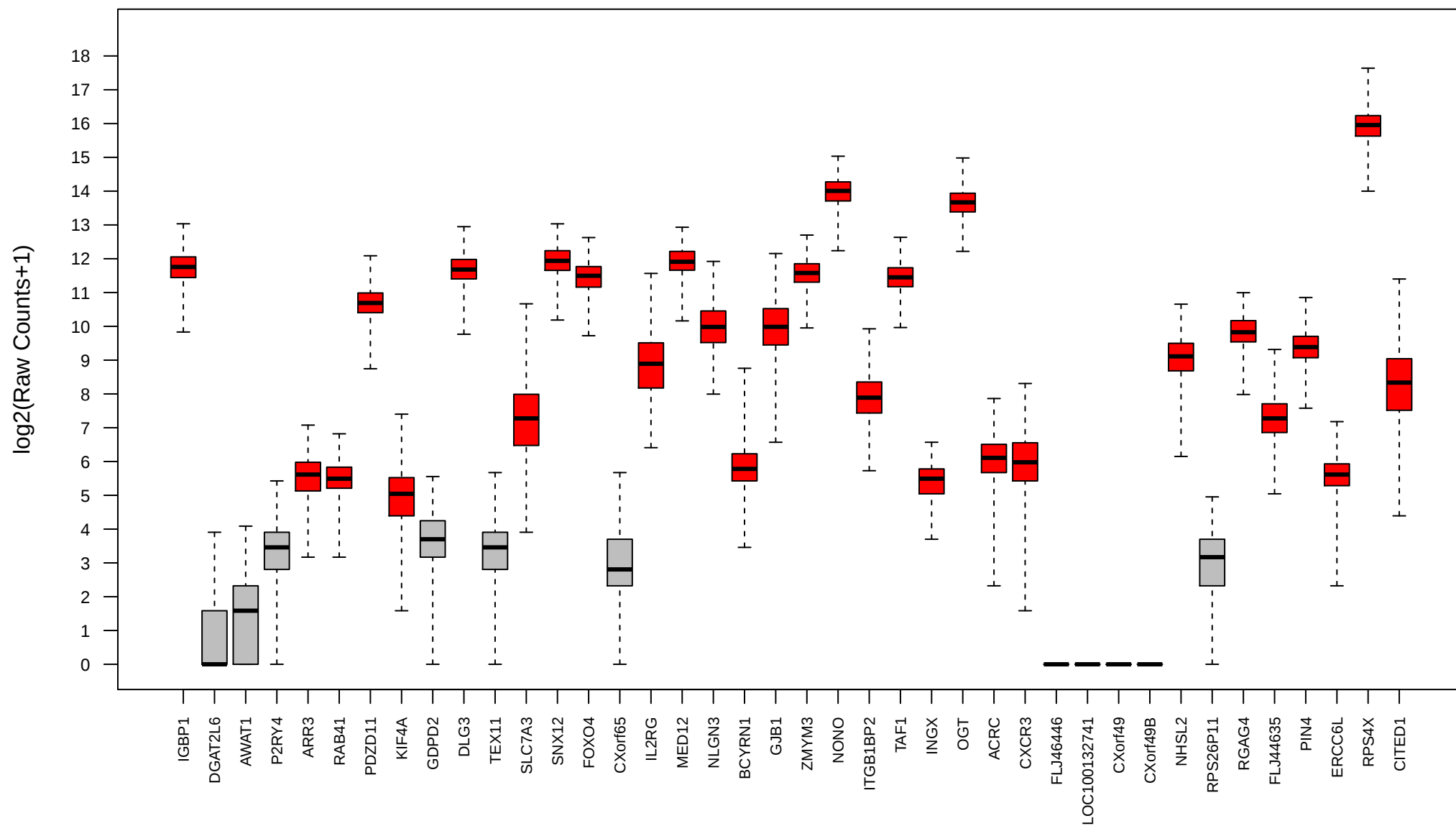
Total Genes: 37



Region100, chr23.70307983.70507983

rs4844289

Total Genes: 40

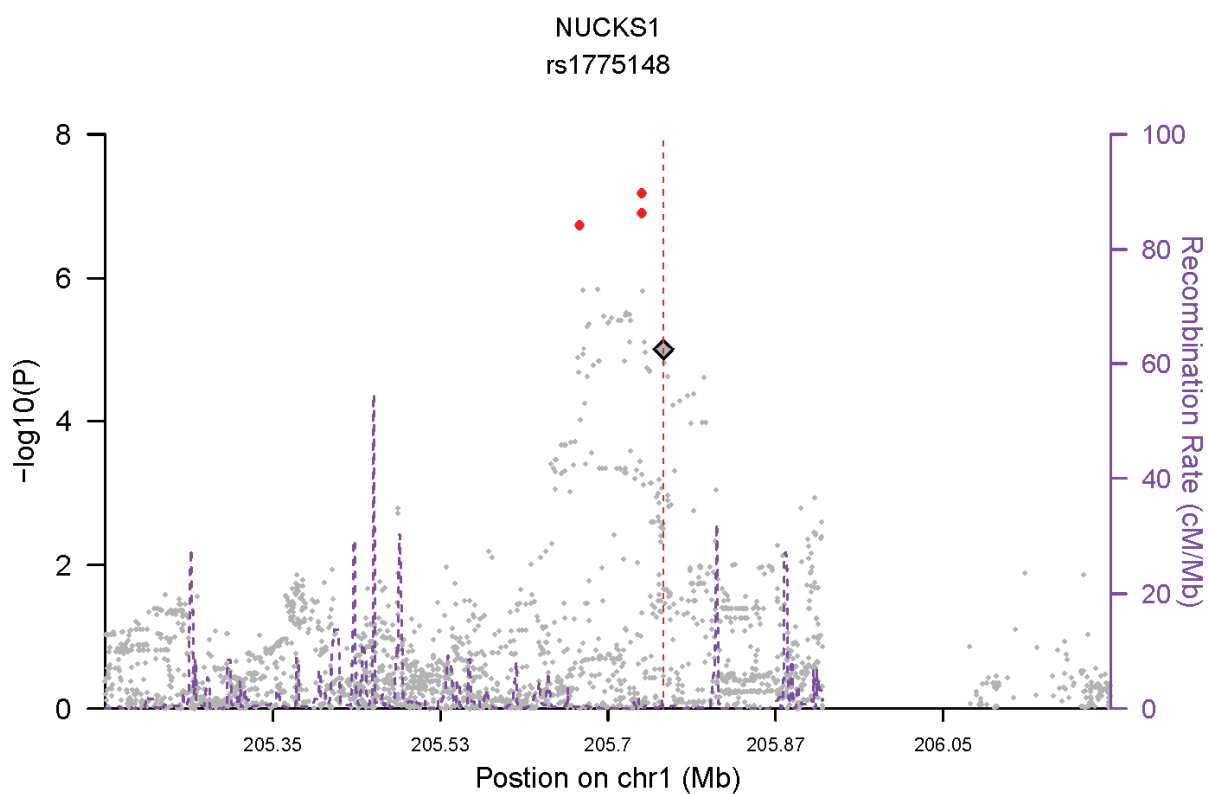


## Supplementary Figure 2 - Regional association plots for each of the genes placed in Group 1

Regional association plots display eQTL results for the target gene listed in the title and all SNPs in the target gene region. All PC risk-SNPs in the region are listed in the second line of the title. The x-axis shows the chromosomal position of the SNPs (with expressed genes in the region displayed below) and the y-axis is the  $-\log_{10}(\text{p-value})$  obtained by regressing normalized expression levels for the target gene on the number of minor alleles of each SNP genotype adjusted for histologic characteristics and 14 expression principal components. The PC risk-SNP position is indicated by a dotted red vertical line with the eQTL result displayed as a diamond. Colored points show all Bonferroni significant results with the color defined by LD between the SNP and the PC risk-SNP (LD  $r^2 > 0.5$  red, between 0.2 – 0.5 green, and  $\leq 0.2$  blue). If the region contains multiple PC risk-SNPs, the points are colored based on LD with the PC risk-SNP that is in highest LD with the eQTL peak associated SNP. The eQTL result for this PC risk-SNP is displayed as diamond, the data points for all of the other PC risk-SNPs are displayed as an open circle.

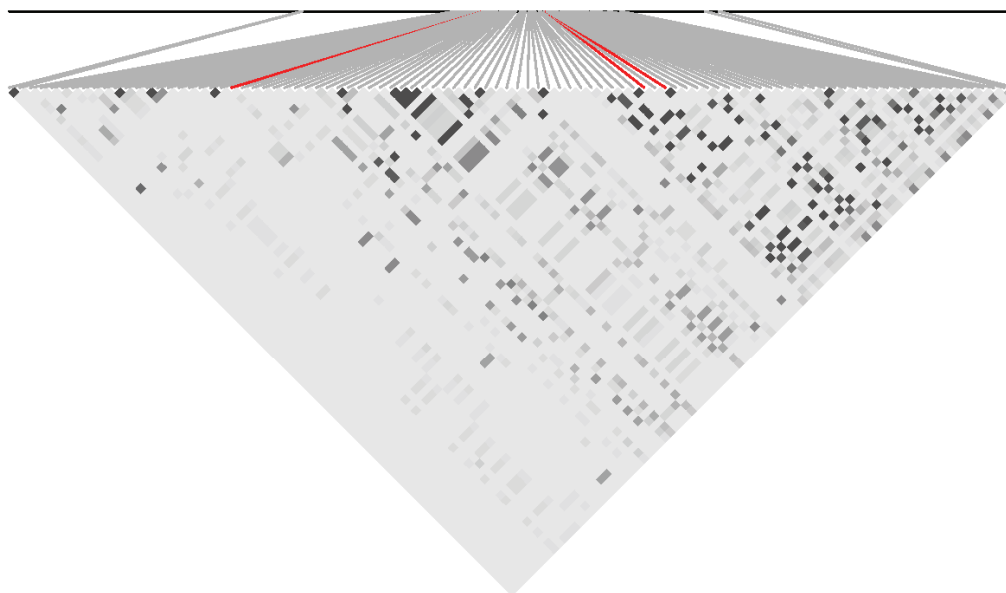
The table below the LD plot shows results for the peak-SNP (Result Type = Peak) and the most upstream and downstream SNPs (Result Type = Flanking) surpassing the Bonferroni significance threshold ( $P < 1.96\text{E-}07$  for primary analysis and  $P < 3.02\text{E-}08$  for second stage) as well as the top result for each PC risk SNP (Result Type = PC Risk) and, if a SNP in LD ( $r^2 > 0.5$ ) with the PC risk SNP has a stronger association than the PC risk SNP (i.e., lower p-value), then the LD SNP with the strongest association is also presented (Result Type = MaxLD). Finally, if all of these SNPs have a single direction of effect, e.g., all have positive beta coefficients thus increasing gene expression, and if any Bonferroni significant results were

observed in the opposite direction, then the strongest result among the opposite direction SNPs is also presented (Result Type = ReverseBeta).

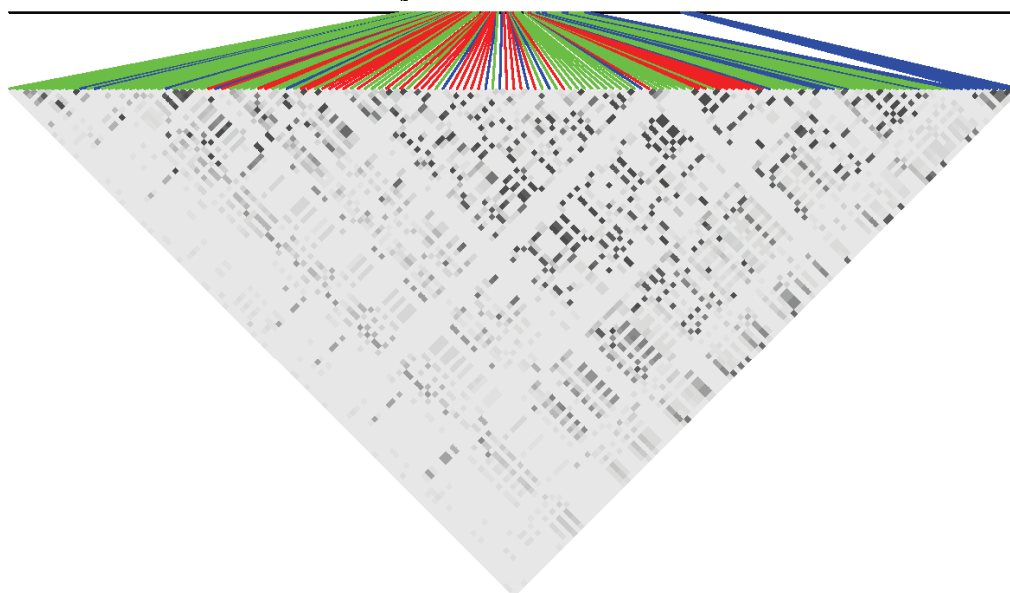
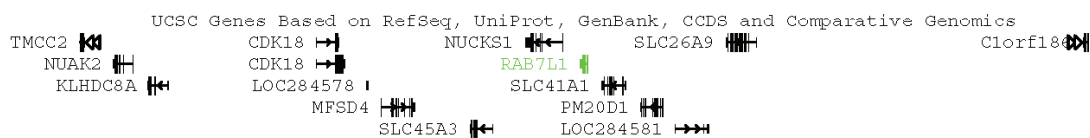
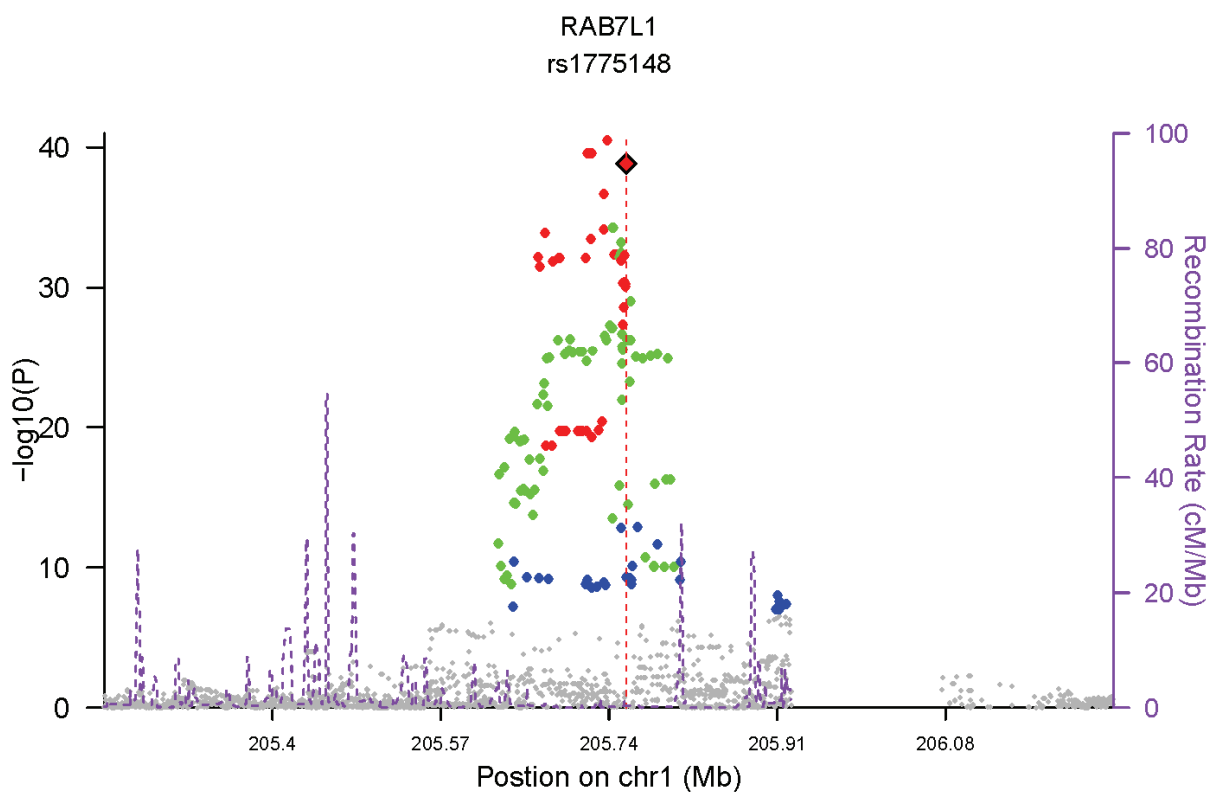


UCSC Genes Based on RefSeq, UniProt, GenBank, CCDS and Comparative Genomics

TMCC2 NUA2K KLHDC8A CDK18 CDK18 LOC284578 MFSD4 SLC45A3 NUCKS1 RAB7L1 SLC41A1 PM20D1 LOC284581 SLC26A9

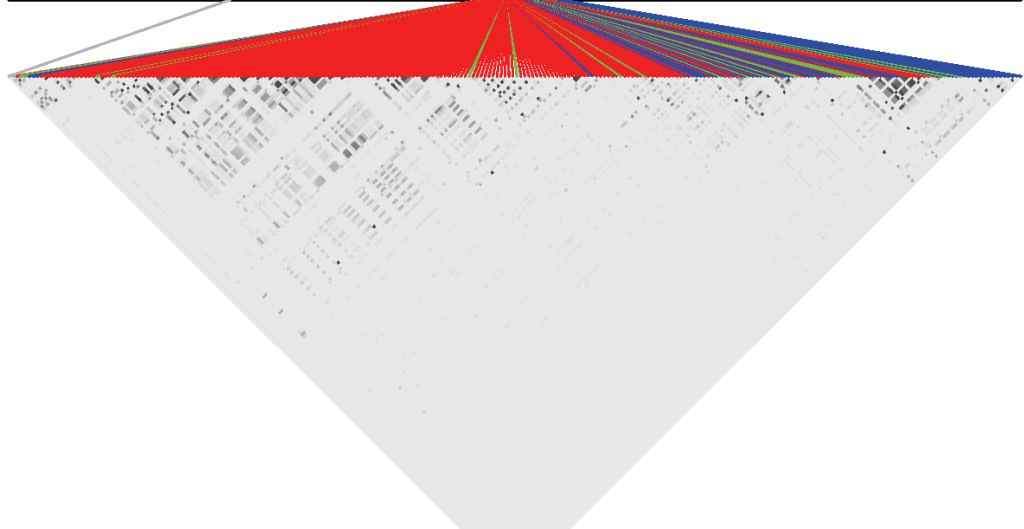
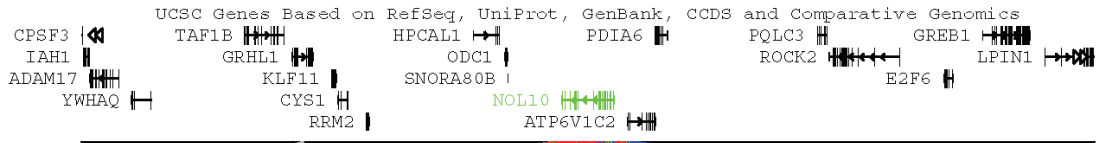
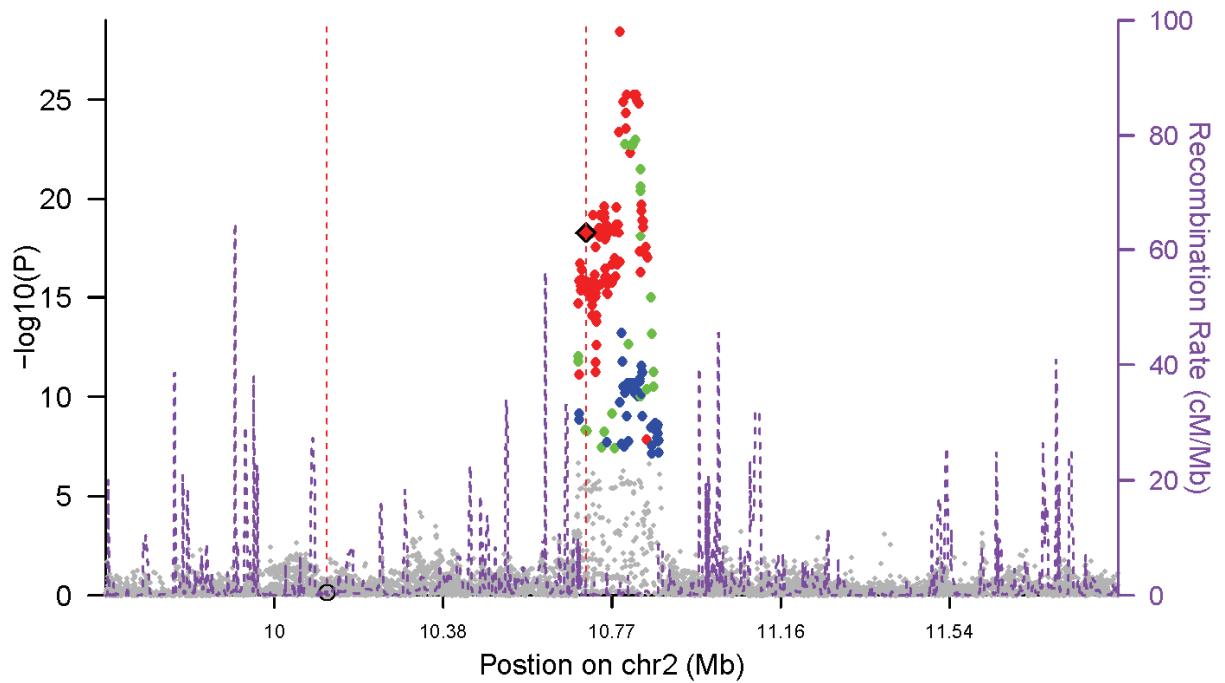


| rsID       | pos       | minor | major | MAF  | Beta  | p.value  | adj.pvalue | rs1775148 | imputed | Result Type |
|------------|-----------|-------|-------|------|-------|----------|------------|-----------|---------|-------------|
| rs11240554 | 205671644 | T     | C     | 0.34 | 0.027 | 1.84e-07 | 0.425      | 0.627     | 1       | Flanking    |
| rs2014202  | 205735612 | A     | G     | 0.38 | 0.027 | 6.73e-08 | -          | 0.773     | 1       | Peak        |
| rs7522056  | 205735891 | A     | G     | 0.38 | 0.027 | 1.27e-07 | 0.422      | 0.782     | 0       | Flanking    |
| rs1775148  | 205757824 | C     | T     | 0.43 | 0.023 | 1.00e-05 | 0.632      | 1.000     | 1       | PC Risk     |

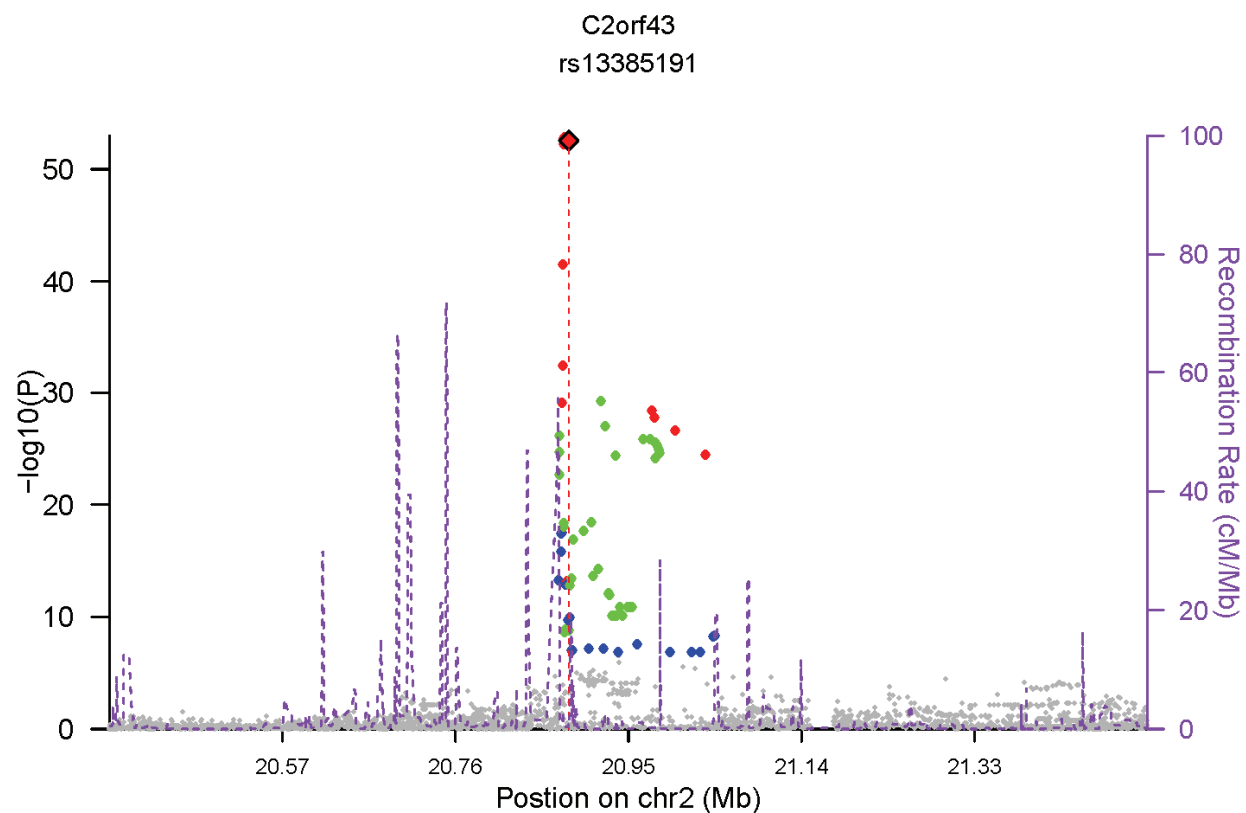


| rsID      | pos       | minor | major | MAF  | Beta   | p.value  | adj.p.value | rs1775148 | imputed | Result Type |
|-----------|-----------|-------|-------|------|--------|----------|-------------|-----------|---------|-------------|
| rs3761916 | 205630893 | G     | A     | 0.29 | -0.123 | 2.14e-12 | 9.33e-02    | 0.287     | 0       | Flanking    |
| rs708723  | 205739266 | C     | T     | 0.49 | -0.193 | 3.29e-41 | -           | 0.678     | 0       | Peak        |
| rs1775148 | 205757824 | C     | T     | 0.43 | -0.196 | 1.49e-39 | 2.33e-05    | 1.000     | 1       | PC Risk     |
| rs7415921 | 205910883 | G     | T     | 0.46 | 0.087  | 2.77e-08 | 8.20e-01    | <0.2      | 0       | Flanking    |

NOL10  
rs9287719, rs11902236

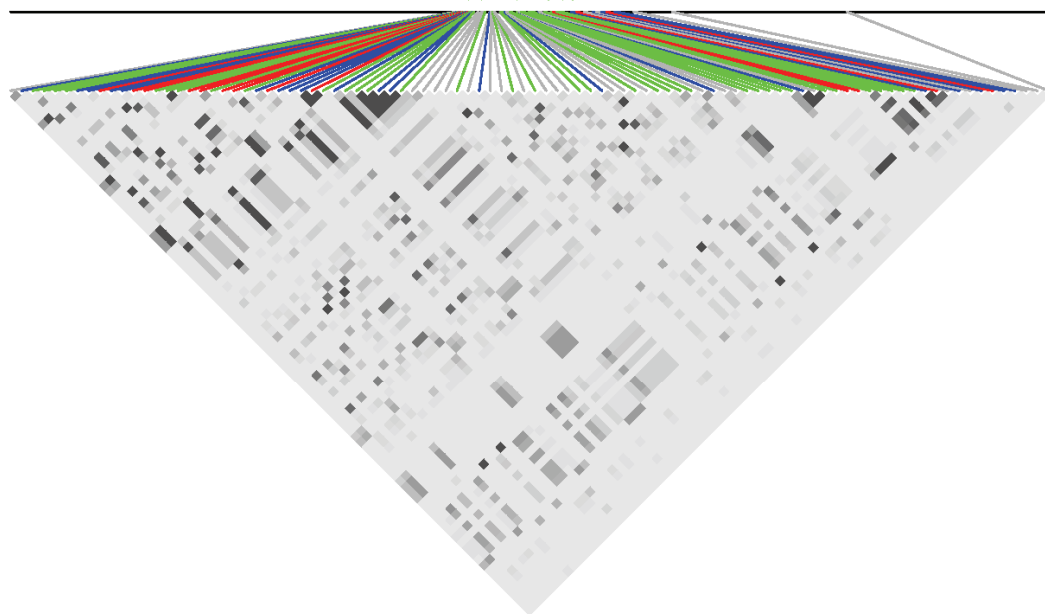


| rsID       | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs11902236 | rs9287719 | imputed | Result Type |
|------------|----------|-------|-------|------|--------|----------|------------|------------|-----------|---------|-------------|
| rs7581701  | 10093908 | T     | C     | 0.42 | 0.005  | 3.91e-01 | 0.413      | 0.520      | <0.2      | 0       | MaxLD       |
| rs11902236 | 10117868 | T     | C     | 0.29 | -0.003 | 6.70e-01 | 0.918      | 1.000      | <0.2      | 0       | PC Risk     |
| rs3929613  | 10694242 | A     | G     | 0.40 | 0.052  | 2.17e-15 | 0.703      | <0.2       | 0.551     | 1       | Flanking    |
| rs9287719  | 10710730 | C     | T     | 0.48 | -0.053 | 5.32e-19 | 0.958      | <0.2       | 1.000     | 1       | PC Risk     |
| rs7567304  | 10790029 | T     | C     | 0.42 | 0.067  | 3.70e-29 | -          | <0.2       | 0.629     | 1       | Peak        |
| rs4669615  | 10878511 | T     | G     | 0.21 | -0.045 | 1.57e-08 | 0.153      | <0.2       | <0.2      | 0       | Flanking    |

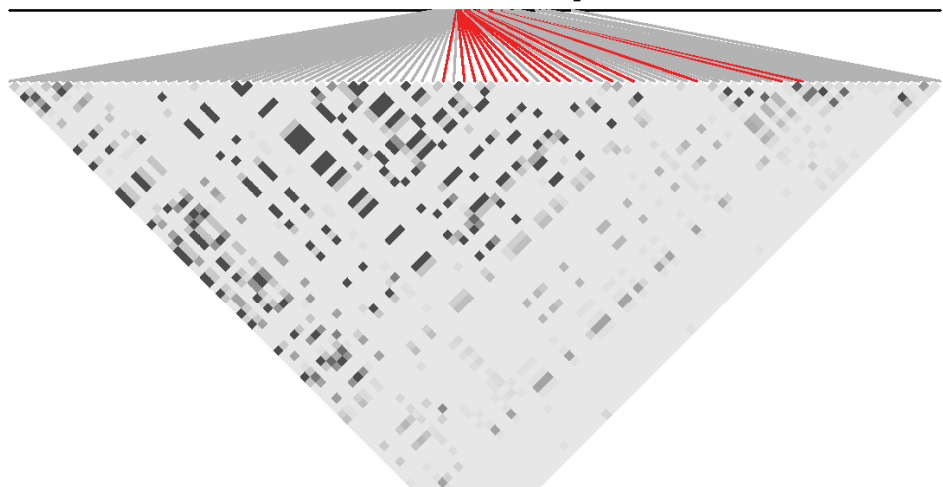
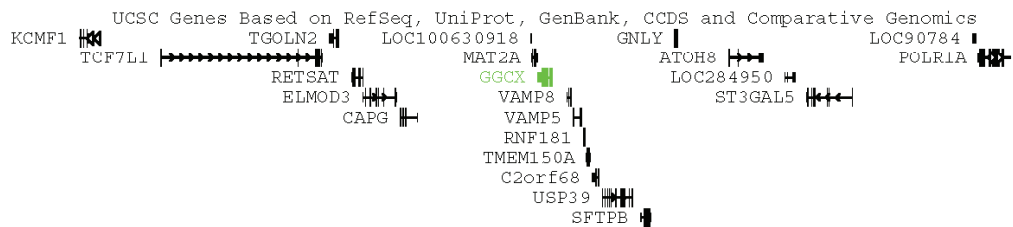
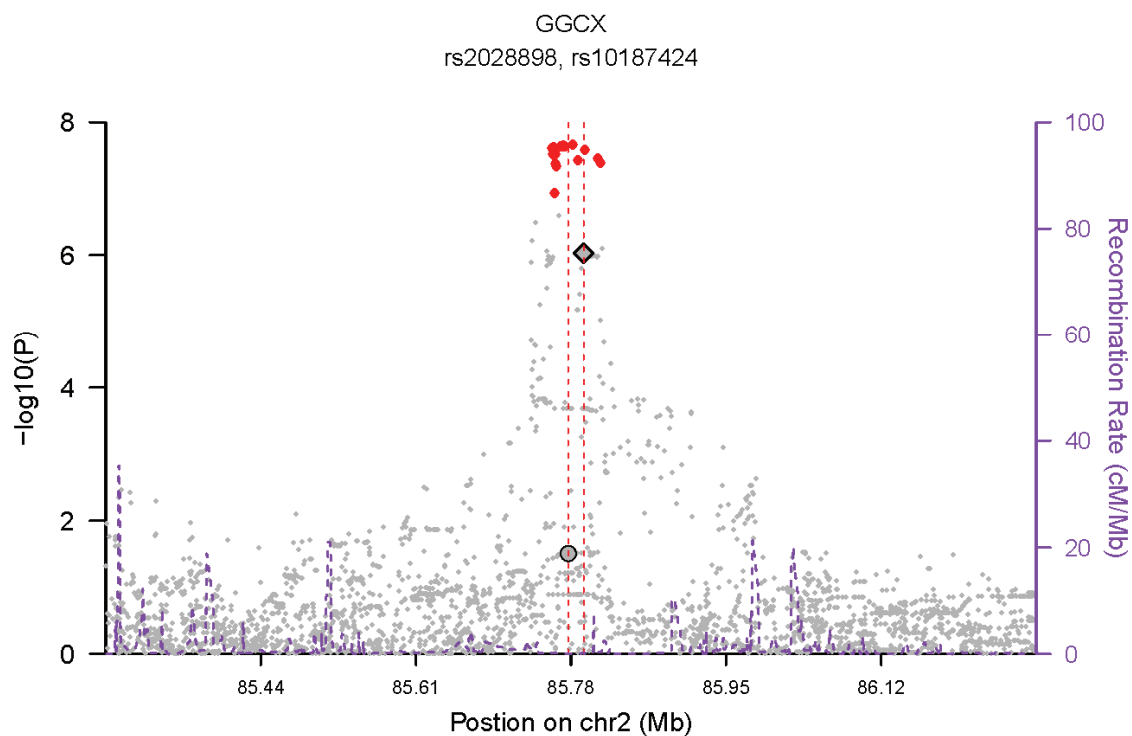


UCSC Genes Based on RefSeq, UniProt, GenBank, CCDS and Comparative Genomics

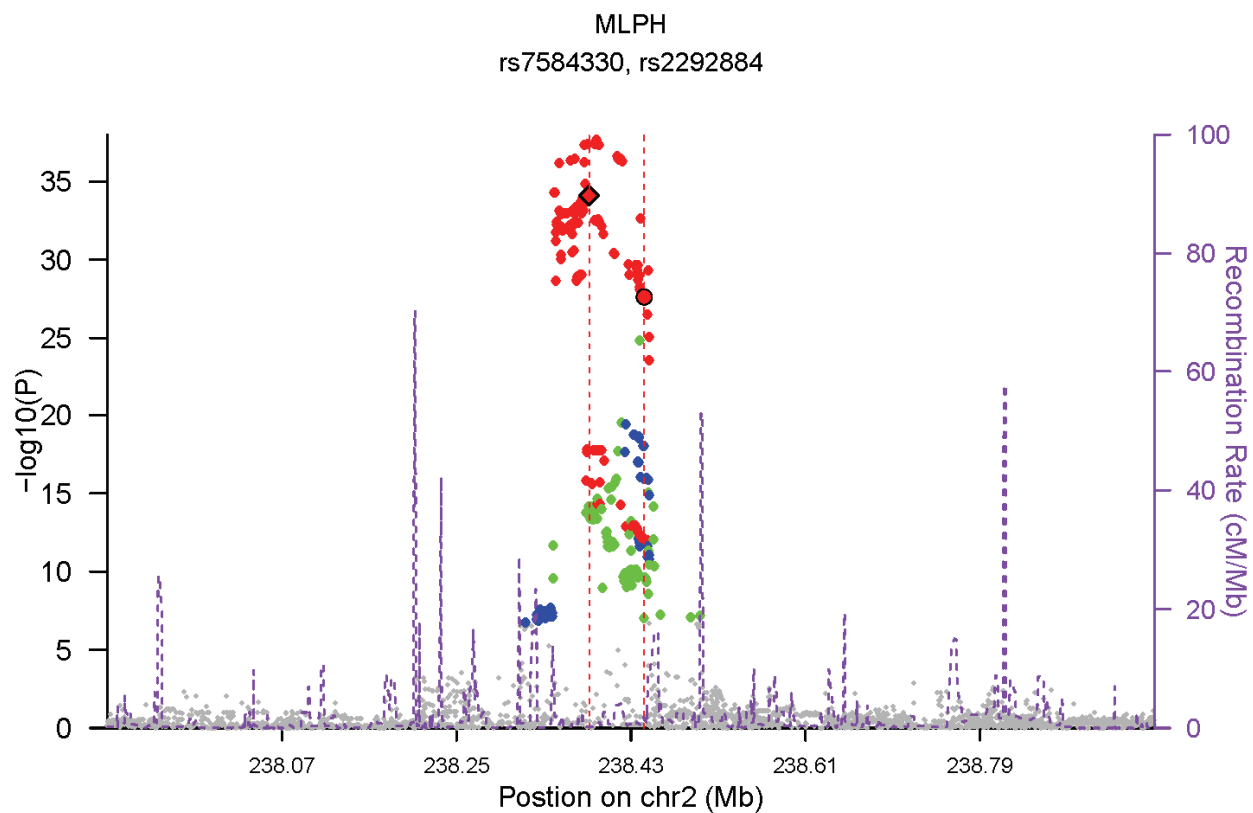
SDC1    PUM2    RHOB    HS1BP3    GDF7    C2orf43    APOB



| rsID       | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs13385191 | imputed | Result Type |
|------------|----------|-------|-------|------|--------|----------|------------|------------|---------|-------------|
| rs72784331 | 20877436 | A     | C     | 0.14 | 0.223  | 5.95e-14 | 1.32e-09   | <0.2       | 0       | Flanking    |
| rs10182643 | 20884586 | C     | G     | 0.24 | -0.364 | 1.54e-53 | -          | 0.992      | 1       | Peak        |
| rs13385191 | 20888265 | G     | A     | 0.24 | -0.363 | 2.84e-53 | 9.08e-01   | 1.000      | 1       | PC Risk     |
| rs12476956 | 21049129 | T     | C     | 0.43 | 0.130  | 4.87e-09 | 9.60e-01   | <0.2       | 1       | Flanking    |

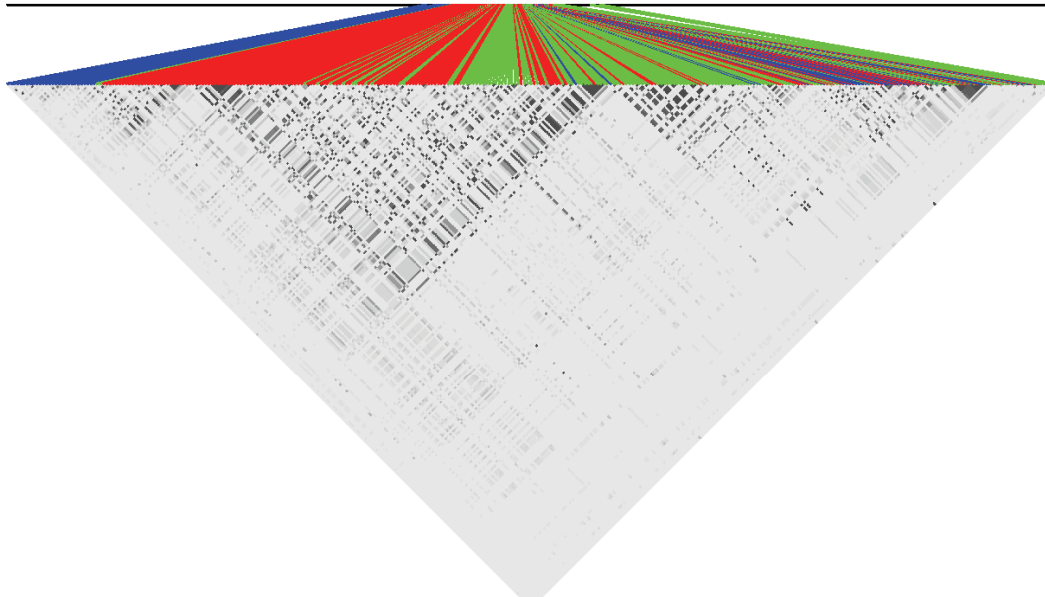


| rsID       | pos      | minor | major | MAF  | Beta  | p.value  | adj.pvalue | rs2028898 | rs10187424 | imputed | Result Type |
|------------|----------|-------|-------|------|-------|----------|------------|-----------|------------|---------|-------------|
| rs6735152  | 85754450 | C     | A     | 0.41 | 0.040 | 8.76e-07 | 0.7092     | 0.513     | 0.964      | 1       | MaxLD       |
| rs6731005  | 85760395 | T     | C     | 0.45 | 0.045 | 2.47e-08 | 0.7690     | 0.444     | 0.836      | 1       | Flanking    |
| rs2028898  | 85777270 | A     | G     | 0.27 | 0.020 | 3.06e-02 | 0.0284     | 1.000     | 0.536      | 1       | PC Risk     |
| rs6738645  | 85783128 | G     | T     | 0.45 | 0.045 | 2.20e-08 | -          | 0.461     | 0.855      | 1       | Peak        |
| rs10187424 | 85794297 | C     | T     | 0.41 | 0.040 | 9.24e-07 | 0.5112     | 0.536     | 1.000      | 0       | PC Risk     |
| rs55971080 | 85812746 | C     | T     | 0.45 | 0.044 | 4.08e-08 | 0.9761     | 0.454     | 0.836      | 1       | Flanking    |

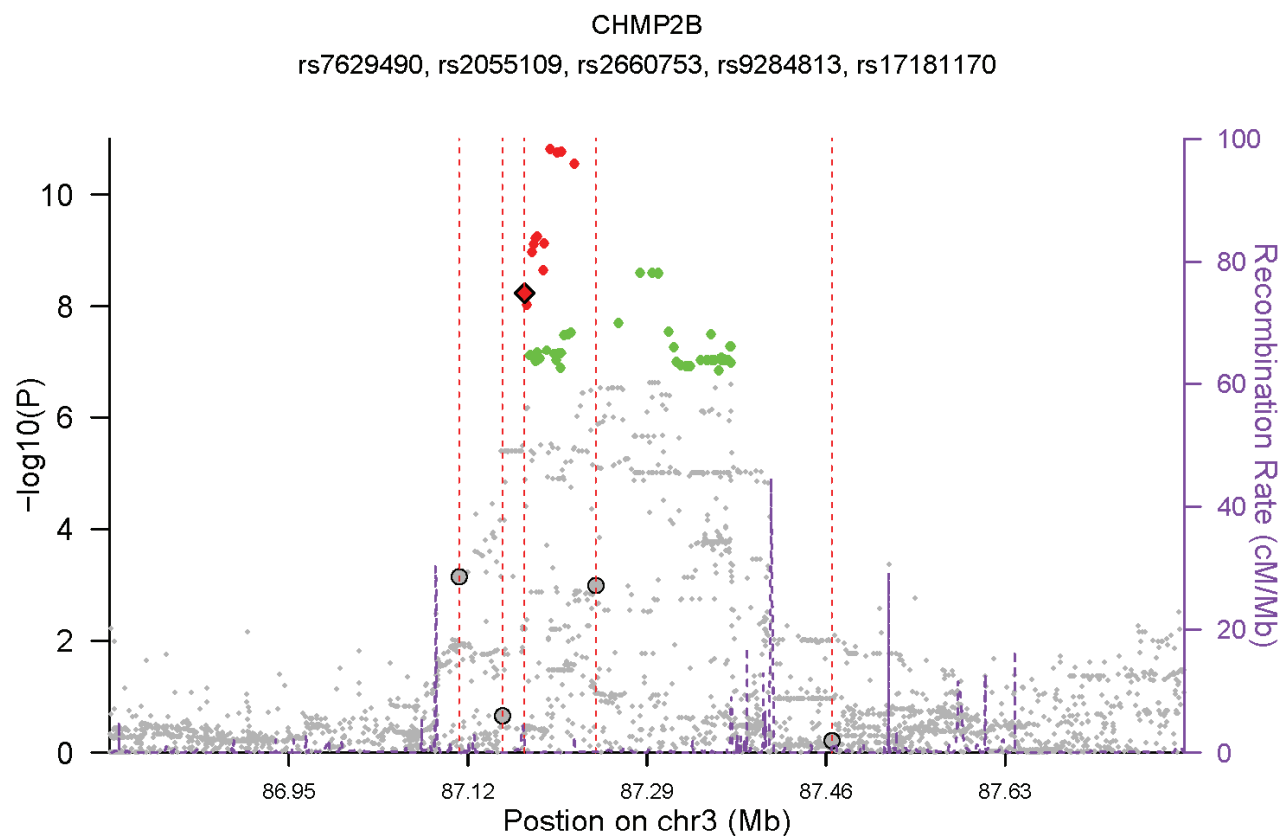


UCSC Genes Based on RefSeq, UniProt, GenBank, CCDS and Comparative Genomics

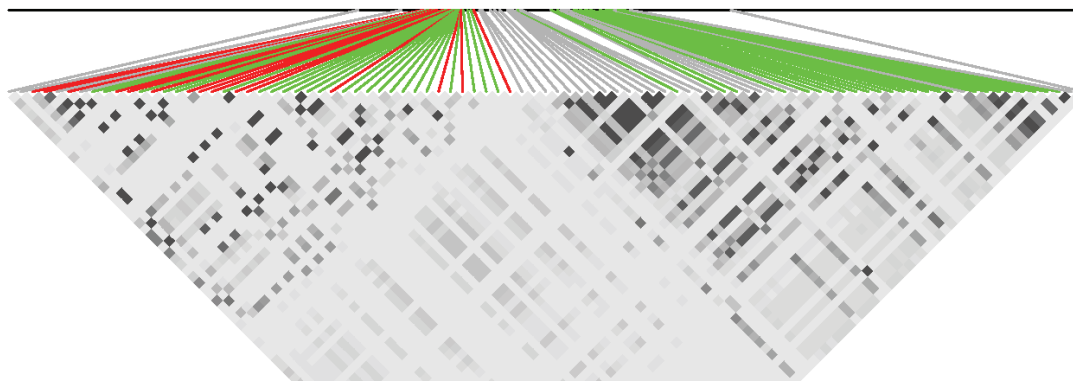
COPS8 COL6A3 MLPH RAB17 RBM44 RAMP1 UBE2F LRRFIP1



| rsID       | pos       | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs7584330 | rs2292884 | imputed | Result Type |
|------------|-----------|-------|-------|------|--------|----------|------------|-----------|-----------|---------|-------------|
| rs57027839 | 238337593 | G     | A     | 0.07 | -0.159 | 2.80e-08 | 0.05746    | <0.2      | <0.2      | 0       | Flanking    |
| rs7584330  | 238387228 | G     | A     | 0.28 | -0.188 | 8.10e-35 | 0.50733    | 1.000     | 0.690     | 0       | PC Risk     |
| rs58057291 | 238395479 | A     | T     | 0.25 | -0.203 | 2.22e-38 | -          | 0.890     | 0.736     | 1       | Peak        |
| rs2292884  | 238443226 | G     | A     | 0.27 | -0.167 | 2.24e-28 | 0.80923    | 0.690     | 1.000     | 0       | PC Risk     |
| rs867306   | 238454154 | A     | C     | 0.15 | -0.131 | 4.66e-11 | 0.00992    | 0.402     | 0.432     | 0       | Flanking    |

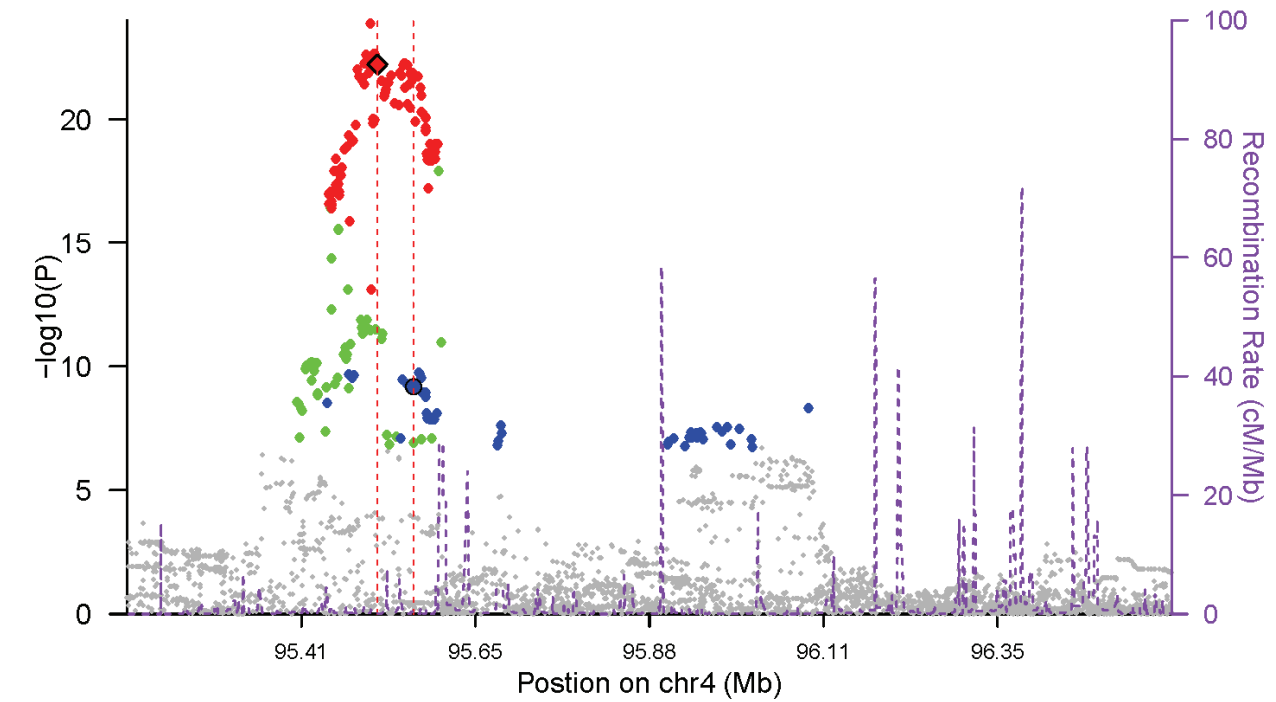


UCSC Genes Based on RefSeq, UniProt, GenBank, CCDS and Comparative Genomics  
VGLL3 CHMP2B



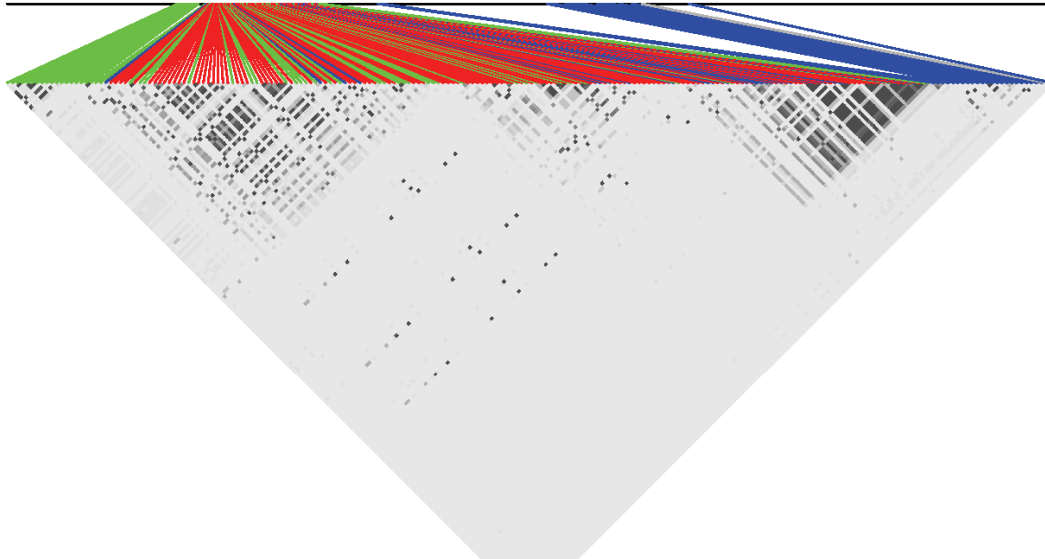
| rsID       | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs2660753 | rs9284813 | rs17181170 | rs7629490 | rs2055109 | imputed | Result Type |
|------------|----------|-------|-------|------|--------|----------|------------|-----------|-----------|------------|-----------|-----------|---------|-------------|
| rs2575748  | 87109709 | G     | A     | 0.17 | 0.026  | 9.99e-03 | 0.0240     | 0.614     | 0.569     | <0.2       | <0.2      | <0.2      | 1       | MaxLD       |
| rs2660753  | 87110674 | T     | C     | 0.11 | 0.040  | 7.03e-04 | 0.0463     | 1.000     | 0.243     | <0.2       | <0.2      | <0.2      | 0       | PC Risk     |
| rs1436642  | 87118806 | T     | C     | 0.11 | 0.041  | 5.95e-04 | 0.0468     | 0.992     | 0.247     | <0.2       | <0.2      | <0.2      | 1       | MaxLD       |
| rs1865866  | 87119543 | A     | G     | 0.11 | 0.041  | 5.95e-04 | 0.0468     | 0.992     | 0.247     | <0.2       | <0.2      | <0.2      | 0       | MaxLD       |
| rs9284813  | 87152169 | G     | A     | 0.14 | 0.013  | 2.16e-01 | 0.4088     | 0.243     | 1.000     | <0.2       | <0.2      | <0.2      | 0       | PC Risk     |
| rs7642887  | 87172632 | C     | T     | 0.49 | -0.044 | 5.55e-09 | 0.6900     | <0.2      | <0.2      | 1.000      | 0.204     | <0.2      | 1       | Flanking    |
| rs17181170 | 87173324 | A     | G     | 0.49 | -0.044 | 5.80e-09 | 0.7005     | <0.2      | <0.2      | 1.000      | 0.204     | <0.2      | 0       | PC Risk     |
| rs9856752  | 87198389 | A     | G     | 0.45 | 0.051  | 1.52e-11 | -          | <0.2      | <0.2      | 0.702      | 0.347     | <0.2      | 1       | Peak        |
| rs7629490  | 87241497 | T     | C     | 0.36 | 0.025  | 1.01e-03 | 0.4748     | <0.2      | <0.2      | 0.204      | 1.000     | <0.2      | 0       | PC Risk     |
| rs17024046 | 87263497 | T     | C     | 0.37 | 0.042  | 2.02e-08 | 0.1583     | <0.2      | <0.2      | 0.324      | 0.714     | <0.2      | 0       | MaxLD       |
| rs11127975 | 87311731 | C     | T     | 0.40 | 0.042  | 2.88e-08 | 0.3773     | <0.2      | <0.2      | 0.371      | <0.2      | <0.2      | 1       | Flanking    |
| rs2055109  | 87467332 | G     | A     | 0.25 | -0.005 | 6.03e-01 | 0.7888     | <0.2      | <0.2      | <0.2       | <0.2      | 1.000     | 0       | PC Risk     |
| rs9840394  | 87582728 | T     | G     | 0.30 | -0.018 | 3.44e-02 | 0.4246     | <0.2      | <0.2      | <0.2       | <0.2      | 0.611     | 0       | MaxLD       |
| rs9858431  | 87583001 | A     | G     | 0.30 | -0.018 | 3.44e-02 | 0.4246     | <0.2      | <0.2      | <0.2       | <0.2      | 0.611     | 1       | MaxLD       |

BMPR1B  
rs12500426, rs17021918



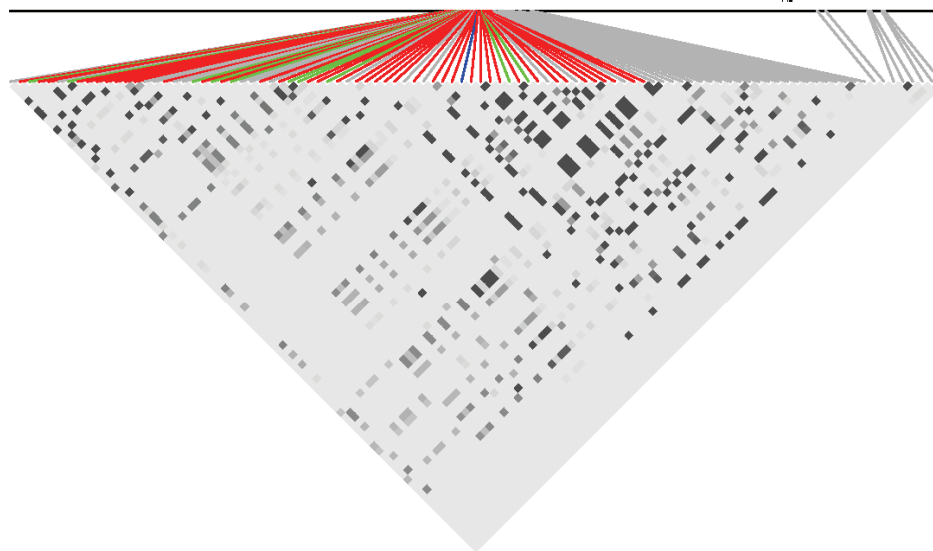
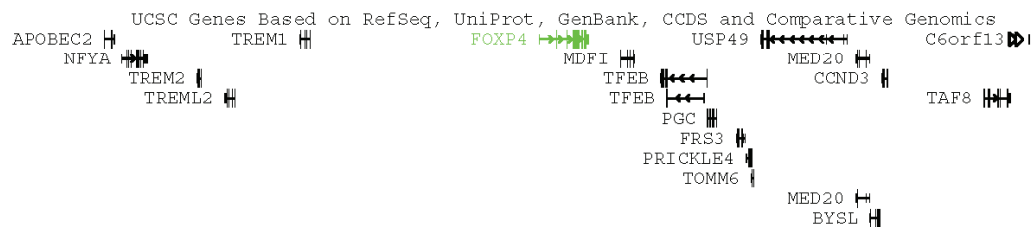
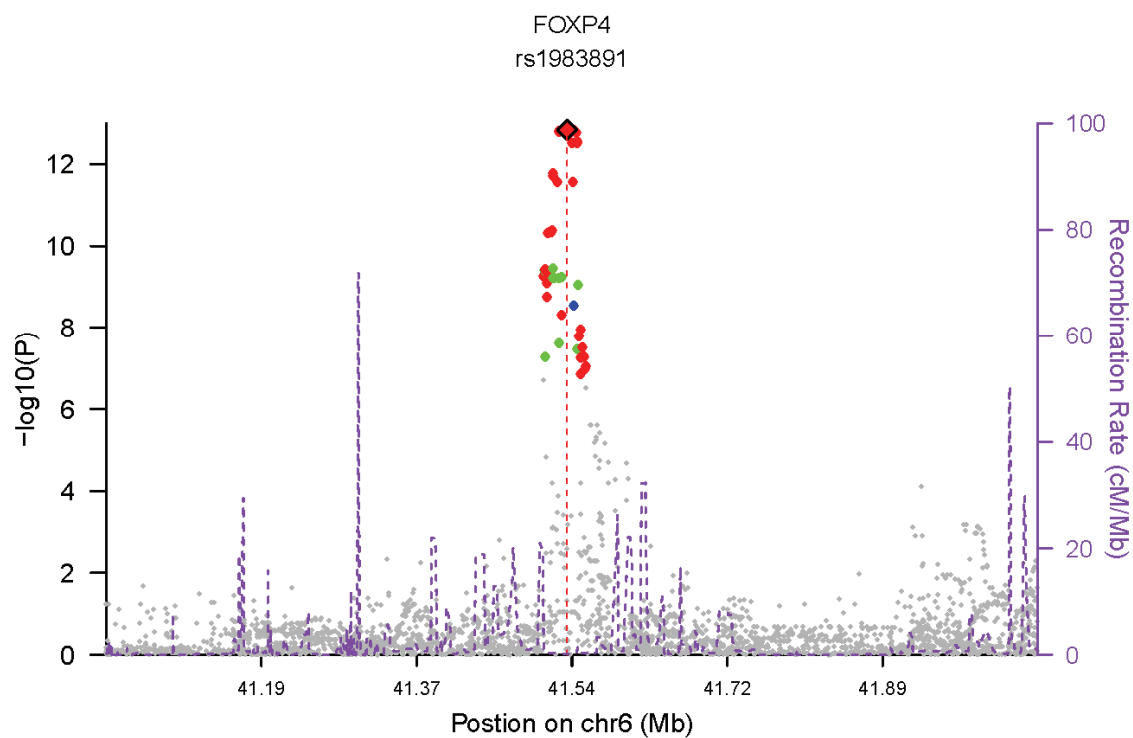
UCSC Genes Based on RefSeq, UniProt, GenBank, CCDS and Comparative Genomics

SMARCD1 HPGDS PDLIM5 BMPR1B UNC5C

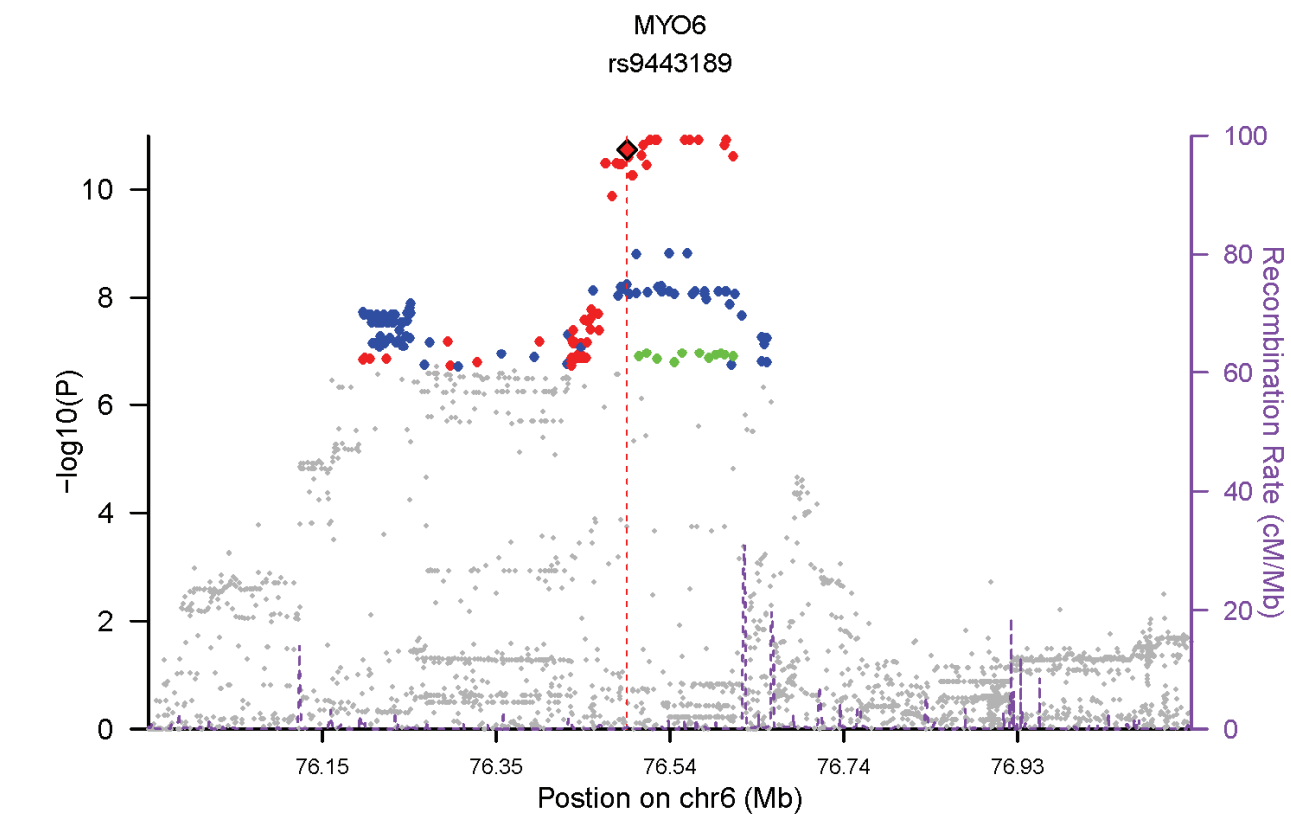


| rsID       | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs12500426 | rs17021918 | imputed | Result Type |
|------------|----------|-------|-------|------|--------|----------|------------|------------|------------|---------|-------------|
| rs2438140  | 95407821 | C     | T     | 0.49 | -0.109 | 2.75e-09 | 5.98e-01   | 0.240      | <0.2       | 0       | Flanking    |
| rs2452597  | 95493246 | G     | A     | 0.28 | 0.144  | 1.35e-12 | 2.09e-02   | 0.354      | 0.713      | 1       | MaxLD       |
| rs12639887 | 95505975 | T     | C     | 0.43 | -0.182 | 1.38e-24 | -          | 0.769      | 0.319      | 0       | Peak        |
| rs12500426 | 95514609 | A     | C     | 0.47 | -0.178 | 6.19e-23 | 7.59e-02   | 1.000      | <0.2       | 1       | PC Risk     |
| rs17021918 | 95562877 | T     | C     | 0.33 | 0.120  | 6.36e-10 | 2.83e-01   | <0.2       | 1.000      | 1       | PC Risk     |
| rs7693093  | 96093552 | T     | C     | 0.44 | 0.116  | 5.05e-09 | 1.85e-09   | <0.2       | <0.2       | 1       | Flanking    |





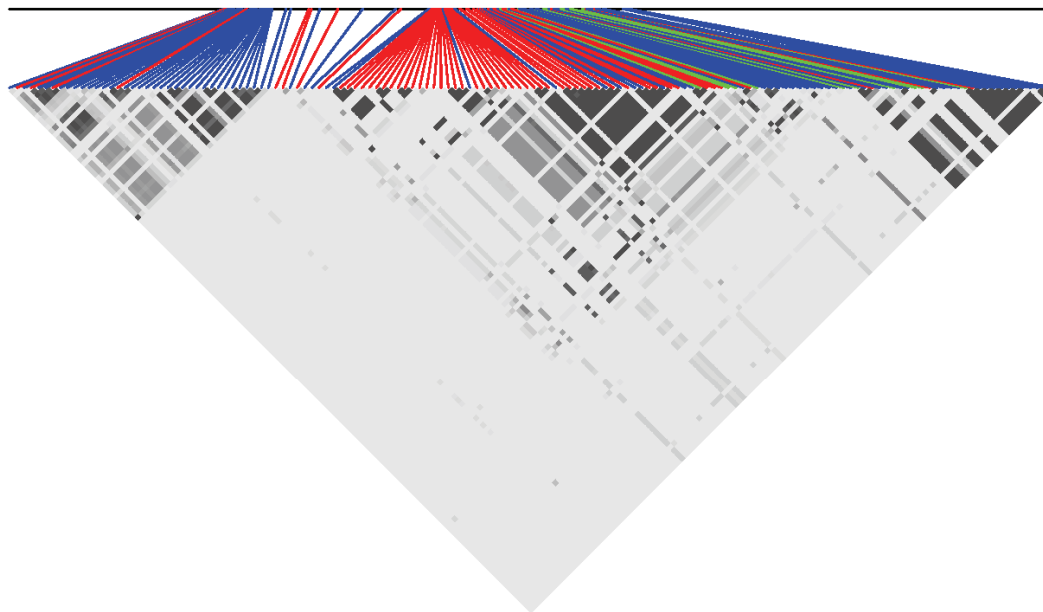
| rsID       | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs1983891 | imputed | Result Type |
|------------|----------|-------|-------|------|--------|----------|------------|-----------|---------|-------------|
| rs12203518 | 41510291 | C     | G     | 0.25 | -0.069 | 5.45e-10 | 0.0803     | 0.873     | 1       | Flanking    |
| rs9296365  | 41535379 | G     | A     | 0.24 | -0.082 | 1.44e-13 | -          | 1.000     | 1       | Peak        |
| rs1983891  | 41536427 | T     | C     | 0.24 | -0.082 | 1.45e-13 | 0.9249     | 1.000     | 1       | PC Risk     |
| rs3800285  | 41558443 | G     | A     | 0.28 | -0.057 | 9.10e-08 | 0.5740     | 0.605     | 1       | Flanking    |



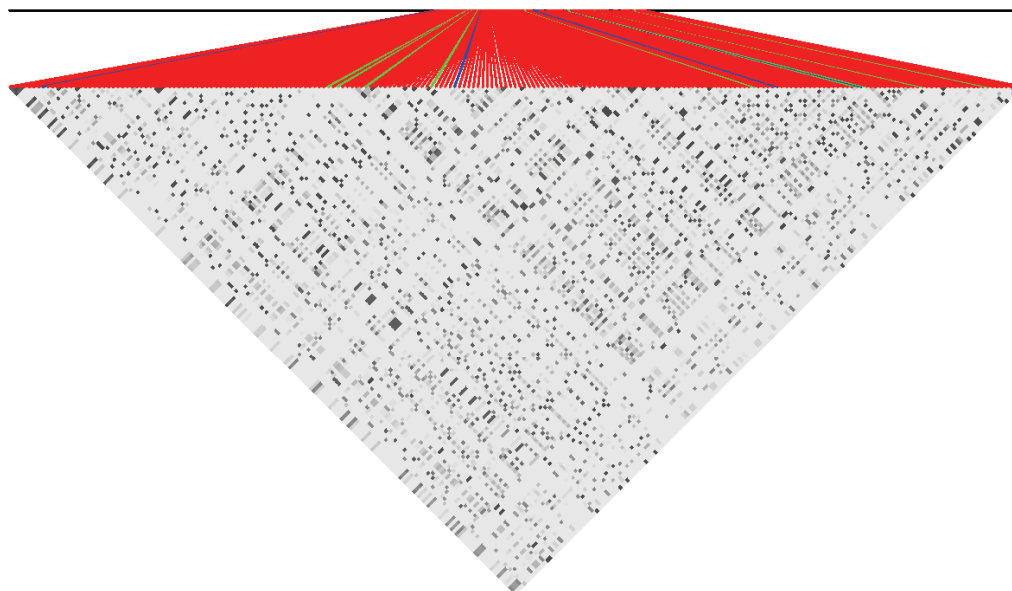
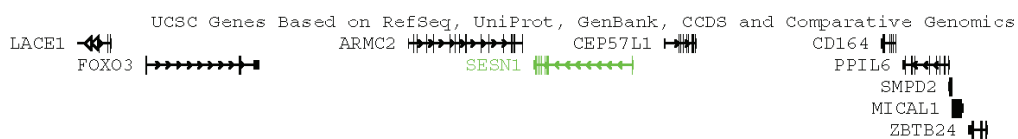
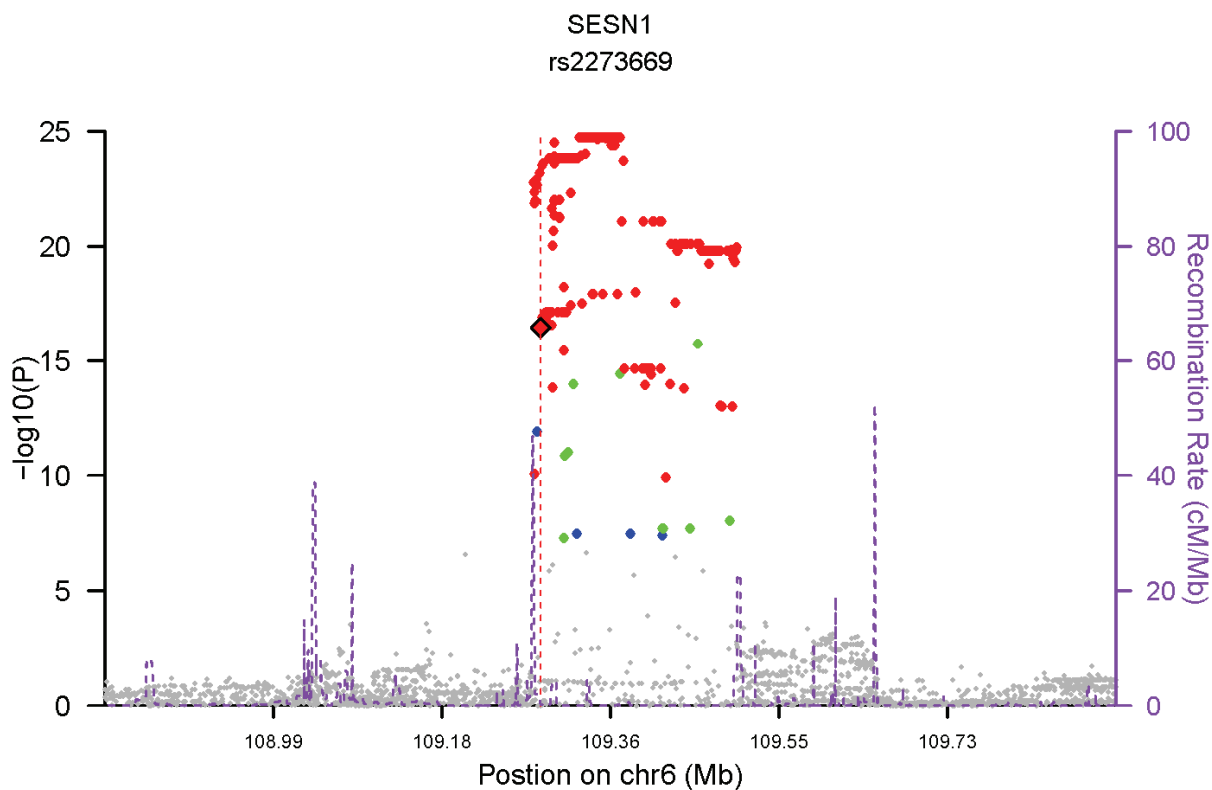
UCSC Genes Based on RefSeq, UniProt, GenBank, CCDS and Comparative Genomics

TMEM30A  
 LOC100506804  
 FILIP1

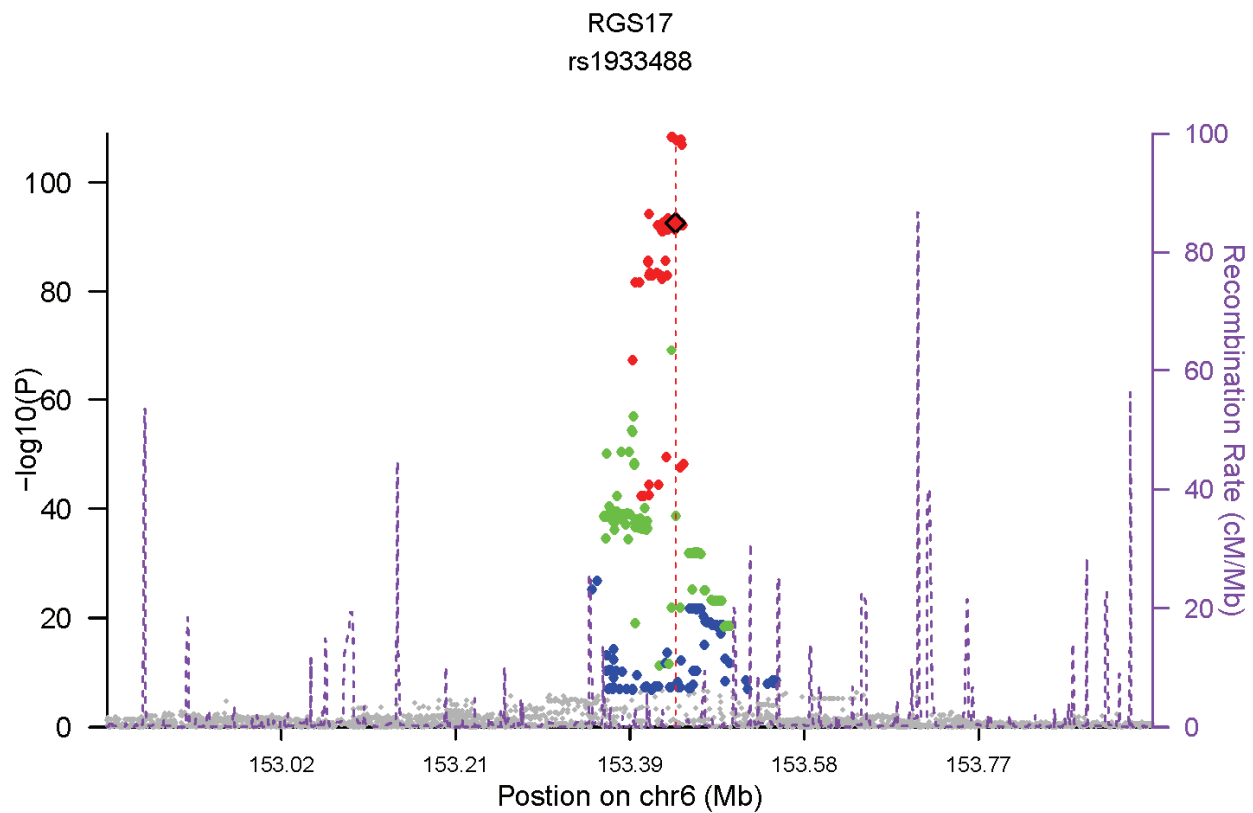
SENP6  
 MYO6  
 IMPG1



| rsID       | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs9443189 | imputed | Result Type |
|------------|----------|-------|-------|------|--------|----------|------------|-----------|---------|-------------|
| rs11752498 | 76199880 | T     | A     | 0.48 | -0.056 | 1.88e-08 | 0.000377   | <0.2      | 1       | Flanking    |
| rs9443189  | 76495882 | G     | A     | 0.16 | 0.093  | 1.84e-11 | 0.906406   | 1.000     | 1       | PC Risk     |
| rs3798439  | 76566734 | T     | G     | 0.15 | 0.094  | 1.23e-11 | -          | 0.968     | 1       | Peak        |
| rs699186   | 76625079 | C     | T     | 0.37 | -0.056 | 2.16e-08 | 0.000533   | <0.2      | 0       | Flanking    |

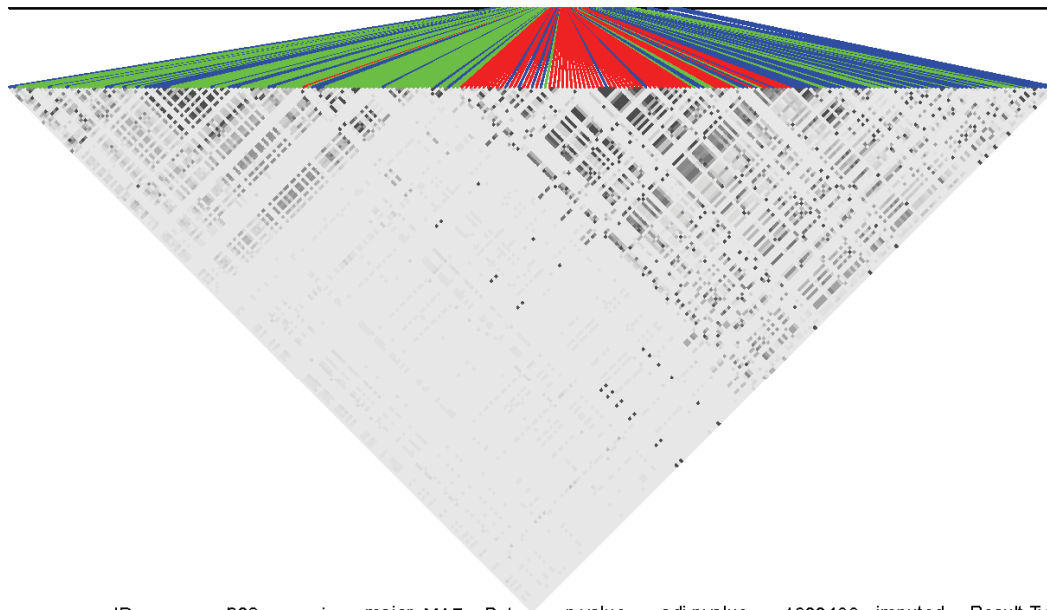


| rsID        | pos       | minor | major | MAF  | Beta  | p.value  | adj.pvalue | rs2273669 | imputed | Result Type |
|-------------|-----------|-------|-------|------|-------|----------|------------|-----------|---------|-------------|
| rs12193858  | 109277908 | T     | A     | 0.12 | 0.204 | 1.71e-23 | 0.833      | 0.742     | 1       | Flanking    |
| rs2273669   | 109285189 | G     | A     | 0.16 | 0.157 | 3.45e-17 | 0.234      | 1.000     | 0       | PC Risk     |
| rs112871784 | 109362245 | T     | C     | 0.13 | 0.202 | 1.89e-25 | -          | 0.774     | 1       | Peak        |
| rs59358669  | 109500192 | A     | G     | 0.11 | 0.199 | 1.10e-20 | 0.953      | 0.594     | 1       | Flanking    |

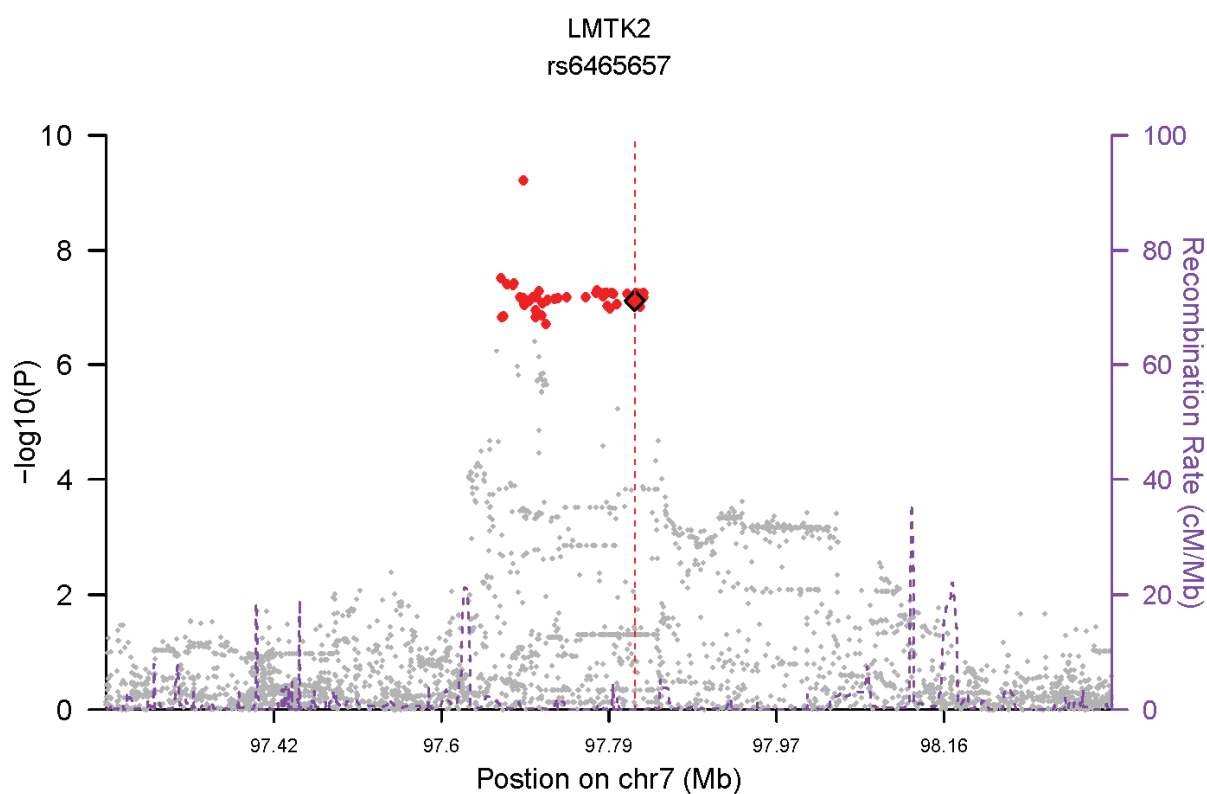


UCSC Genes Based on RefSeq, UniProt, GenBank, CCDS and Comparative Genomics

SYNE1 MYCT1 VIP FBXO5 MTRF1L RGS17



| rsID        | pos       | minor | major | MAF  | Beta   | p.value   | adj.pvalue | rs1933488 | imputed | Result Type |
|-------------|-----------|-------|-------|------|--------|-----------|------------|-----------|---------|-------------|
| rs7774354   | 153352474 | C     | A     | 0.12 | -0.684 | 6.14e-26  | 4.96e-02   | <0.2      | 0       | Flanking    |
| rs1281962   | 153431376 | G     | C     | 0.45 | 0.597  | 3.11e-50  | 1.93e-09   | 0.640     | 1       | ReverseBeta |
| rs113645266 | 153437735 | C     | T     | 0.32 | -0.837 | 4.40e-109 | -          | 0.635     | 1       | Peak        |
| rs1933488   | 153441079 | G     | A     | 0.44 | -0.738 | 2.62e-93  | 2.55e-18   | 1.000     | 0       | PC Risk     |
| rs315408    | 153549673 | A     | G     | 0.14 | -0.378 | 2.88e-09  | 3.88e-01   | <0.2      | 0       | Flanking    |



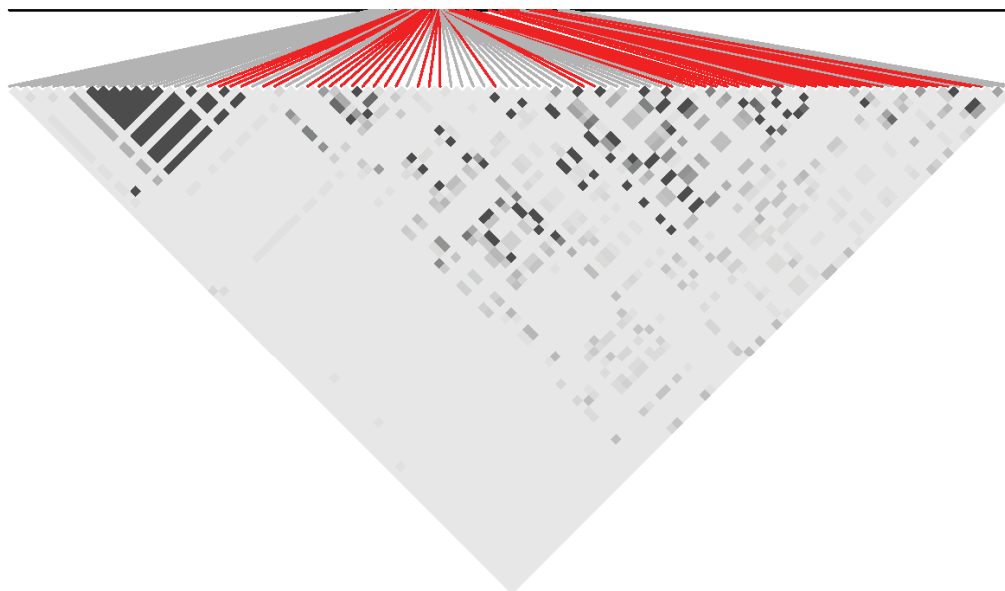
UCSC Genes Based on RefSeq, UniProt, GenBank, CCDS and Comparative Genomics

TAC1 | MGC72080 | LMTK2 | NPTX2 |

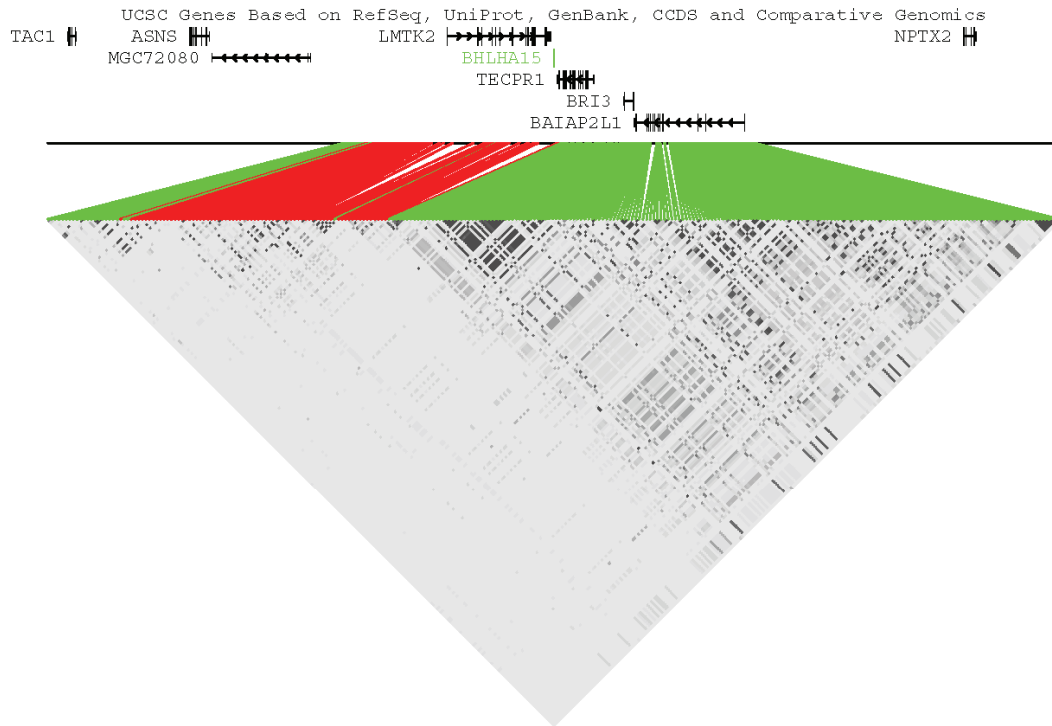
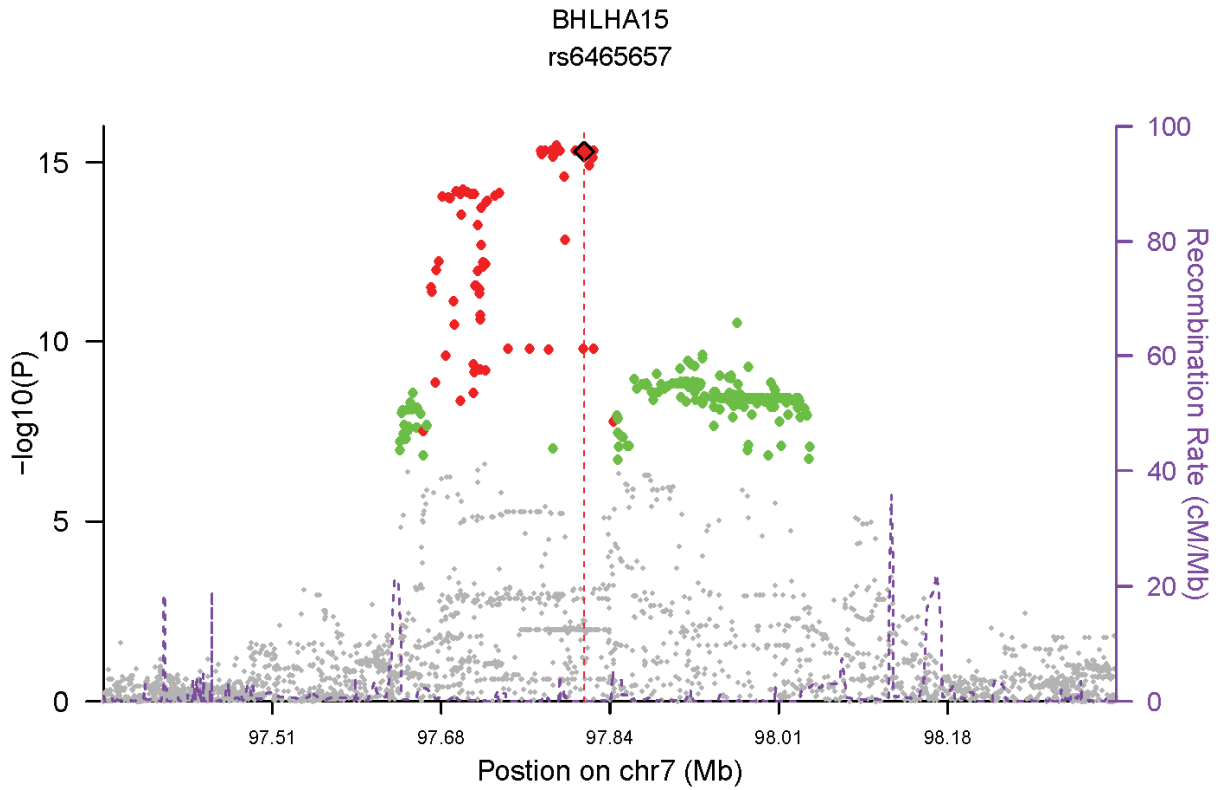
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TECPRI | BRI3 |

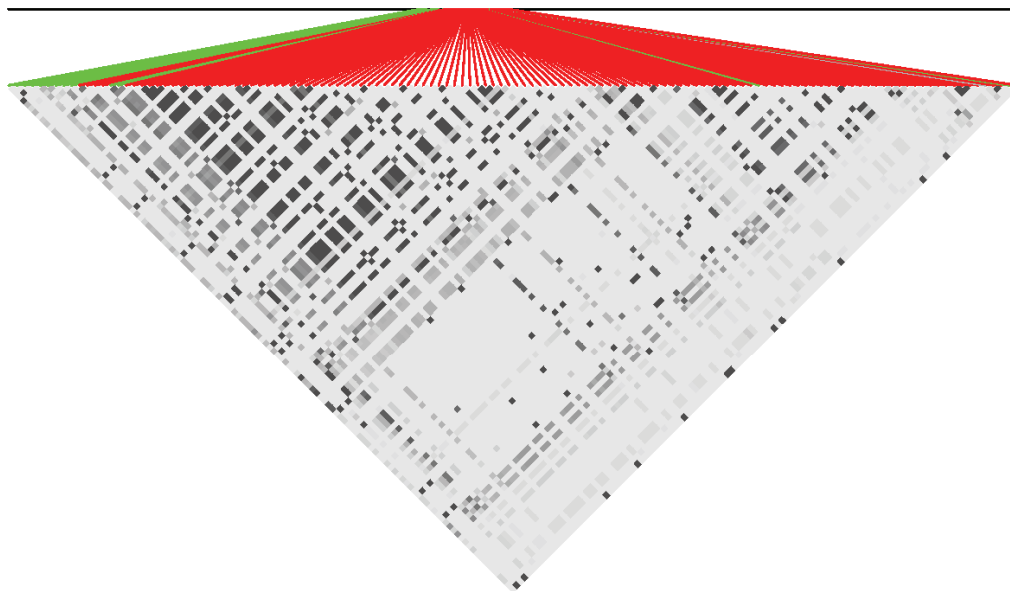
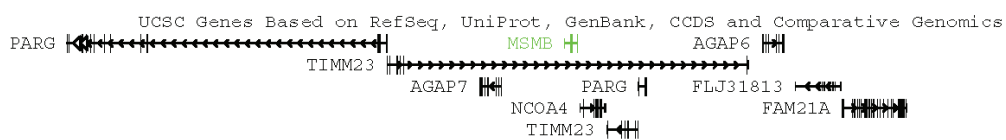
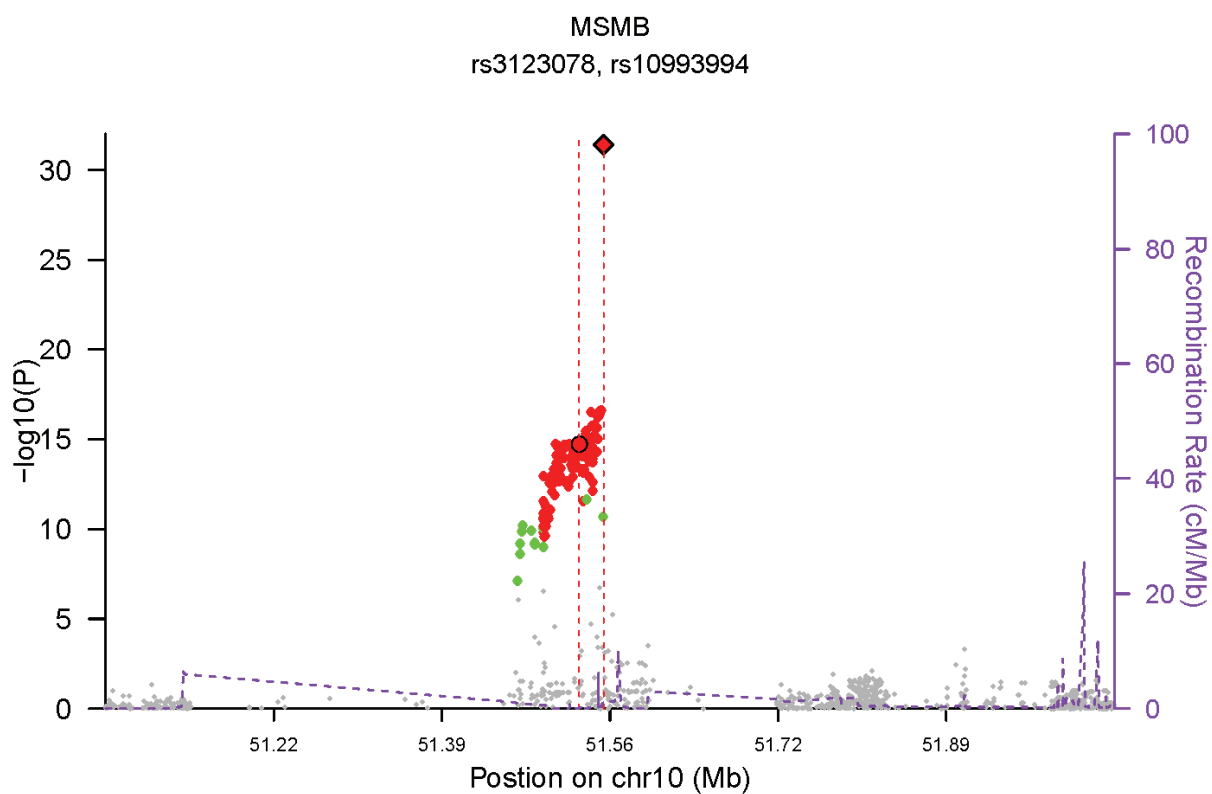
BAIAP2L1 |



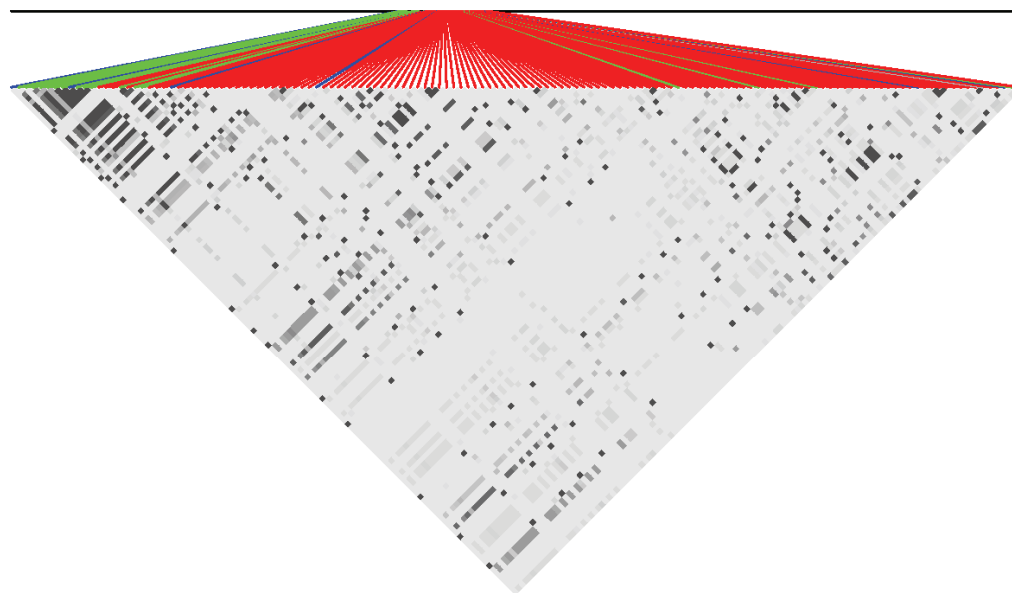
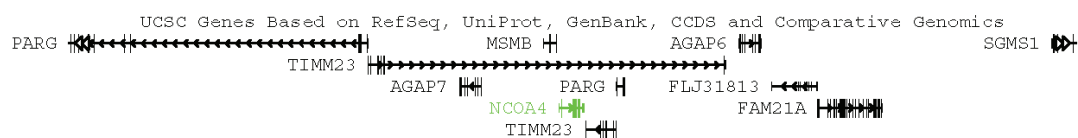
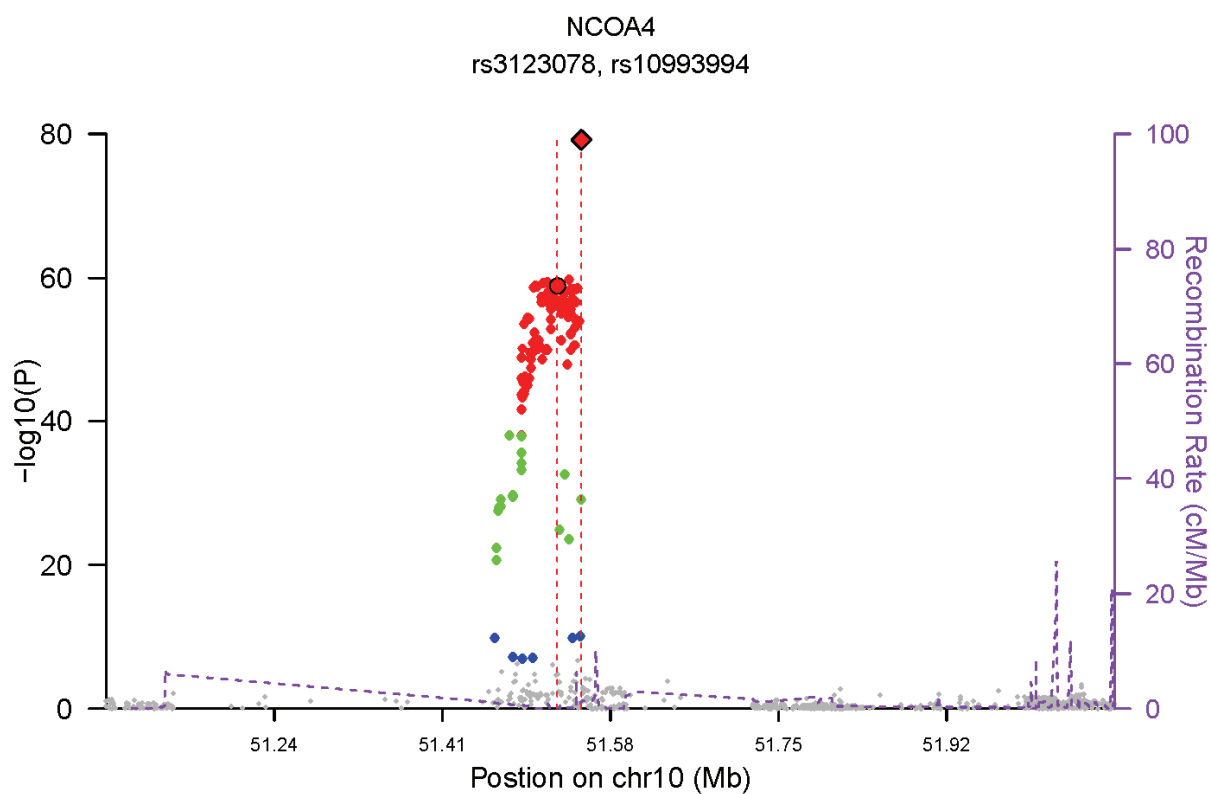
| rsID      | pos      | minor | major | MAF  | Beta  | p.value  | adj.pvalue | rs6465657 | imputed | Result Type |
|-----------|----------|-------|-------|------|-------|----------|------------|-----------|---------|-------------|
| rs847577  | 97694858 | A     | T     | 0.39 | 0.057 | 6.08e-10 | -          | 0.677     | 1       | Peak        |
| rs6465657 | 97816327 | C     | T     | 0.47 | 0.045 | 7.56e-08 | 0.621      | 1.000     | 0       | PC Risk     |
| rs2132276 | 97826340 | G     | A     | 0.47 | 0.045 | 5.58e-08 | 0.559      | 0.991     | 1       | Flanking    |



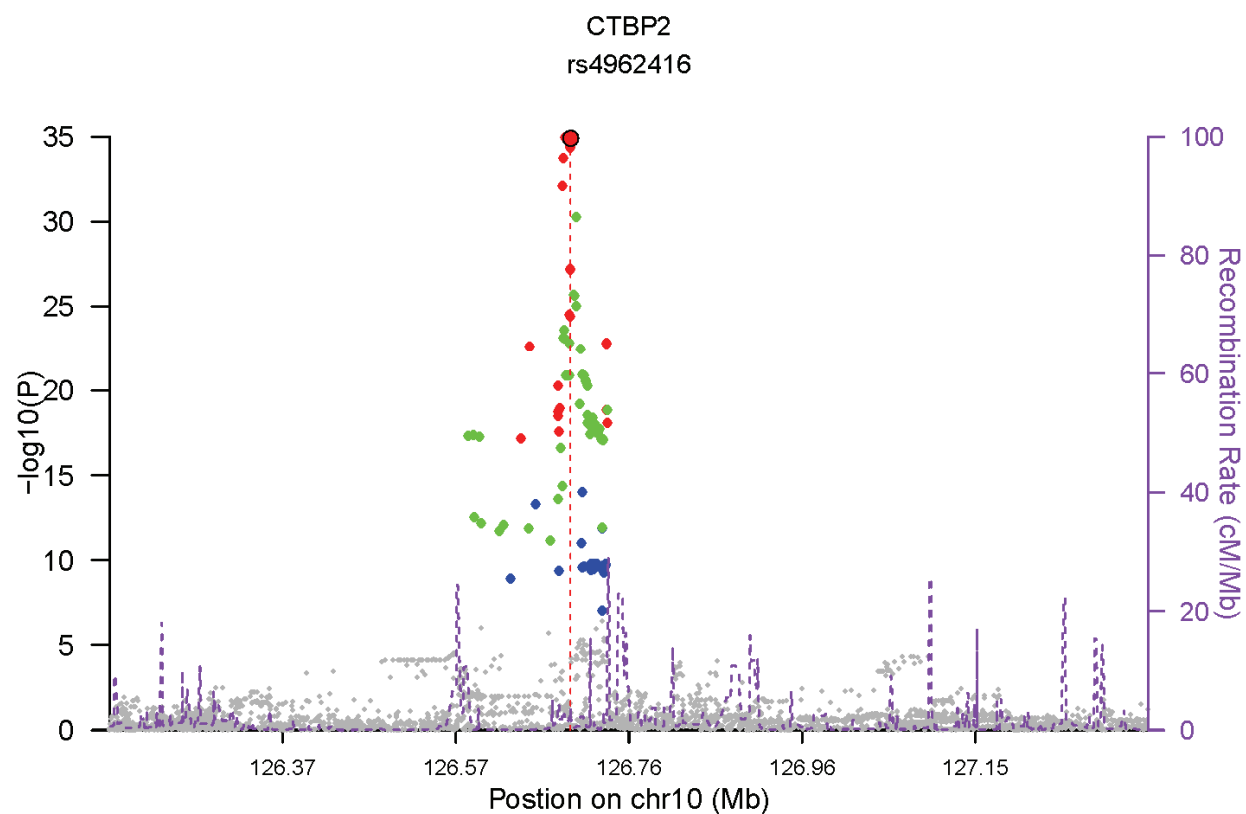
| rsID       | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs6465657 | imputed | Result Type |
|------------|----------|-------|-------|------|--------|----------|------------|-----------|---------|-------------|
| rs1180776  | 97636476 | A     | G     | 0.42 | -0.175 | 1.02e-08 | 0.435      | 0.442     | 1       | Flanking    |
| rs6958572  | 97789351 | A     | G     | 0.48 | 0.239  | 3.52e-16 | -          | 0.946     | 0       | Peak        |
| rs6465657  | 97816327 | C     | T     | 0.47 | 0.236  | 5.08e-16 | 0.431      | 1.000     | 0       | PC Risk     |
| rs11496115 | 98037034 | A     | G     | 0.49 | -0.177 | 1.15e-08 | 0.623      | 0.422     | 1       | Flanking    |



| rsID           | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs3123078 | rs10993994 | imputed | Result Type |
|----------------|----------|-------|-------|------|--------|----------|------------|-----------|------------|---------|-------------|
| chr10:51465650 | 51465650 | C     | T     | 0.46 | -0.172 | 2.50e-09 | 2.33e-01   | 0.432     | 0.383      | 1       | Flanking    |
| rs3123078      | 51524971 | C     | T     | 0.48 | -0.190 | 1.81e-15 | 8.25e-07   | 1.000     | 0.788      | 0       | PC Risk     |
| rs10763536     | 51535801 | A     | G     | 0.49 | 0.189  | 1.74e-14 | 2.86e-06   | 0.935     | 0.752      | 1       | ReverseBeta |
| rs10993994     | 51549496 | T     | C     | 0.42 | -0.273 | 4.06e-32 | -          | 0.788     | 1.000      | 0       | Peak        |

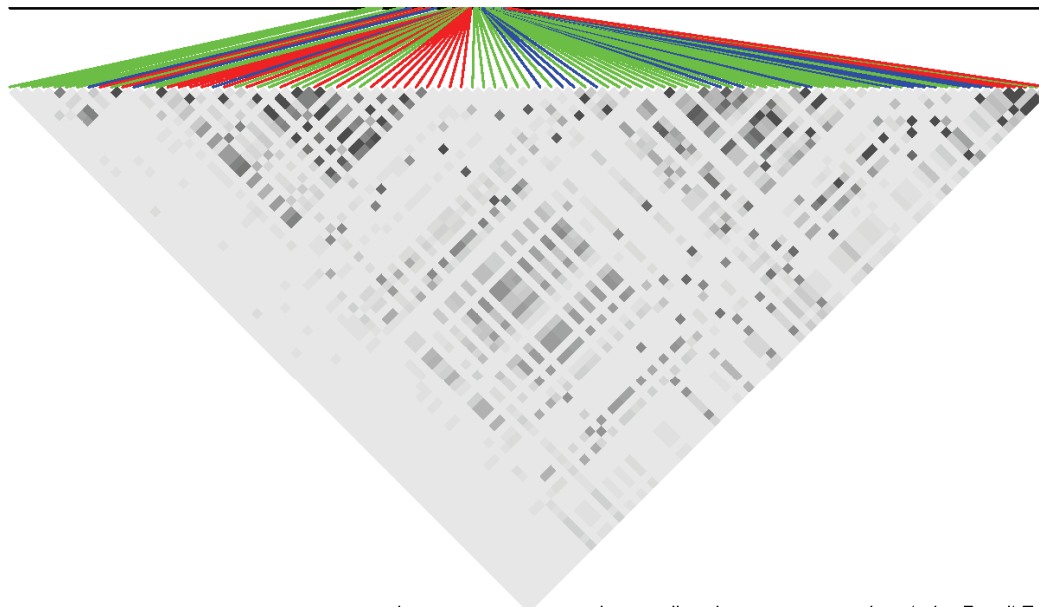


| rsID       | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs3123078 | rs10993994 | imputed | Result Type |
|------------|----------|-------|-------|------|--------|----------|------------|-----------|------------|---------|-------------|
| rs79489567 | 51461808 | A     | G     | 0.09 | 0.340  | 1.54e-10 | 0.0541     | <0.2      | <0.2       | 1       | Flanking    |
| rs3123078  | 51524971 | C     | T     | 0.48 | 0.307  | 1.06e-59 | 0.3452     | 1.000     | 0.788      | 0       | PC Risk     |
| rs10763536 | 51535801 | A     | G     | 0.49 | -0.309 | 2.74e-56 | 0.3898     | 0.935     | 0.752      | 1       | ReverseBeta |
| rs10993994 | 51549496 | T     | C     | 0.42 | 0.344  | 6.83e-80 | -          | 0.788     | 1.000      | 0       | Peak        |

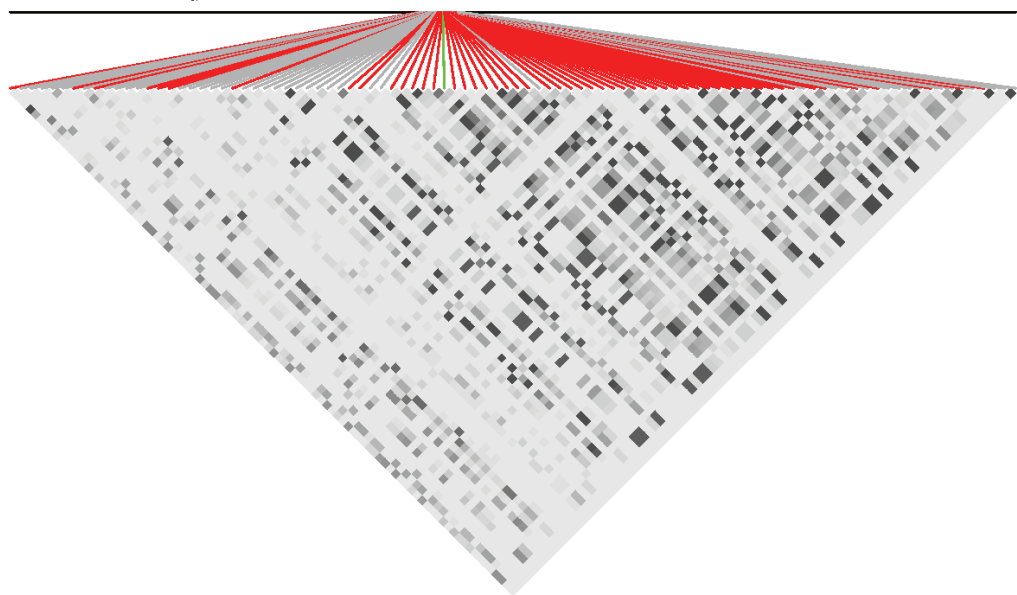
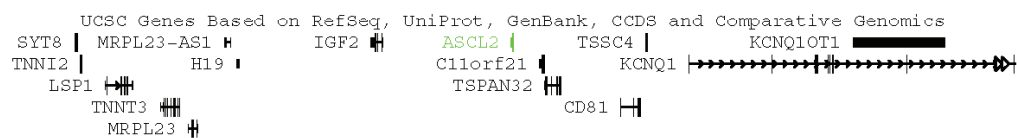
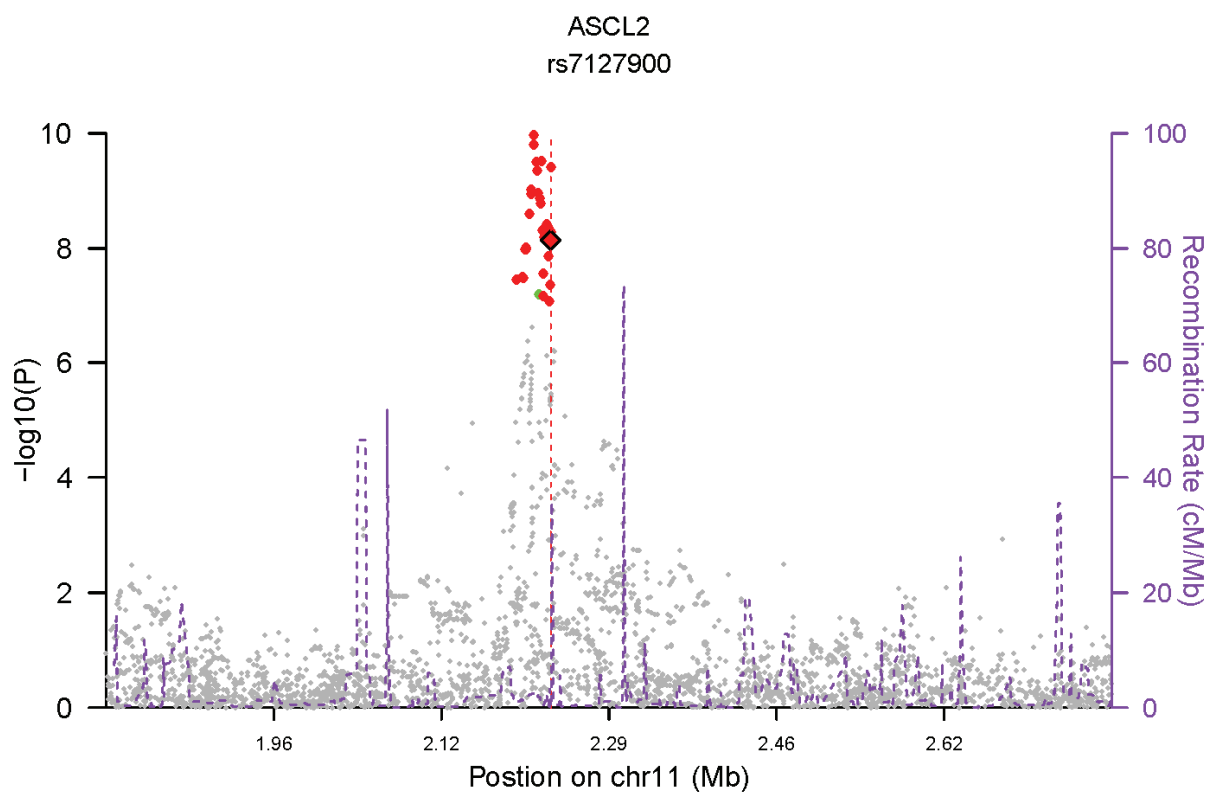


UCSC Genes Based on RefSeq, UniProt, GenBank, CCDS and Comparative Genomics

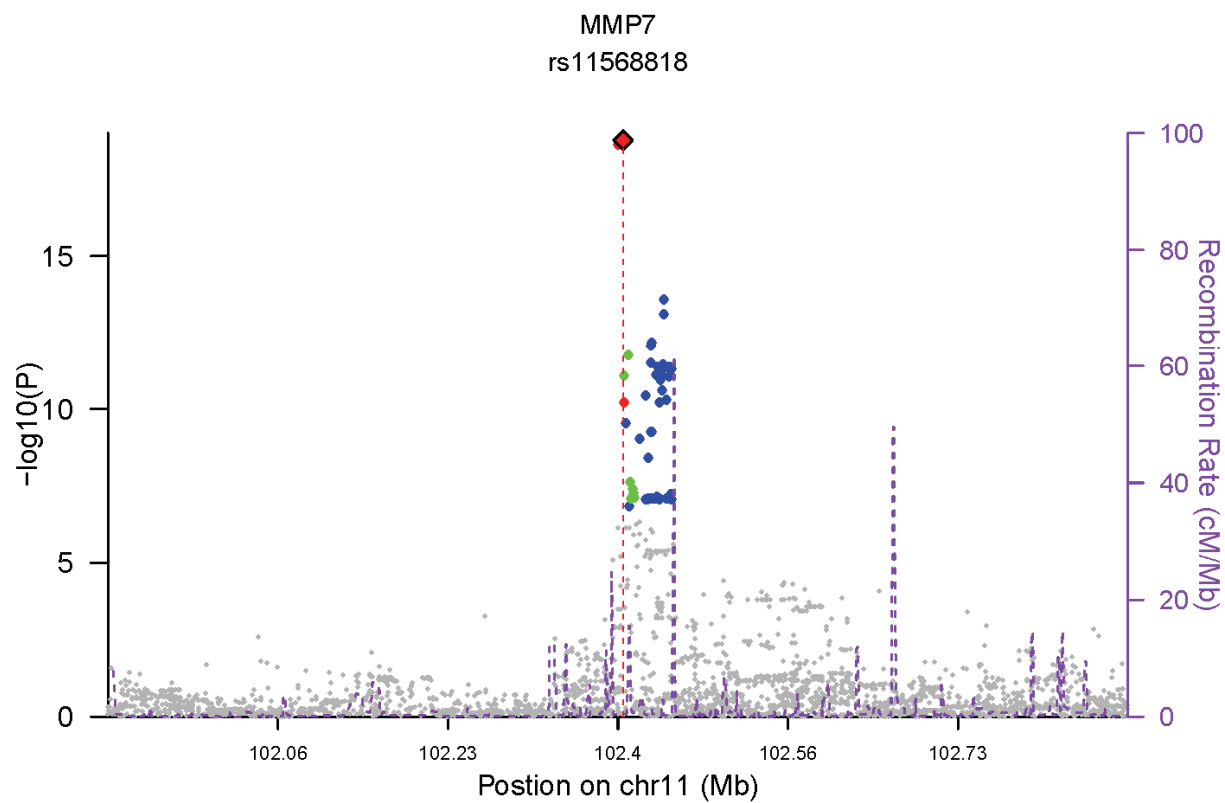
LHP METTL10 ZRANB1  
FAM53B FAM175B CTBP2



| rsID        | pos       | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs4962416 | imputed | Result Type |
|-------------|-----------|-------|-------|------|--------|----------|------------|-----------|---------|-------------|
| rs35186116  | 126582160 | G     | A     | 0.27 | 0.109  | 5.10e-18 | 0.66191    | 0.482     | 1       | Flanking    |
| rs4962720   | 126696840 | T     | G     | 0.27 | 0.137  | 1.19e-35 | 0.55803    | 1.000     | 0       | Peak        |
| rs4962416   | 126696872 | C     | T     | 0.27 | 0.137  | 1.19e-35 | -          | 1.000     | 0       | Peak        |
| rs4109292   | 126710654 | A     | G     | 0.51 | -0.099 | 1.25e-21 | 0.00212    | 0.373     | 1       | ReverseBeta |
| kgp21878233 | 126738637 | C     | A     | 0.37 | 0.094  | 8.17e-19 | 0.37272    | 0.519     | 1       | Flanking    |

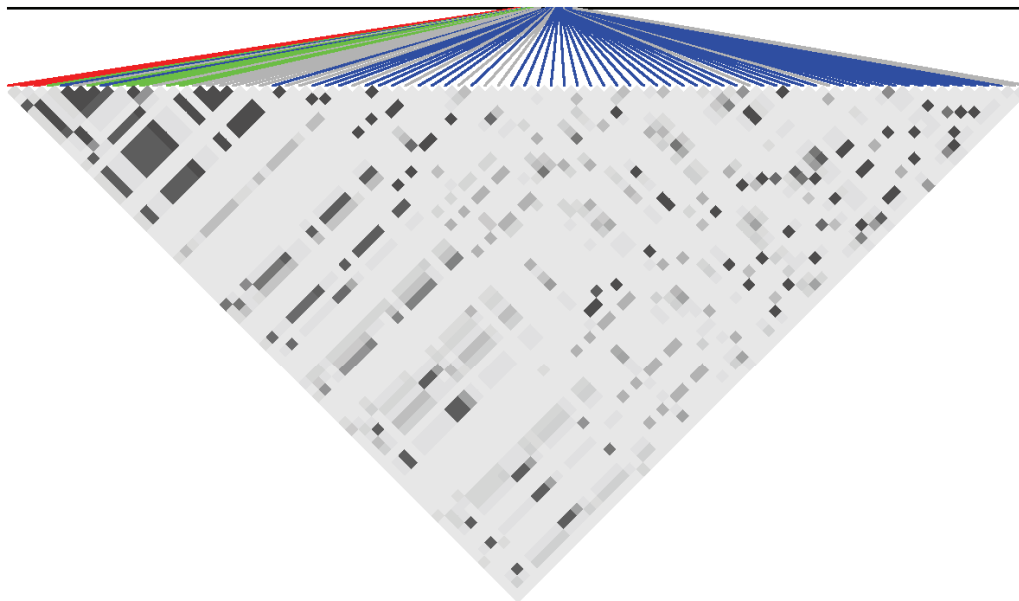


| rsID        | pos     | minor | major | MAF  | Beta  | p.value  | adj.pvalue | rs7127900 | imputed | Result Type |
|-------------|---------|-------|-------|------|-------|----------|------------|-----------|---------|-------------|
| rs146569428 | 2199686 | A     | G     | 0.25 | 0.165 | 3.52e-08 | 0.650      | 0.612     | 1       | Flanking    |
| rs12419367  | 2217280 | A     | G     | 0.25 | 0.192 | 1.07e-10 | -          | 0.718     | 0       | Peak        |
| rs7127900   | 2233574 | A     | G     | 0.23 | 0.180 | 7.26e-09 | 0.519      | 1.000     | 0       | PC Risk     |
| rs10840606  | 2234690 | G     | A     | 0.21 | 0.197 | 3.93e-10 | 0.263      | 0.872     | 0       | Flanking    |

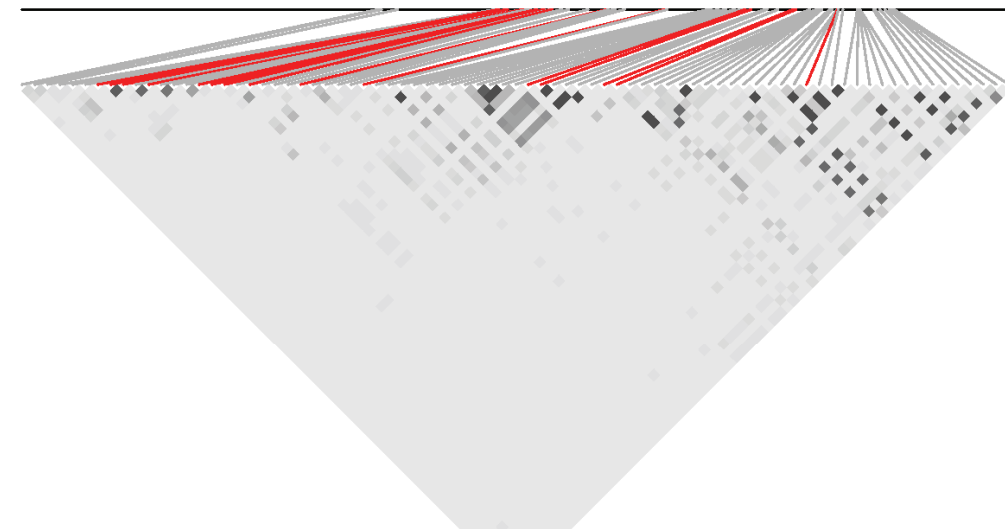
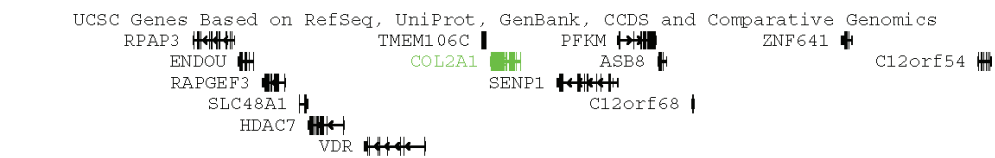
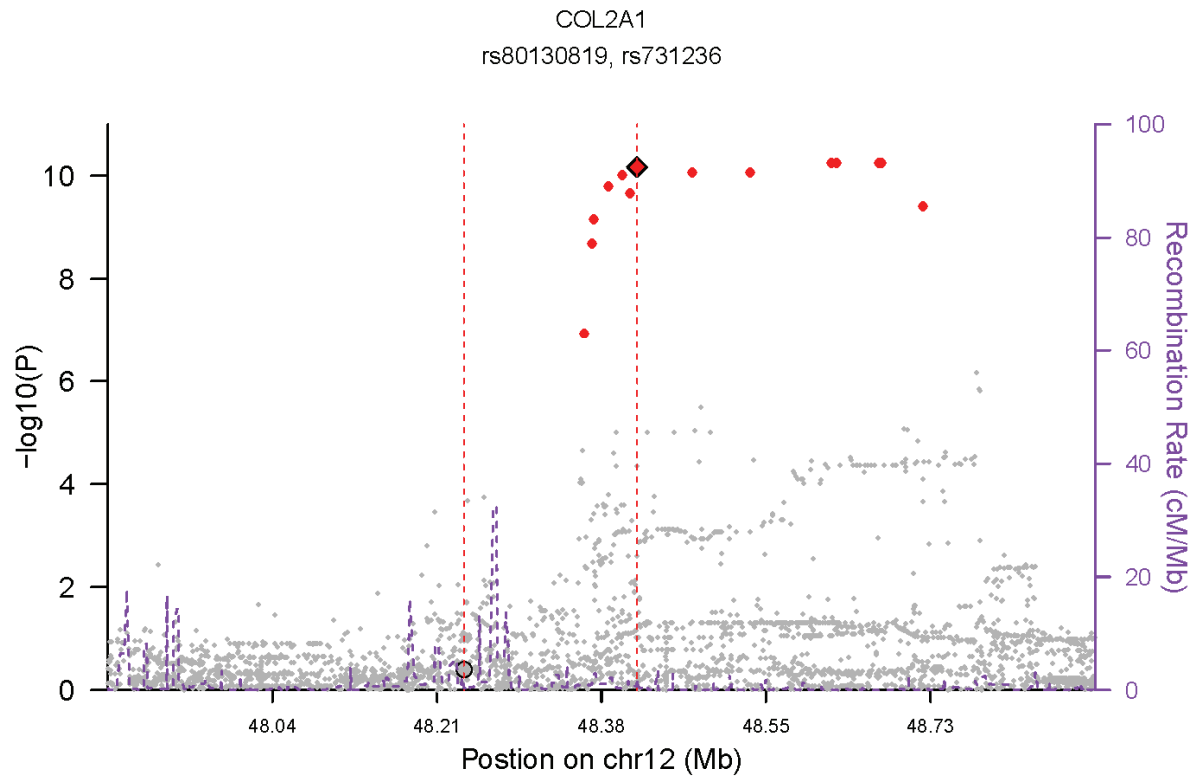


UCSC Genes Based on RefSeq, UniProt, GenBank, CCDS and Comparative Genomics

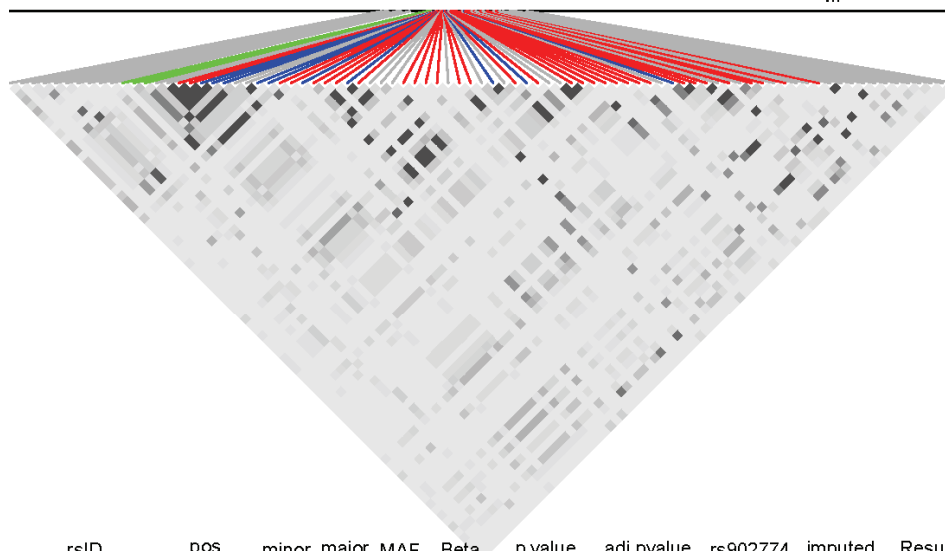
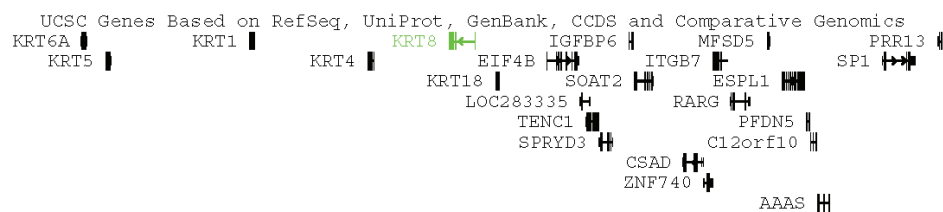
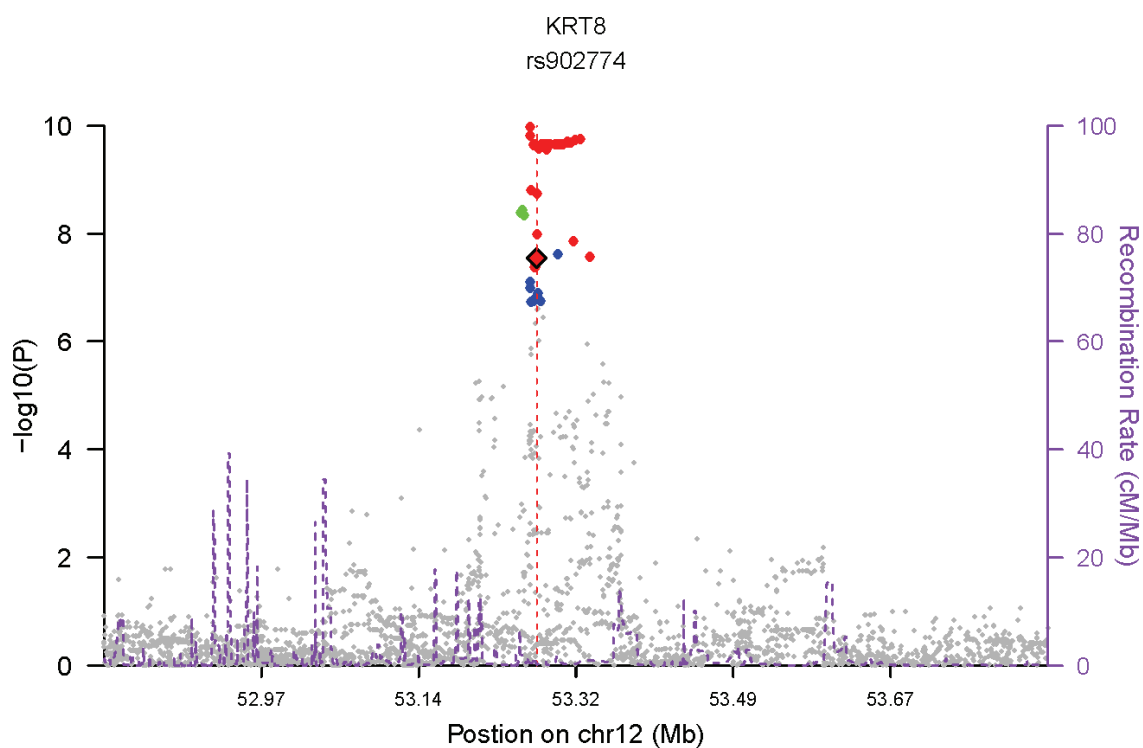
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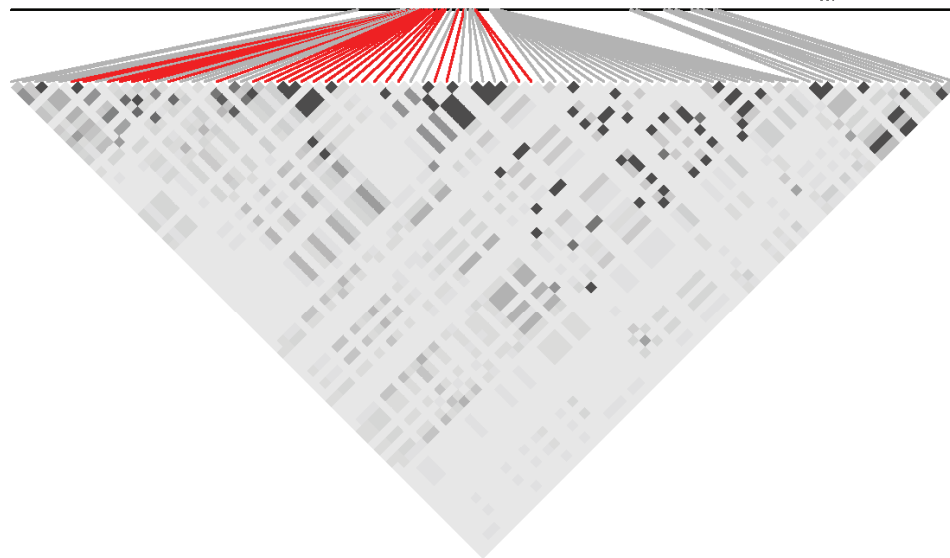
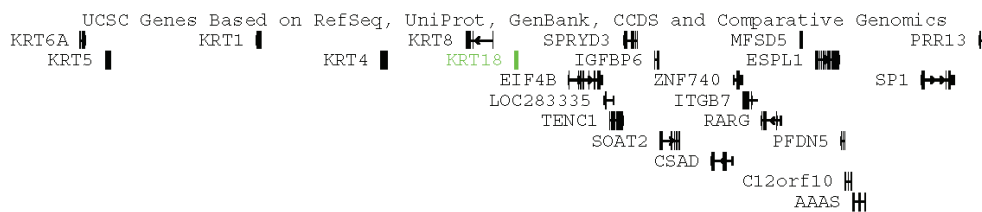
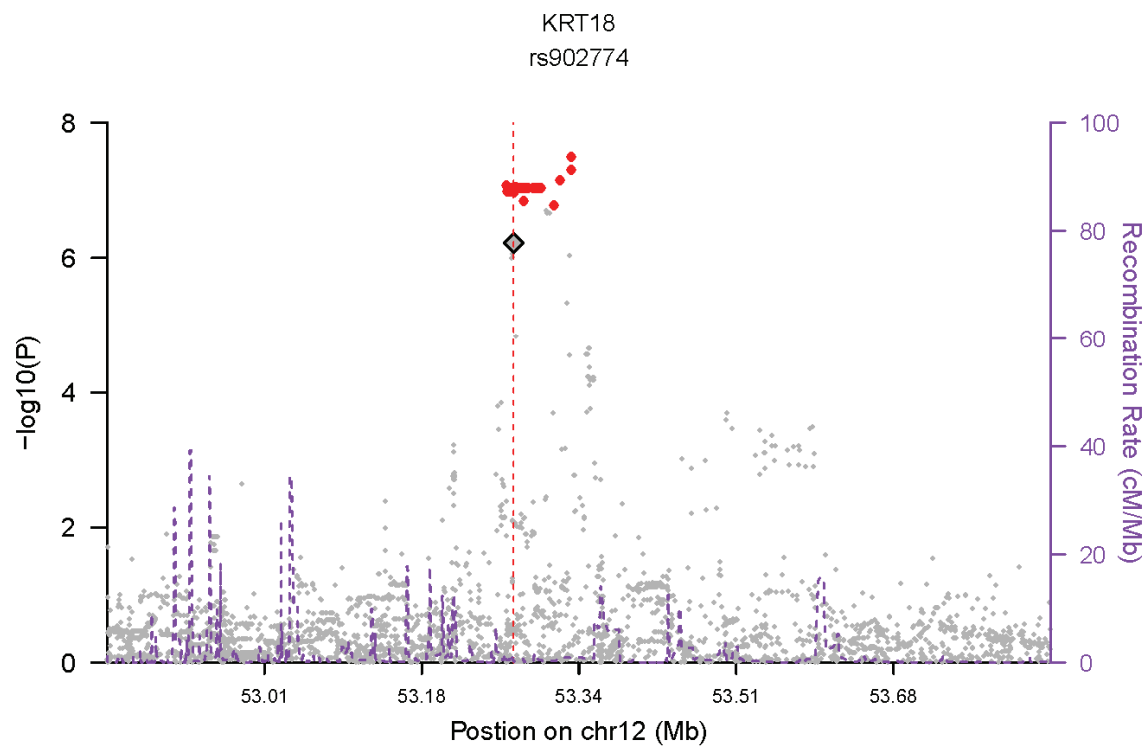
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|------------|-----------|-------|-------|------|--------|----------|------------|------------|---------|-------------|
| rs12285347 | 102396607 | C     | T     | 0.46 | -0.564 | 2.52e-19 | 7.72e-01   | 0.997      | 0       | Flanking    |
| rs11568818 | 102401661 | C     | T     | 0.46 | -0.568 | 1.70e-19 | -          | 1.000      | 0       | Peak        |
| rs1940054  | 102449951 | A     | C     | 0.47 | 0.409  | 4.85e-12 | 8.04e-13   | <0.2       | 1       | Flanking    |



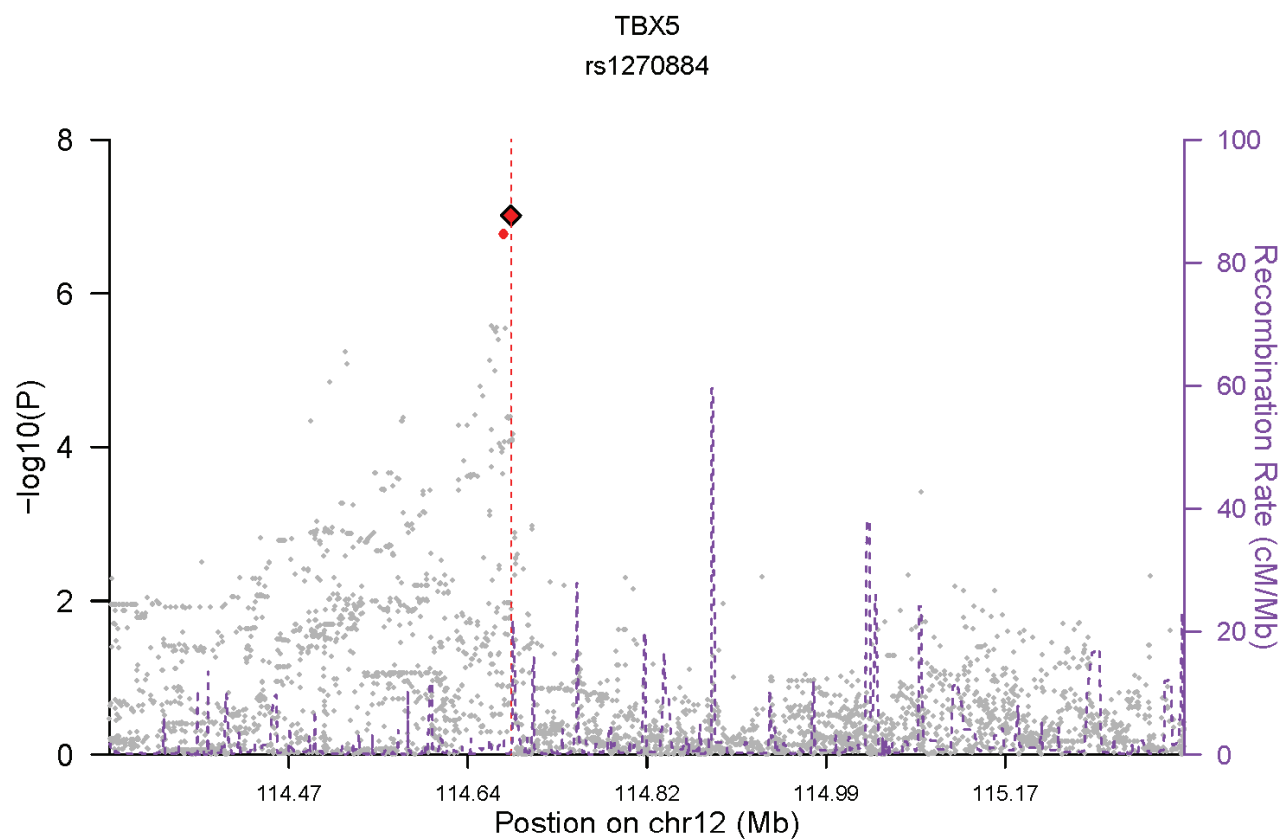
| rsID       | pos      | minor | major | MAF  | Beta  | p.value  | adj.pvalue | rs731236 | rs80130819 | imputed | Result Type |
|------------|----------|-------|-------|------|-------|----------|------------|----------|------------|---------|-------------|
| rs731236   | 48238757 | G     | A     | 0.39 | 0.078 | 3.90e-01 | 0.5148     | 1.000    | <0.2       | 0       | PC Risk     |
| rs7968852  | 48259741 | A     | G     | 0.47 | 0.247 | 7.40e-03 | 0.0313     | 0.533    | <0.2       | 1       | MaxLD       |
| rs4760607  | 48365265 | G     | T     | 0.07 | 0.955 | 1.17e-07 | 0.6509     | <0.2     | 0.633      | 0       | Flanking    |
| rs80130819 | 48419618 | C     | A     | 0.07 | 1.176 | 6.73e-11 | 0.4487     | <0.2     | 1.000      | 1       | PC Risk     |
| rs2087343  | 48675783 | G     | A     | 0.07 | 1.178 | 5.62e-11 | -          | <0.2     | 0.927      | 0       | Peak        |
| rs2450995  | 48719172 | T     | C     | 0.08 | 1.072 | 3.86e-10 | 0.5567     | <0.2     | 0.787      | 1       | Flanking    |



| rsID        | pos      | minor | major | MAF  | Beta   | p.value  | adj.p.value | rs902774 | imputed | Result Type |
|-------------|----------|-------|-------|------|--------|----------|-------------|----------|---------|-------------|
| rs58017462  | 53256863 | A     | G     | 0.09 | -0.135 | 4.07e-09 | 0.085229    | 0.482    | 1       | Flanking    |
| rs73106451  | 53266739 | A     | C     | 0.14 | -0.119 | 1.06e-10 | -           | 0.782    | 1       | Peak        |
| rs902774    | 53273904 | A     | G     | 0.17 | -0.098 | 2.78e-08 | 0.769273    | 1.000    | 0       | PC Risk     |
| rs4919703   | 53297594 | C     | G     | 0.36 | 0.075  | 2.41e-08 | 0.000142    | <0.2     | 1       | ReverseBeta |
| rs117412892 | 53333309 | A     | G     | 0.15 | -0.109 | 2.65e-08 | 0.896989    | 0.559    | 1       | Flanking    |

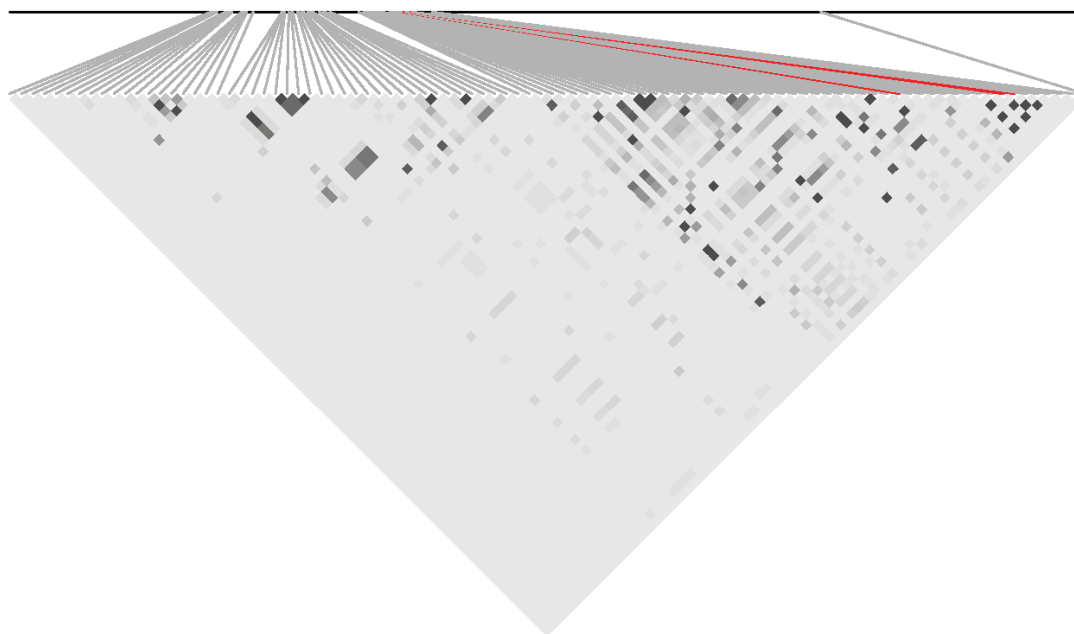


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|------------|----------|-------|-------|------|--------|----------|------------|----------|---------|-------------|
| rs73106451 | 53266739 | A     | C     | 0.14 | -0.066 | 8.42e-08 | 0.0268     | 0.782    | 1       | Flanking    |
| rs902774   | 53273904 | A     | G     | 0.17 | -0.059 | 6.04e-07 | 0.1816     | 1.000    | 0       | PC Risk     |
| rs12302939 | 53335216 | G     | C     | 0.22 | -0.058 | 3.21e-08 | -          | 0.547    | 1       | Peak        |
| rs11170341 | 53335563 | C     | T     | 0.22 | -0.056 | 5.01e-08 | 0.3290     | 0.539    | 0       | Flanking    |

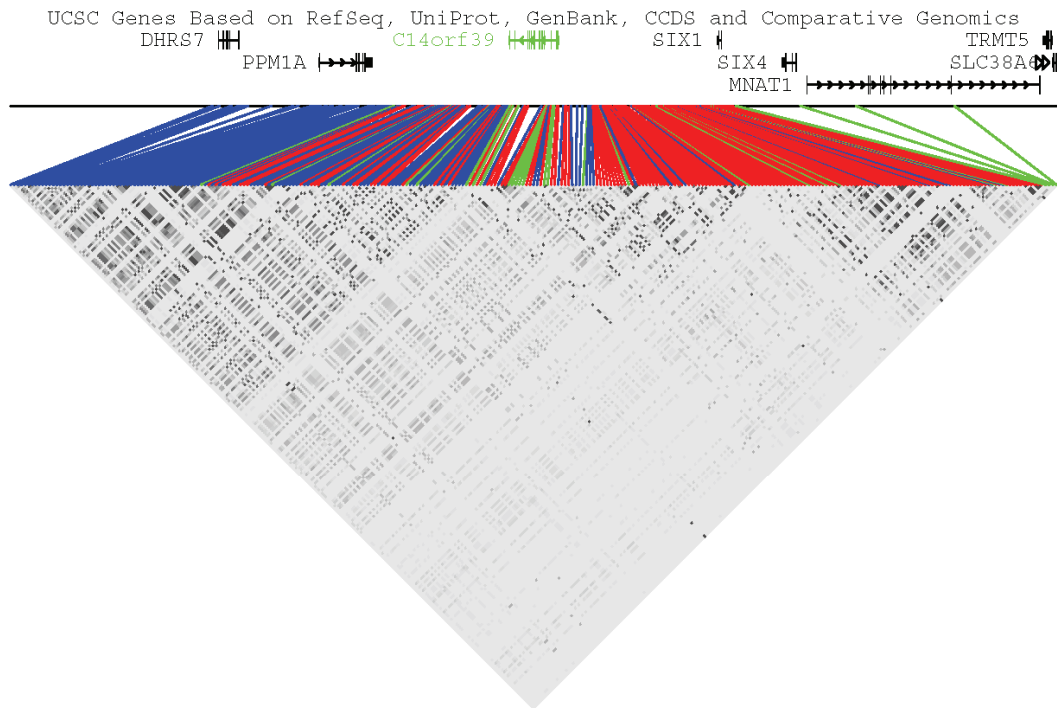
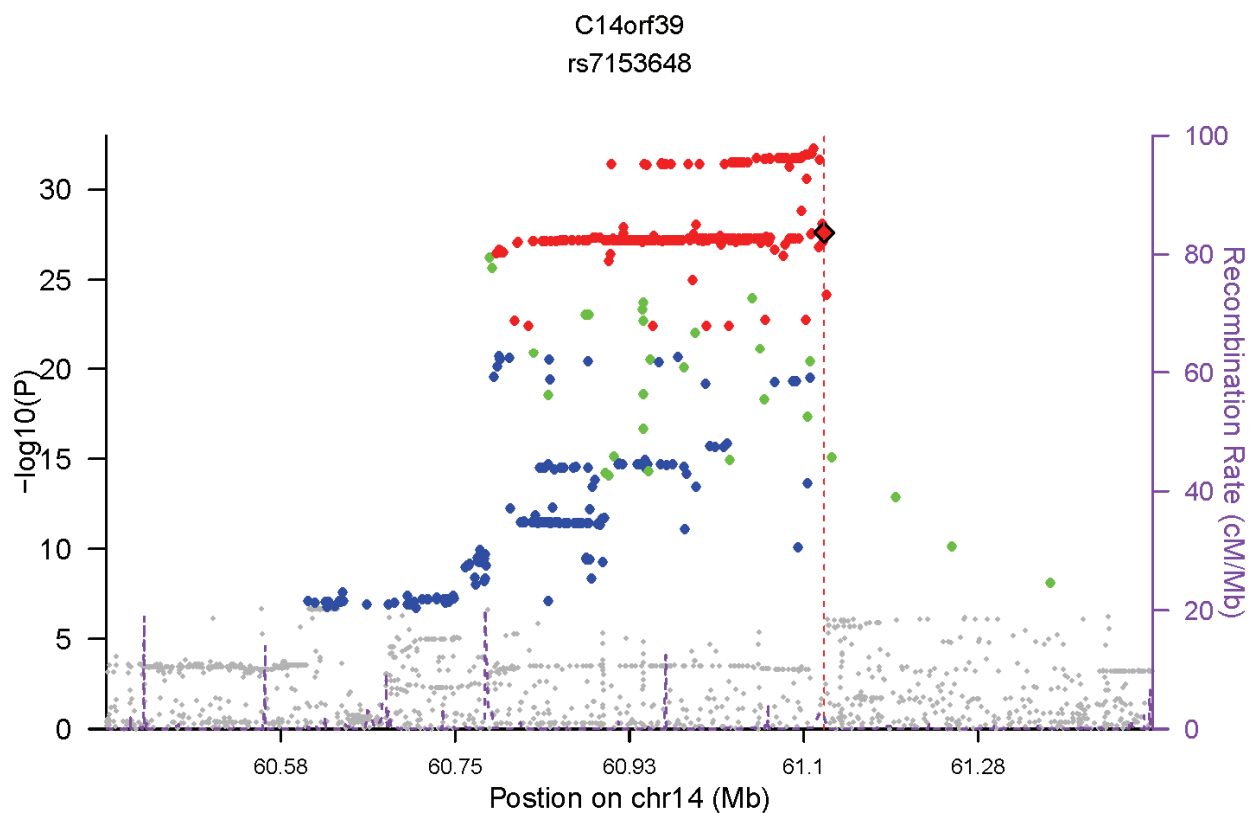


UCSC Genes Based on RefSeq, UniProt, GenBank, CCDS and Comparative Genomics

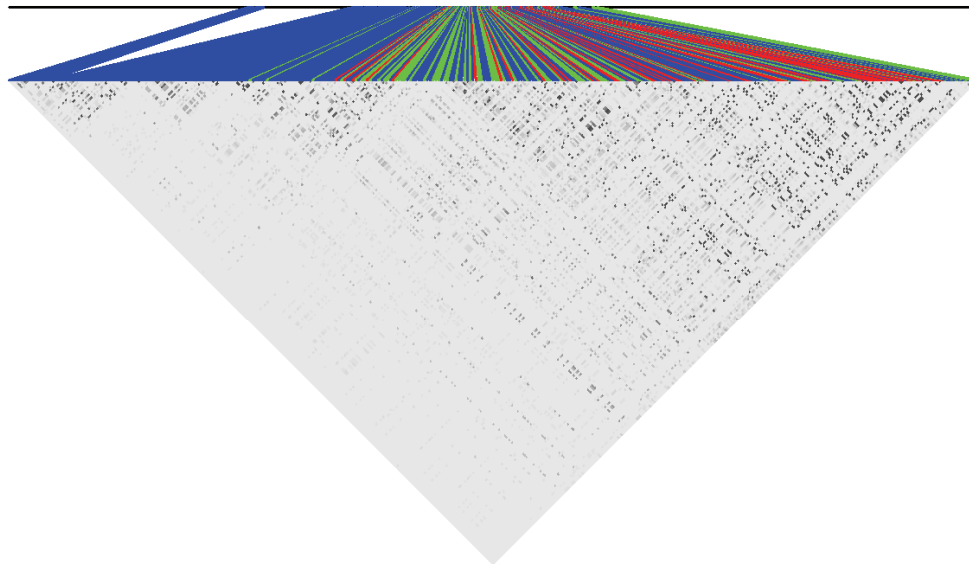
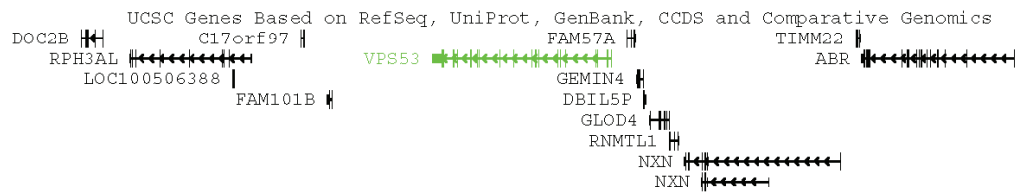
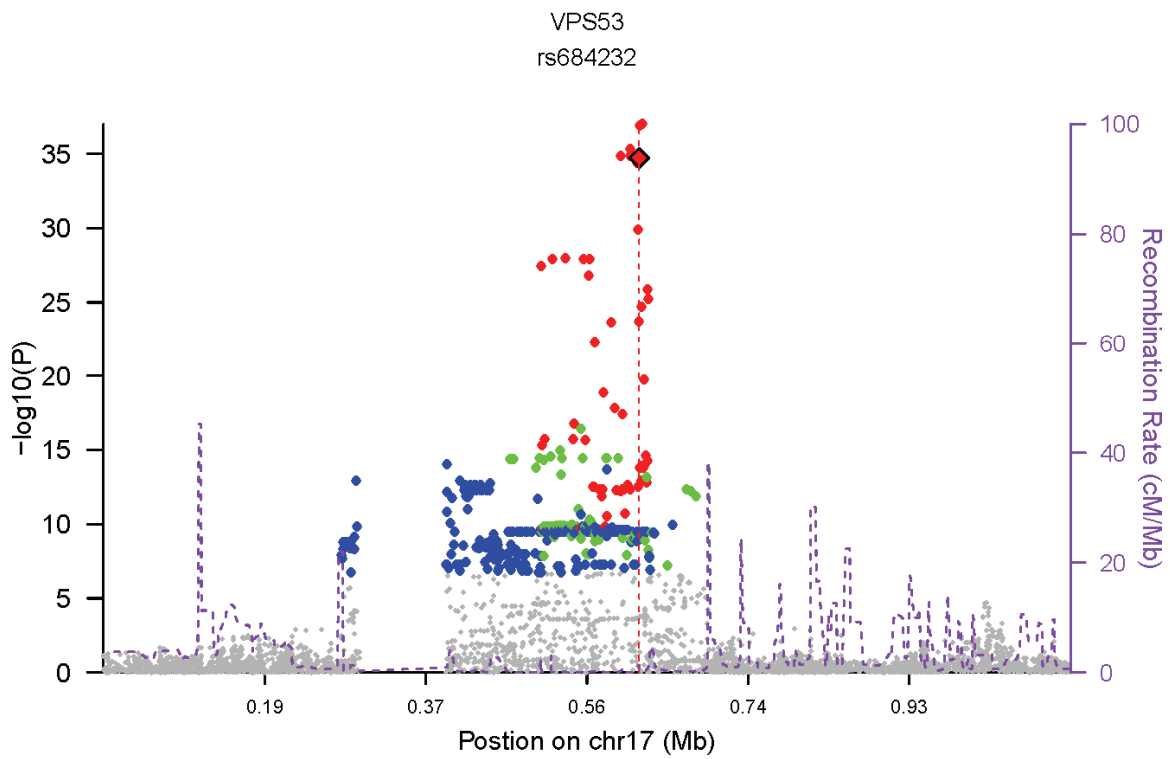
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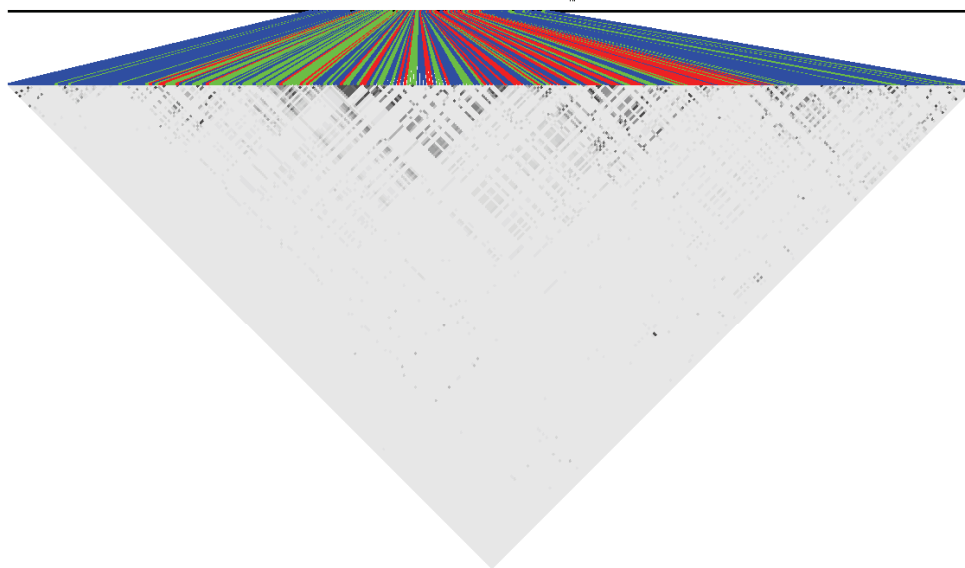
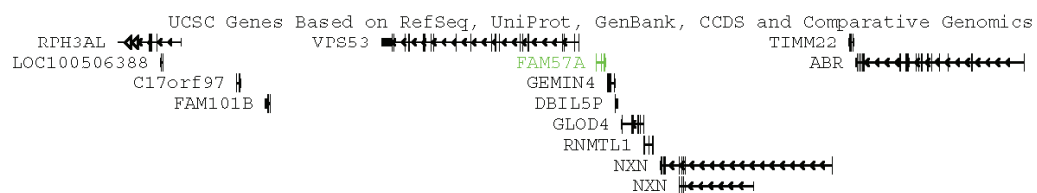
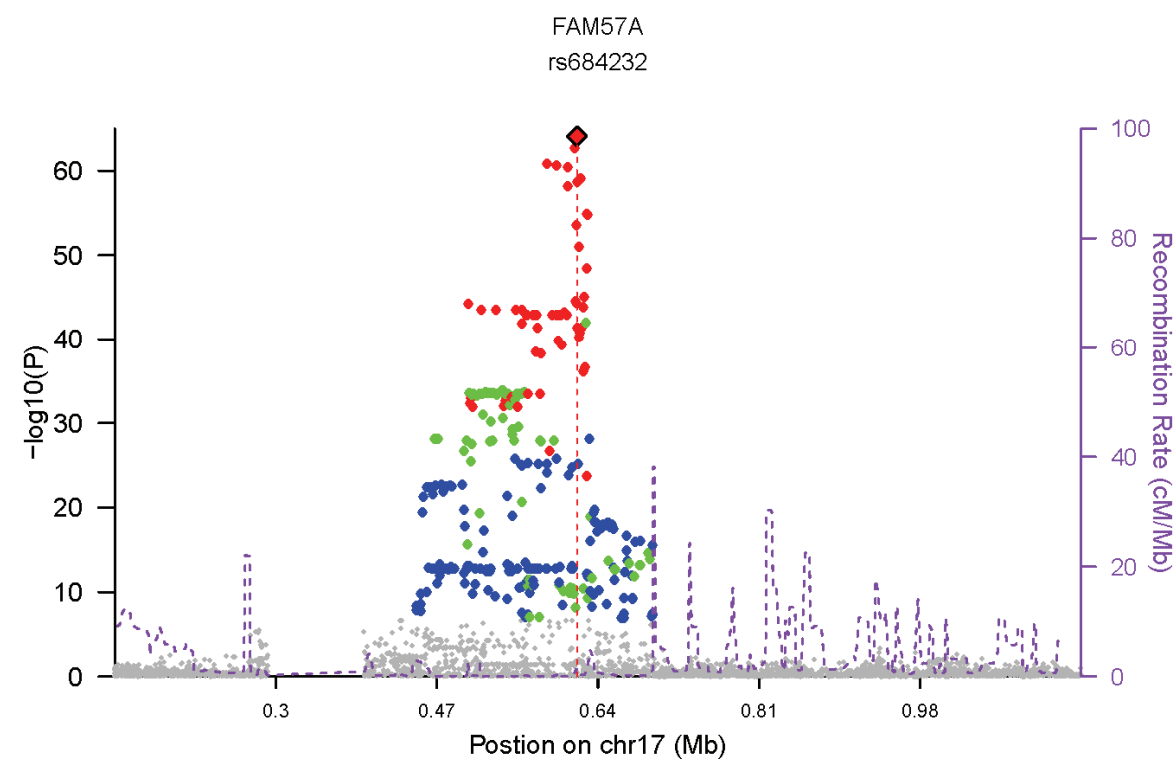
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|-----------|-----------|-------|-------|------|-------|----------|------------|-----------|---------|-------------|
| rs2555013 | 114678318 | C     | T     | 0.48 | 0.180 | 1.68e-07 | 0.528      | 0.991     | 1       | Flanking    |
| rs1270884 | 114685571 | G     | A     | 0.48 | 0.183 | 9.68e-08 | 0.890      | 1.000     | 1       | PC Risk     |
| rs2555004 | 114686645 | A     | G     | 0.48 | 0.182 | 9.38e-08 | -          | 1.000     | 0       | Peak        |



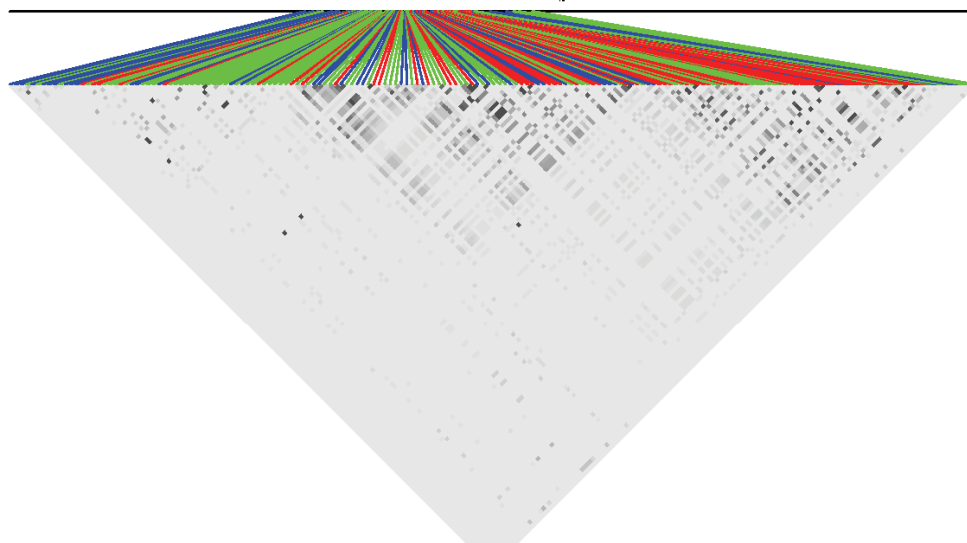
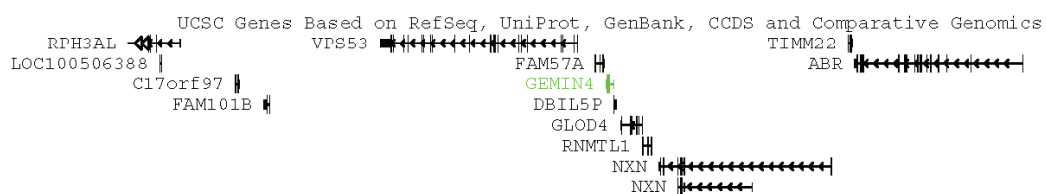
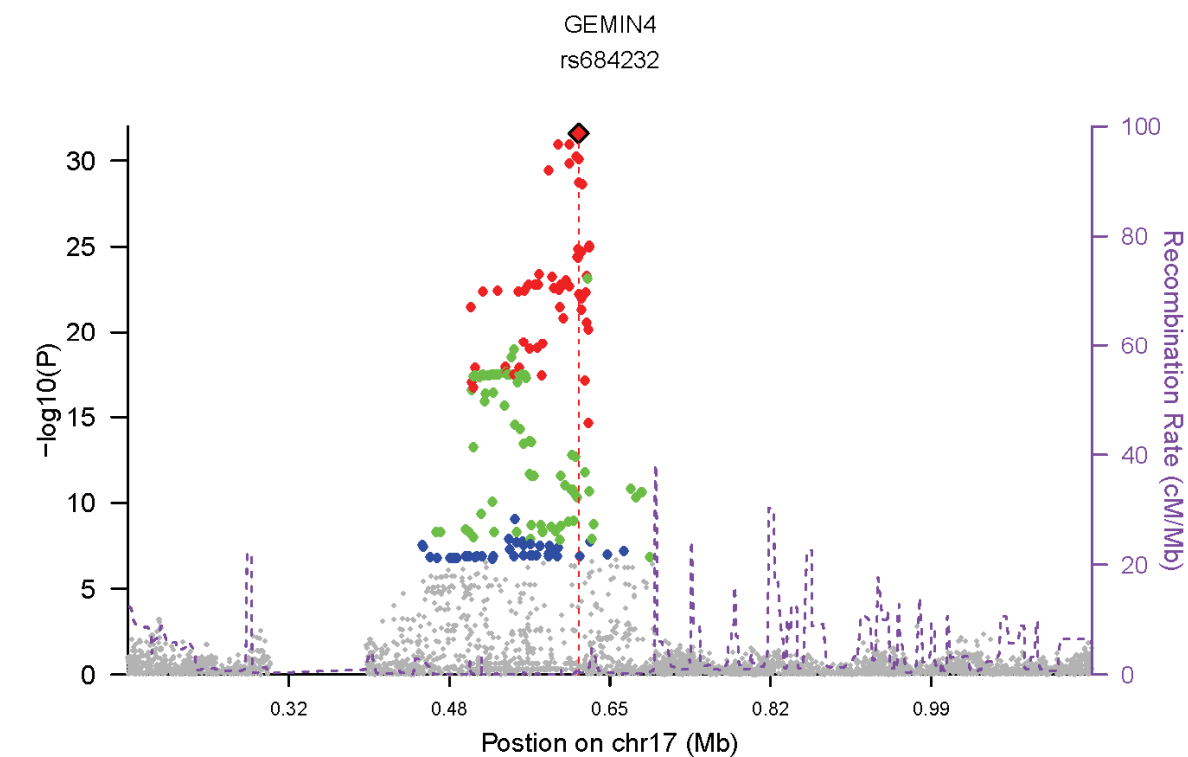
| rsID       | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs7153648 | imputed | Result Type |
|------------|----------|-------|-------|------|--------|----------|------------|-----------|---------|-------------|
| rs216501   | 60640388 | T     | C     | 0.13 | -0.346 | 2.63e-08 | 0.0615     | <0.2      | 0       | Flanking    |
| rs10144415 | 61112667 | G     | C     | 0.10 | -0.792 | 5.30e-33 | -          | 0.778     | 1       | Peak        |
| rs7153648  | 61122526 | C     | G     | 0.09 | -0.783 | 2.45e-28 | 0.3088     | 1.000     | 1       | PC Risk     |
| rs8004224  | 61349255 | A     | C     | 0.03 | -0.720 | 8.16e-09 | 0.9517     | 0.309     | 1       | Flanking    |



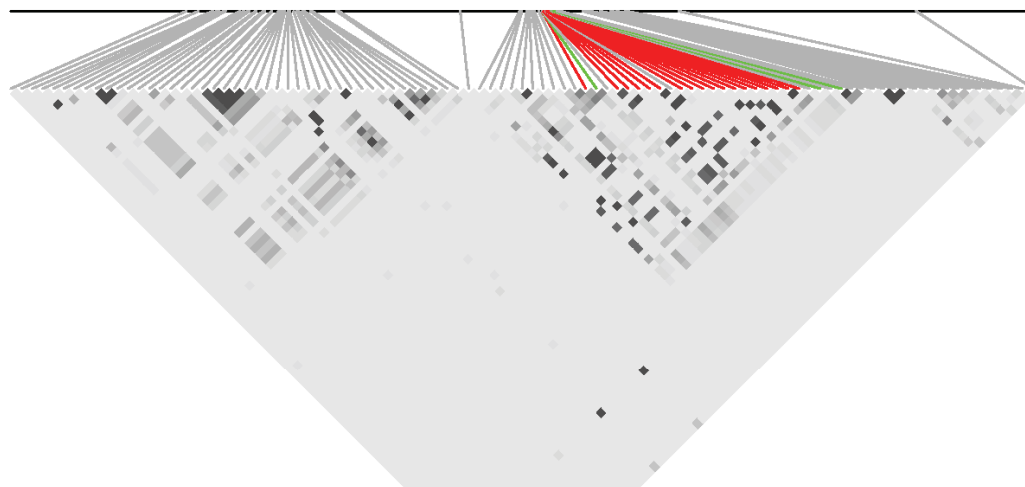
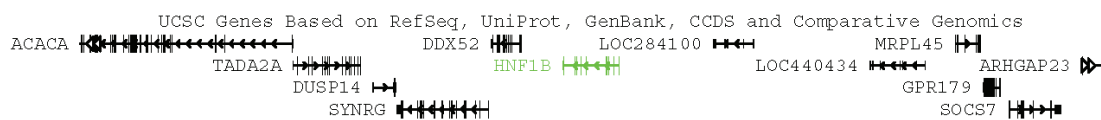
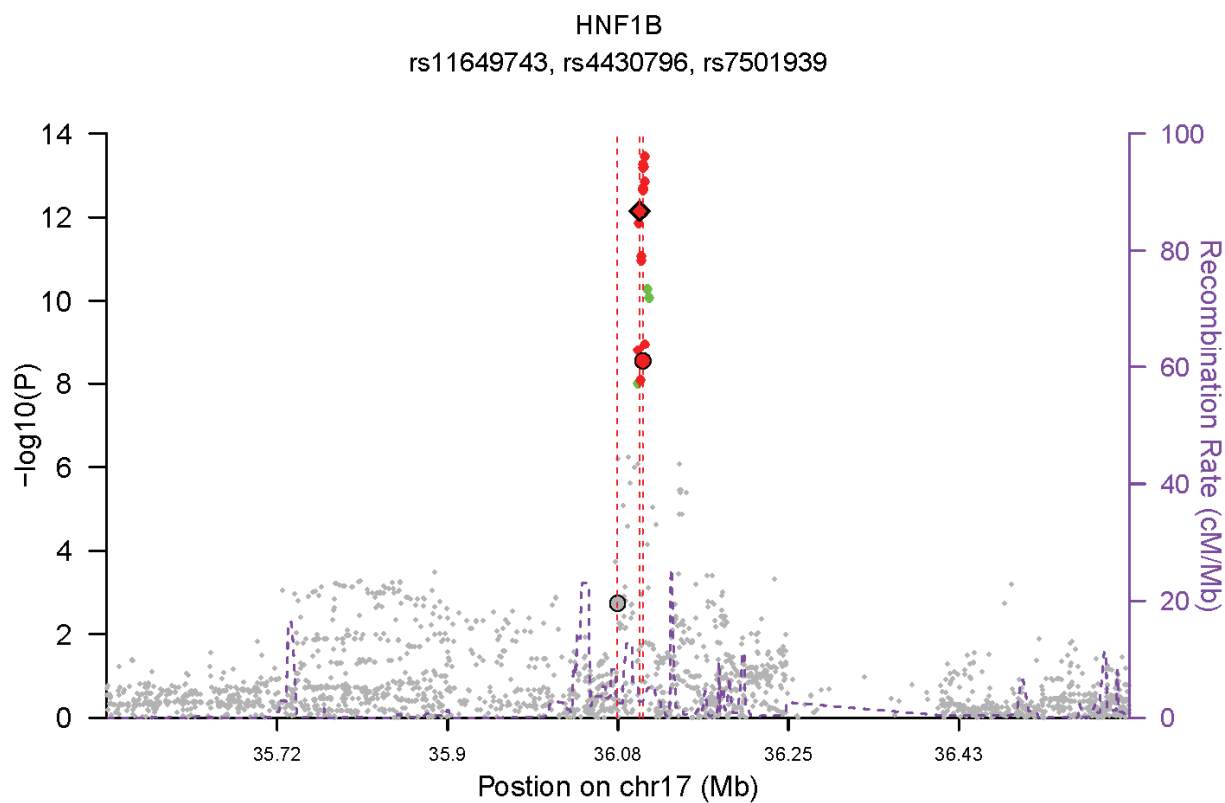
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|-------------|--------|-------|-------|------|--------|----------|------------|----------|---------|-------------|
| rs182175045 | 276230 | T     | G     | 0.03 | 0.140  | 1.24e-08 | 3.38e-08   | <0.2     | 1       | Flanking    |
| rs684232    | 618965 | C     | T     | 0.39 | -0.100 | 1.92e-35 | 6.48e-01   | 1.000    | 0       | PC Risk     |
| rs437948    | 623356 | G     | C     | 0.40 | -0.103 | 1.04e-37 | -          | 0.914    | 1       | Peak        |
| rs2273454   | 685640 | T     | G     | 0.22 | -0.069 | 1.42e-12 | 5.03e-01   | 0.302    | 0       | Flanking    |



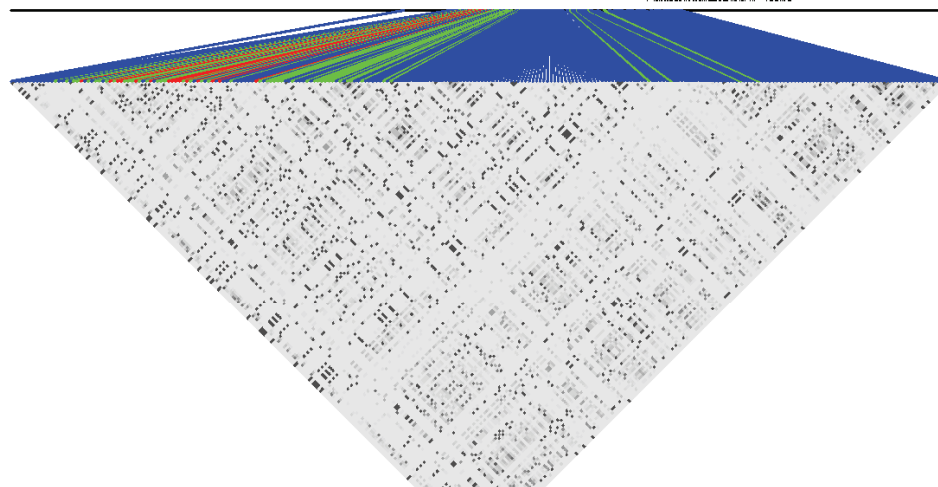
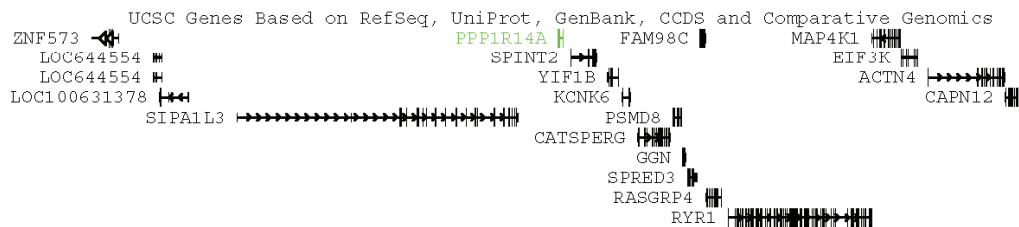
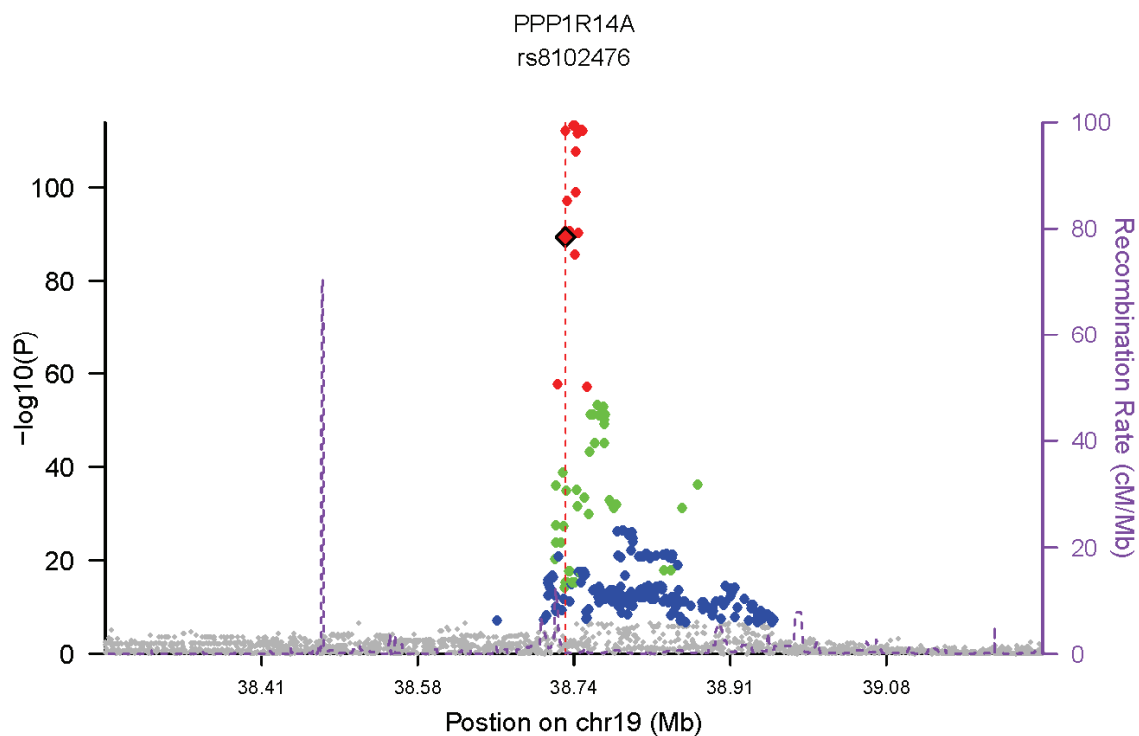
| rsID       | pos    | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs684232 | imputed | Result Type |
|------------|--------|-------|-------|------|--------|----------|------------|----------|---------|-------------|
| rs4968072  | 451732 | G     | A     | 0.35 | -0.112 | 1.38e-08 | 4.56e-01   | <0.2     | 1       | Flanking    |
| rs684232   | 618965 | C     | T     | 0.39 | -0.240 | 8.16e-65 | 6.84e-03   | 1.000    | 0       | PC Risk     |
| rs461251   | 619162 | G     | A     | 0.41 | -0.240 | 3.22e-65 | -          | 0.917    | 1       | Peak        |
| rs72810267 | 698814 | A     | G     | 0.25 | 0.166  | 3.09e-16 | 1.35e-08   | <0.2     | 1       | Flanking    |



| rsID      | pos    | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs684232 | imputed | Result Type |
|-----------|--------|-------|-------|------|--------|----------|------------|----------|---------|-------------|
| rs4968165 | 470314 | A     | C     | 0.18 | -0.070 | 5.08e-09 | 0.2438     | 0.365    | 1       | Flanking    |
| rs2474694 | 618039 | A     | G     | 0.39 | -0.111 | 1.89e-32 | -          | 1.000    | 1       | Peak        |
| rs2955626 | 618100 | C     | G     | 0.49 | 0.094  | 4.31e-25 | 0.0337     | 0.636    | 1       | ReverseBeta |
| rs684232  | 618965 | C     | T     | 0.39 | -0.111 | 2.57e-32 | 0.3981     | 1.000    | 0       | PC Risk     |
| rs2273454 | 685640 | T     | G     | 0.22 | -0.075 | 2.57e-11 | 0.6763     | 0.302    | 0       | Flanking    |

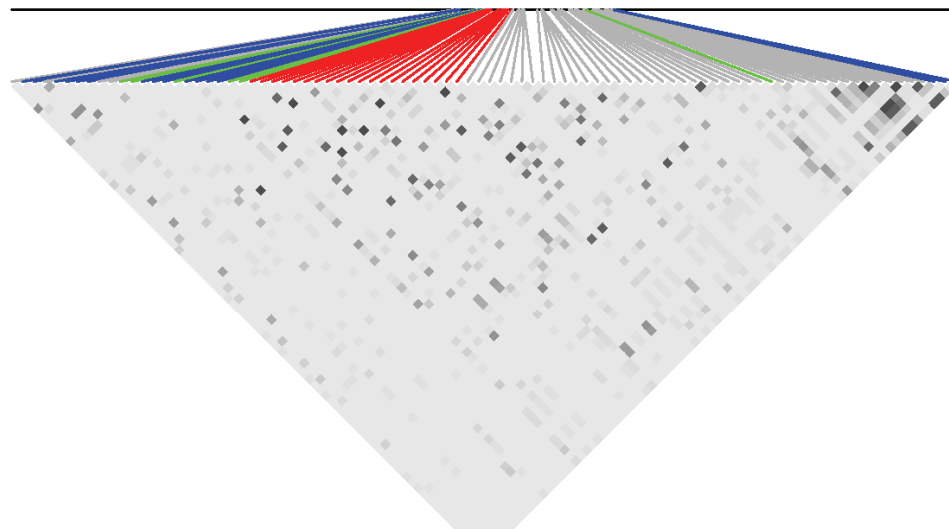
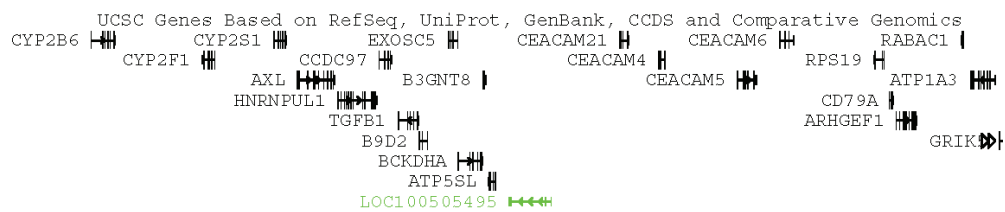
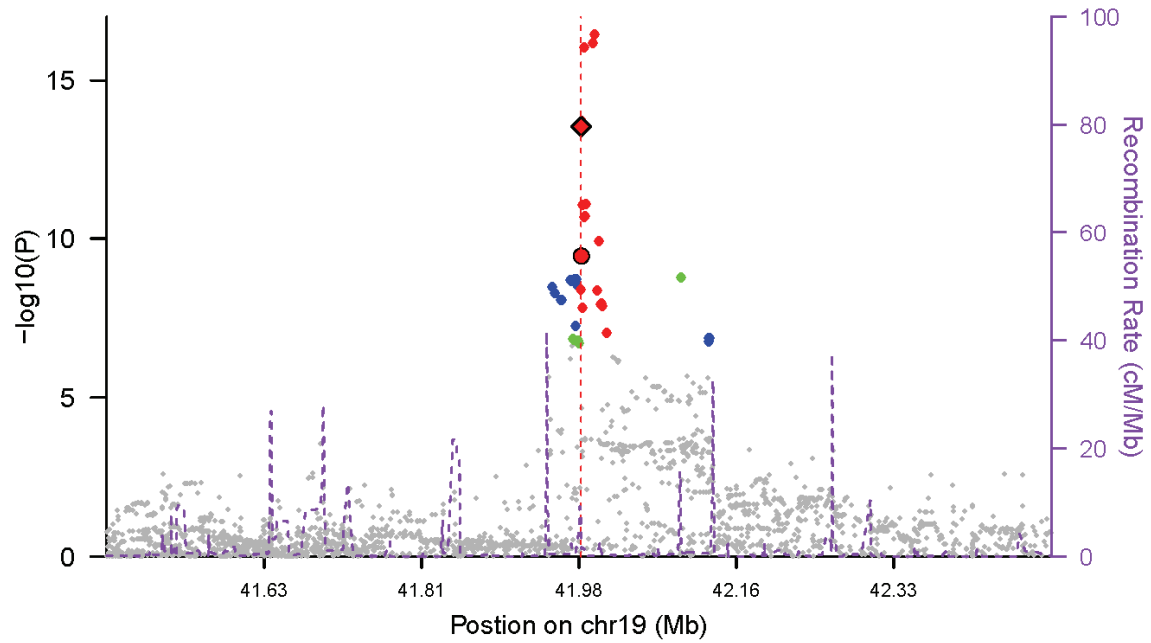


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|------------|----------|-------|-------|------|--------|----------|------------|------------|-----------|-----------|---------|-------------|
| rs11649743 | 36074979 | A     | G     | 0.21 | -0.084 | 1.77e-03 | 0.000774   | 1.000      | <0.2      | <0.2      | 0       | PC Risk     |
| rs7223387  | 36082473 | G     | T     | 0.28 | -0.079 | 1.22e-03 | 0.005402   | 0.633      | <0.2      | <0.2      | 0       | MaxLD       |
| rs2005705  | 36096300 | A     | G     | 0.41 | -0.131 | 1.61e-09 | 0.120599   | <0.2       | 0.809     | 0.519     | 1       | Flanking    |
| rs4430796  | 36098040 | G     | A     | 0.43 | -0.154 | 7.18e-13 | 0.014737   | <0.2       | 1.000     | 0.669     | 0       | PC Risk     |
| rs7501939  | 36101156 | T     | C     | 0.35 | -0.131 | 2.78e-09 | 0.164378   | <0.2       | 0.669     | 1.000     | 0       | PC Risk     |
| rs11263763 | 36103565 | G     | A     | 0.43 | -0.162 | 1.42e-13 | 0.015050   | <0.2       | 0.892     | 0.706     | 1       | MaxLD       |
| rs12453443 | 36104121 | G     | C     | 0.46 | 0.169  | 3.55e-14 | -          | <0.2       | 0.530     | 0.420     | 1       | Peak        |
| rs67143603 | 36108231 | C     | T     | 0.37 | 0.154  | 8.74e-11 | 0.124766   | <0.2       | 0.268     | 0.222     | 1       | Flanking    |

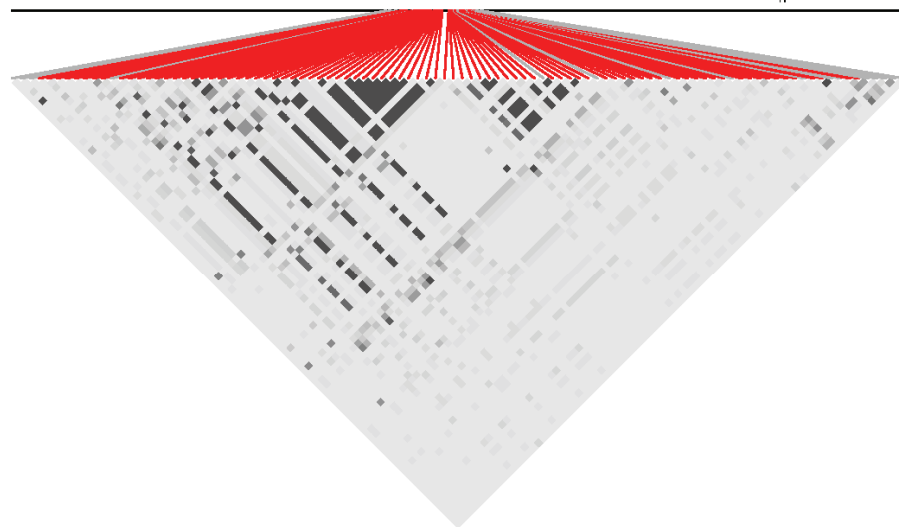
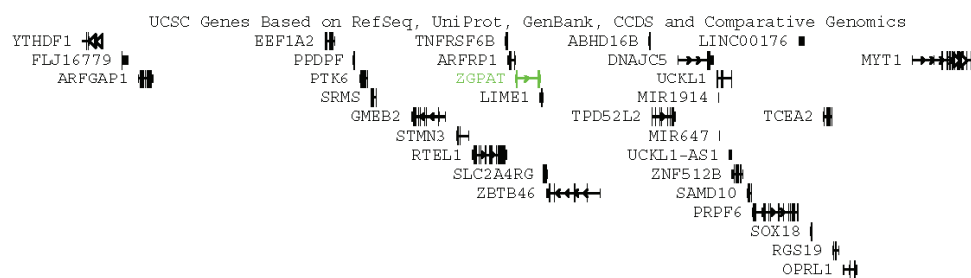
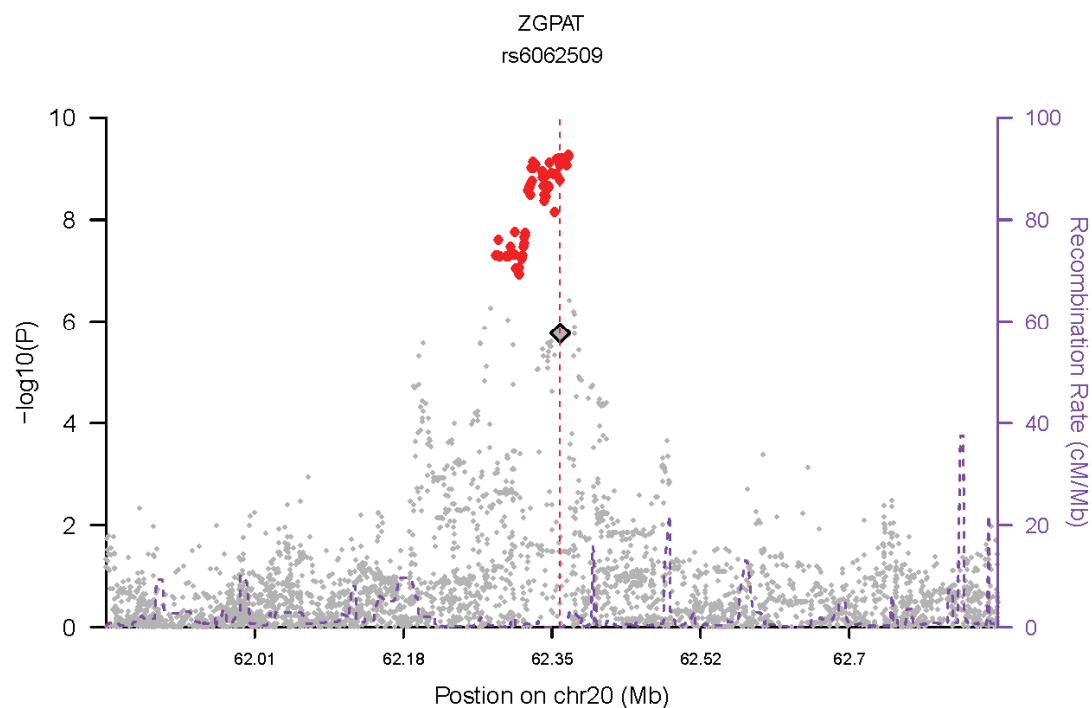


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| rs12978169 | 38715814 | A     | G     | 0.27 | -0.149 | 8.34e-09  | 0.457      | <0.2      | 1       | Flanking    |
| rs4803899  | 38727640 | A     | T     | 0.49 | 0.328  | 2.52e-58  | 0.218      | 0.588     | 1       | ReverseBeta |
| rs8102476  | 38735613 | T     | C     | 0.43 | -0.372 | 4.05e-90  | 0.928      | 1.000     | 0       | PC Risk     |
| rs12976534 | 38743962 | G     | A     | 0.47 | -0.400 | 5.85e-114 | 0.688      | 0.858     | 0       | Peak        |
| rs12610267 | 38744733 | G     | A     | 0.47 | -0.400 | 5.85e-114 | -          | 0.855     | 0       | Peak        |
| rs7259574  | 38956176 | A     | G     | 0.35 | -0.142 | 1.52e-08  | 0.938      | <0.2      | 1       | Flanking    |

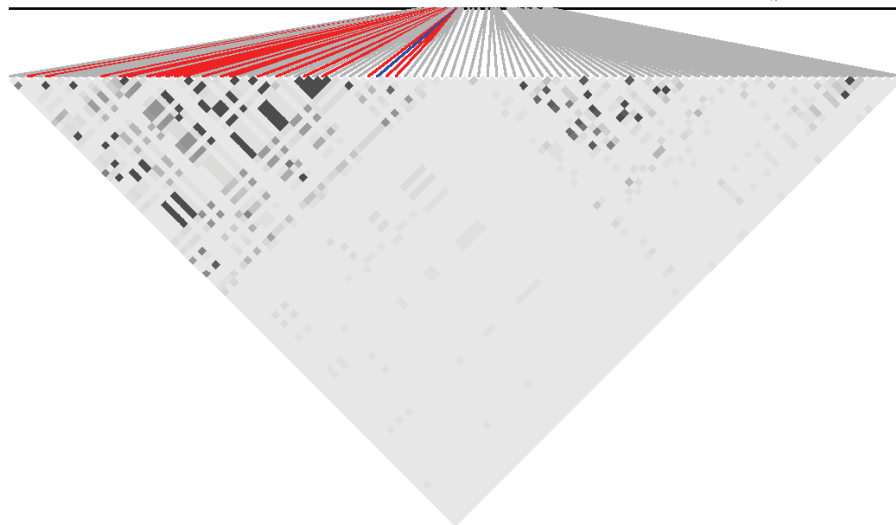
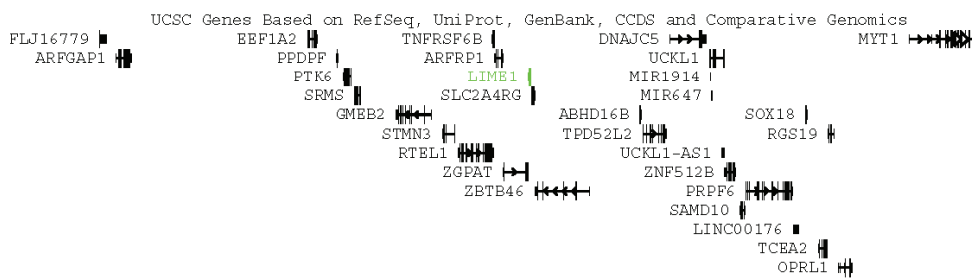
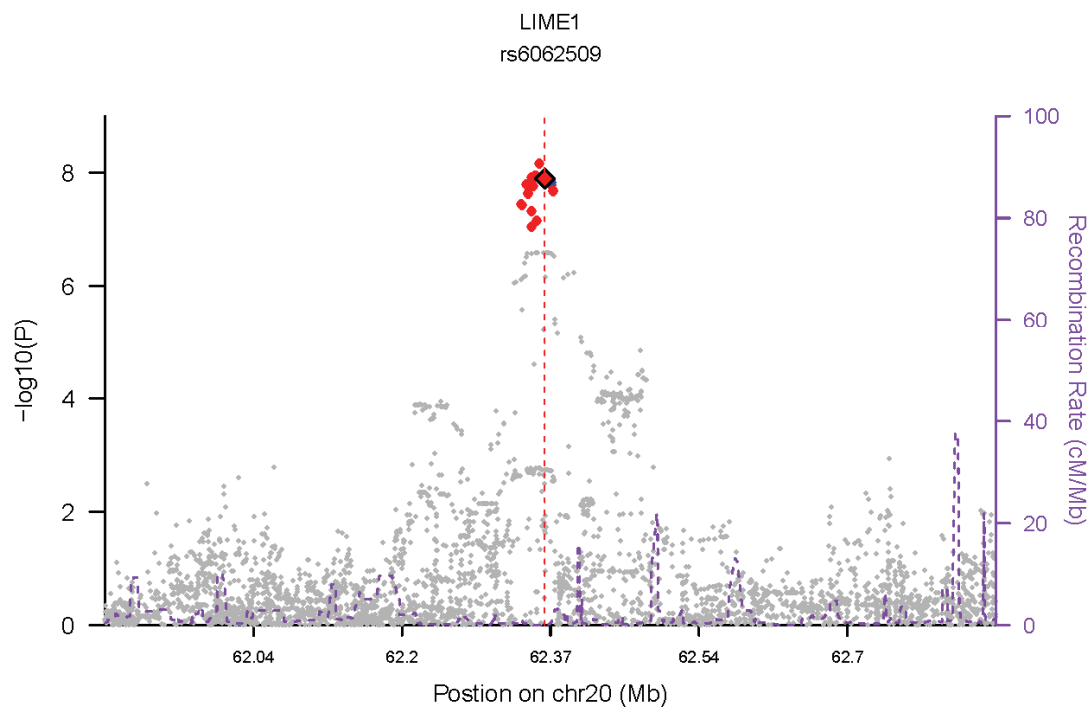
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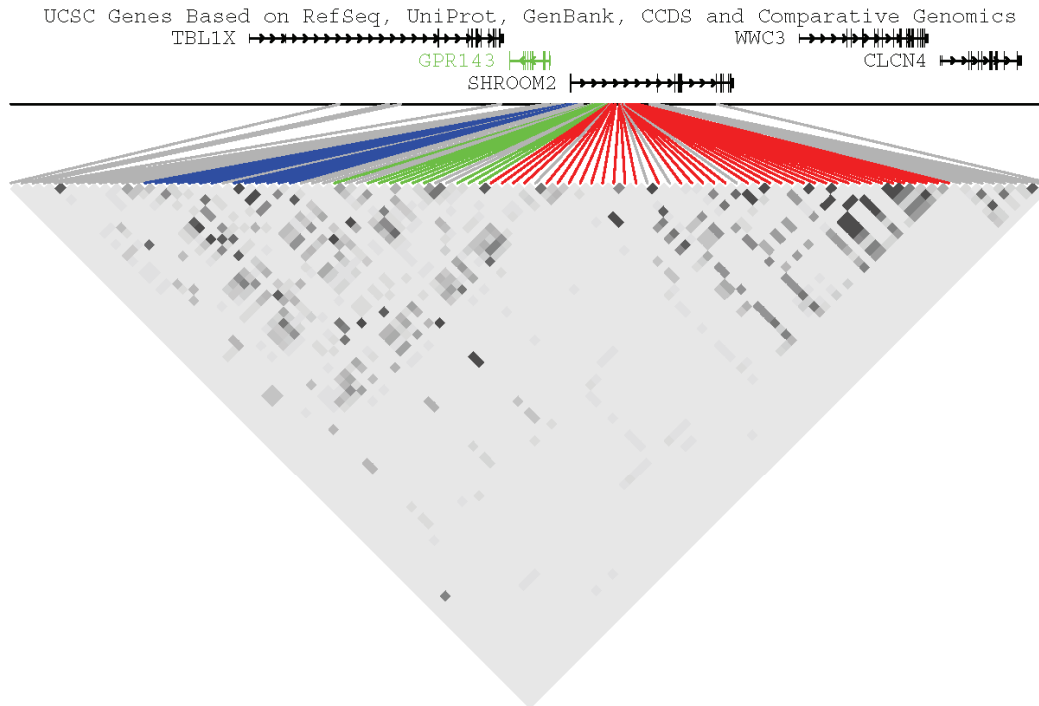
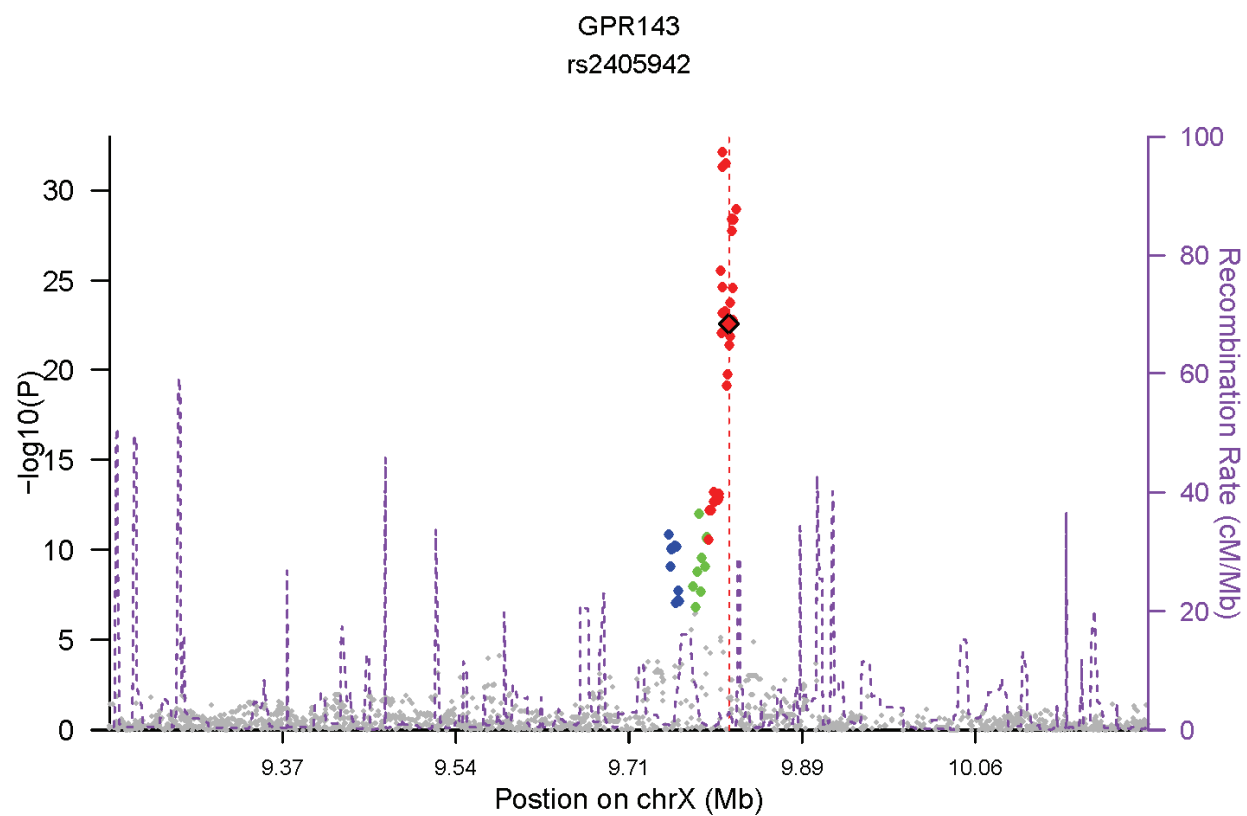
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|------------|----------|-------|-------|------|--------|----------|------------|------------|----------|---------|-------------|
| rs2316973  | 41953928 | G     | T     | 0.05 | -0.271 | 3.49e-09 | 0.00187    | <0.2       | <0.2     | 0       | Flanking    |
| rs11672691 | 41985587 | A     | G     | 0.25 | -0.173 | 2.86e-14 | 0.76263    | 1.000      | 0.860    | 0       | PC Risk     |
| rs887391   | 41985624 | C     | T     | 0.22 | -0.150 | 3.46e-10 | 0.46068    | 0.860      | 1.000    | 1       | PC Risk     |
| rs2191139  | 42001210 | T     | C     | 0.23 | -0.198 | 3.64e-17 | -          | 0.804      | 0.667    | 0       | Peak        |
| rs731055   | 42096416 | C     | T     | 0.17 | -0.166 | 1.68e-09 | 0.87113    | 0.382      | 0.284    | 1       | Flanking    |



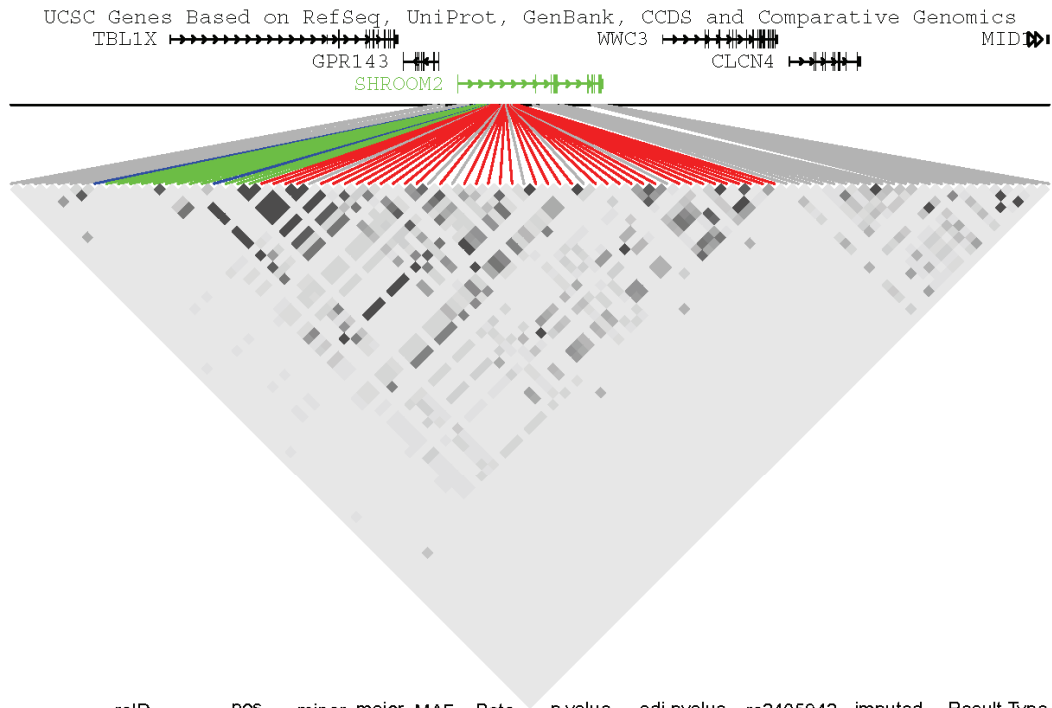
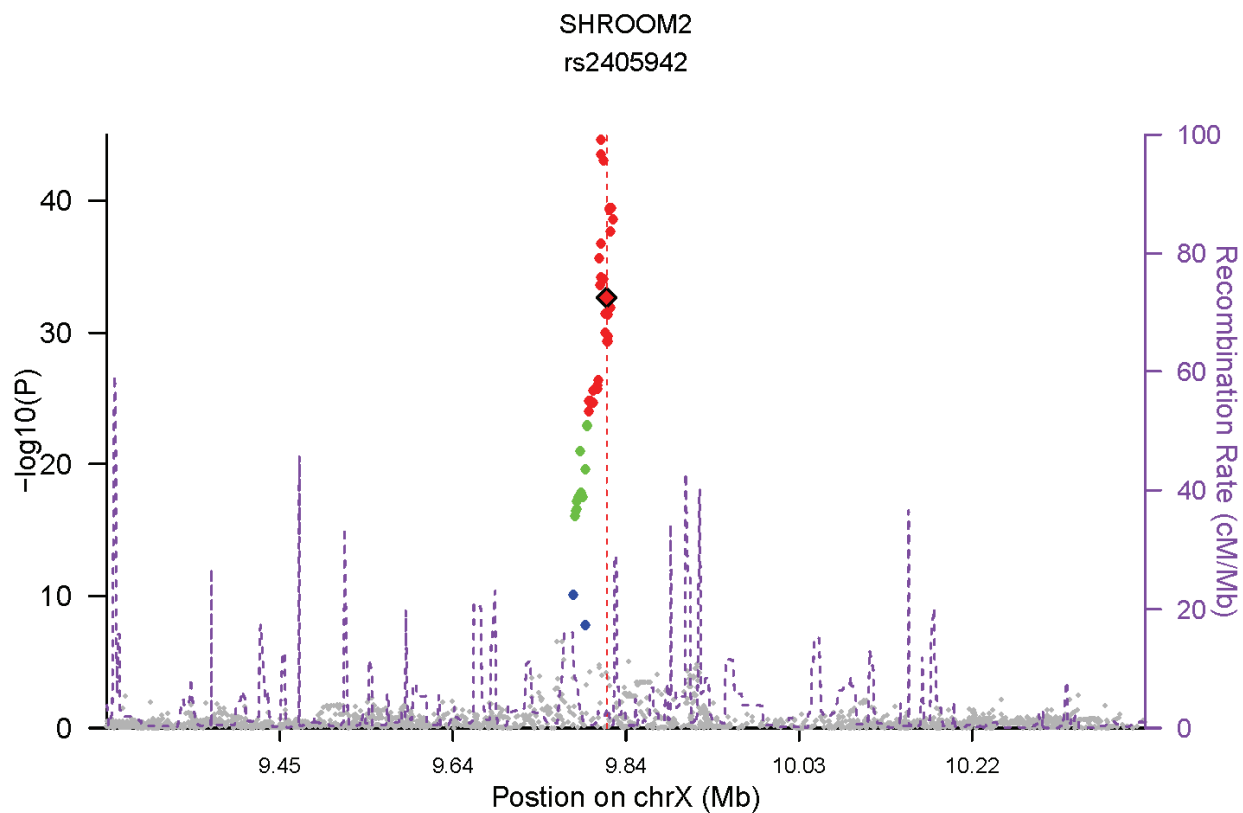
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|-----------|----------|-------|-------|------|--------|----------|------------|-----------|---------|-------------|
| rs3761124 | 62288752 | T     | C     | 0.24 | -0.039 | 5.04e-08 | 0.794      | 0.539     | 0       | Flanking    |
| rs6062509 | 62362563 | G     | T     | 0.31 | -0.033 | 1.70e-06 | 0.294      | 1.000     | 1       | PC Risk     |
| rs2253829 | 62373079 | C     | G     | 0.25 | -0.045 | 5.46e-10 | -          | 0.736     | 1       | Peak        |



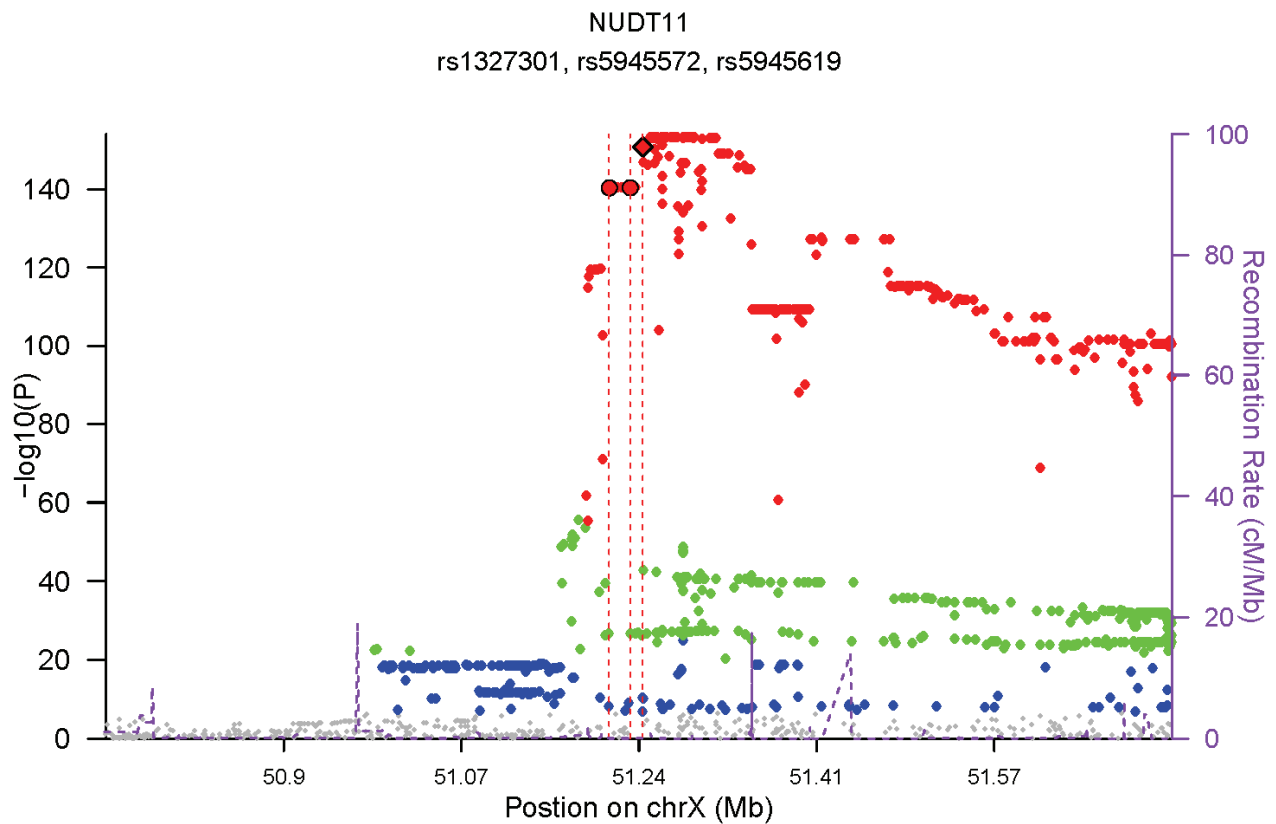
| rsID      | pos      | minor | major | MAF  | Beta  | p.value  | adj.pvalue | rs6062509 | imputed | Result Type |
|-----------|----------|-------|-------|------|-------|----------|------------|-----------|---------|-------------|
| rs6062497 | 62336258 | C     | T     | 0.32 | 0.081 | 3.61e-08 | 0.770      | 0.934     | 1       | Flanking    |
| rs6011058 | 62356627 | C     | T     | 0.31 | 0.086 | 7.01e-09 | -          | 0.984     | 0       | Peak        |
| rs6062509 | 62362563 | G     | T     | 0.31 | 0.084 | 1.28e-08 | 0.507      | 1.000     | 1       | PC Risk     |
| rs4809221 | 62372706 | G     | A     | 0.31 | 0.083 | 2.17e-08 | 0.344      | 0.996     | 1       | Flanking    |



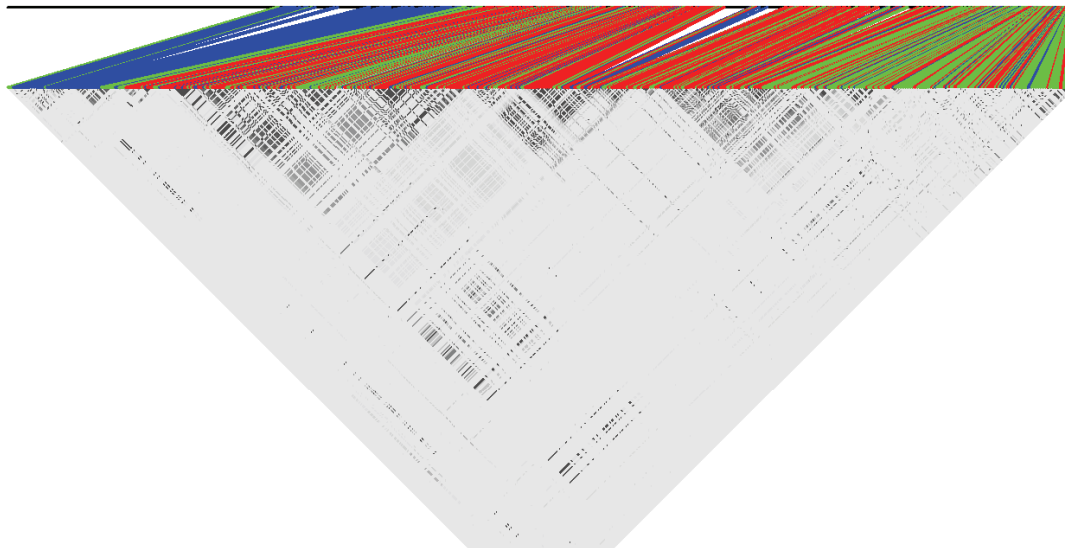
| rsID        | pos     | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs2405942 | imputed | Result Type |
|-------------|---------|-------|-------|------|--------|----------|------------|-----------|---------|-------------|
| rs111660911 | 9754135 | C     | A     | 0.17 | -0.127 | 1.51e-11 | 1.19e-14   | <0.2      | 1       | Flanking    |
| rs4830661   | 9807693 | A     | G     | 0.27 | 0.170  | 7.39e-33 | -          | 0.767     | 0       | Peak        |
| rs2405942   | 9814135 | G     | A     | 0.23 | 0.154  | 2.50e-23 | 7.80e-01   | 1.000     | 0       | PC Risk     |
| rs5934705   | 9821399 | T     | C     | 0.31 | 0.156  | 1.17e-29 | 1.98e-01   | 0.678     | 0       | Flanking    |



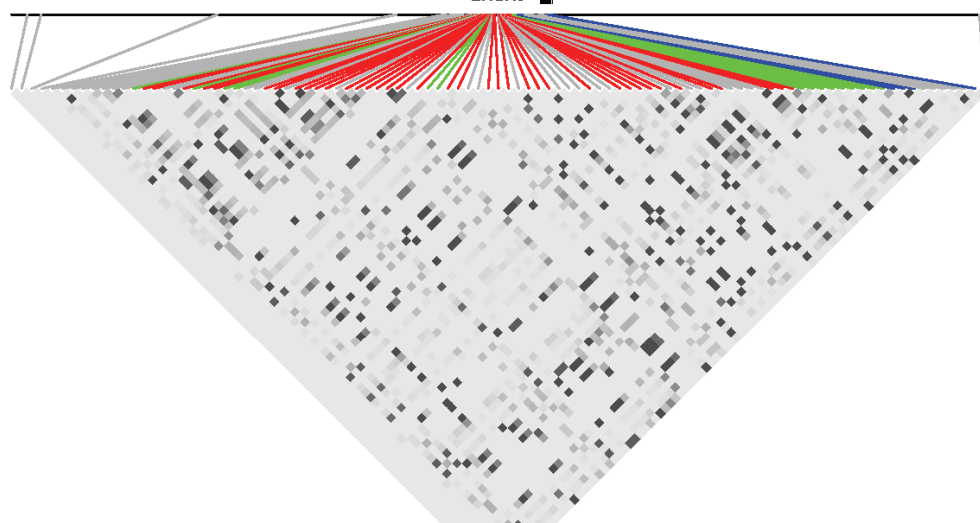
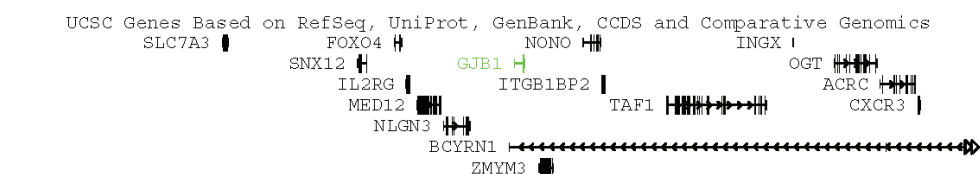
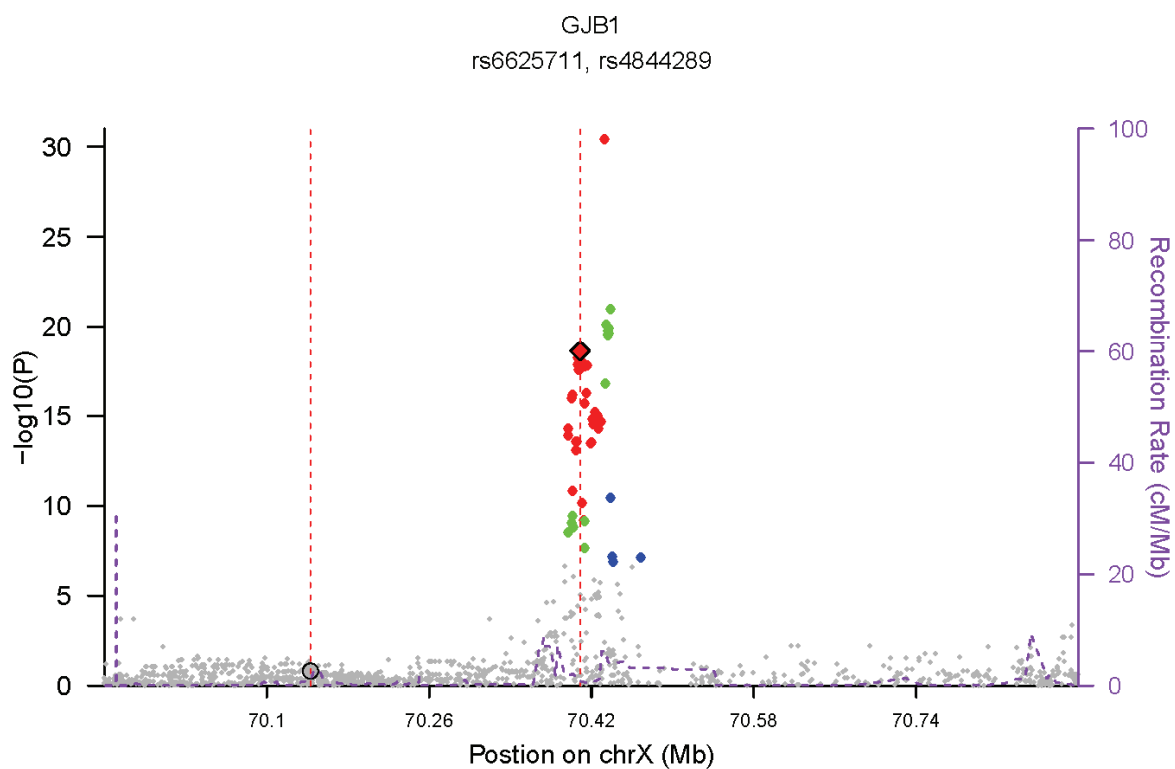
| rsID        | pos     | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs2405942 | imputed | Result Type |
|-------------|---------|-------|-------|------|--------|----------|------------|-----------|---------|-------------|
| rs55743966  | 9776909 | A     | T     | 0.38 | 0.060  | 8.41e-11 | 0.0881     | <0.2      | 0       | Flanking    |
| rs116074556 | 9790986 | G     | A     | 0.15 | -0.090 | 1.80e-08 | 0.0357     | <0.2      | 1       | ReverseBeta |
| rs4830661   | 9807693 | A     | G     | 0.27 | 0.133  | 2.62e-45 | -          | 0.767     | 0       | Peak        |
| rs2405942   | 9814135 | G     | A     | 0.23 | 0.124  | 2.19e-33 | 0.6824     | 1.000     | 0       | PC Risk     |
| rs5934705   | 9821399 | T     | C     | 0.31 | 0.121  | 2.71e-39 | 0.2854     | 0.678     | 0       | Flanking    |



UCSC Genes Based on RefSeq, UniProt, GenBank, CCDS and Comparative Genomics  
 NUDT10 | NUDT11 | GSPT2 | MAGED1



| rsID        | pos      | minor | major | MAF  | Beta   | p.value   | adj.pvalue | rs1327301 | rs5945572 | rs5945619 | imputed | Result Type |
|-------------|----------|-------|-------|------|--------|-----------|------------|-----------|-----------|-----------|---------|-------------|
| rs187324800 | 50989678 | T     | C     | 0.19 | 0.310  | 2.90e-23  | 0.167      | 0.210     | 0.210     | 0.205     | 1       | Flanking    |
| rs1327301   | 51210057 | T     | C     | 0.44 | 0.460  | 3.67e-141 | 0.527      | 1.000     | 1.000     | 0.928     | 1       | PC Risk     |
| rs5945572   | 51229683 | A     | G     | 0.44 | 0.460  | 3.43e-141 | 0.521      | 1.000     | 1.000     | 0.928     | 0       | PC Risk     |
| rs5945619   | 51241672 | C     | T     | 0.45 | 0.468  | 2.10e-151 | 0.593      | 0.928     | 0.928     | 1.000     | 1       | PC Risk     |
| rs2384958   | 51249397 | T     | A     | 0.45 | 0.469  | 6.37e-154 | -          | 0.934     | 0.934     | 0.994     | 1       | Peak        |
| rs141135935 | 51256992 | G     | A     | 0.46 | -0.454 | 1.07e-104 | 0.115      | 0.713     | 0.713     | 0.748     | 1       | ReverseBeta |
| rs190928294 | 52097394 | A     | G     | 0.08 | 0.290  | 5.07e-09  | 0.653      | <0.2      | <0.2      | <0.2      | 1       | Flanking    |



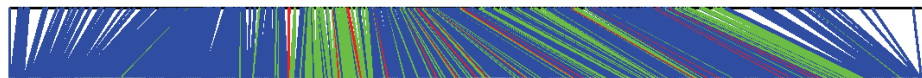
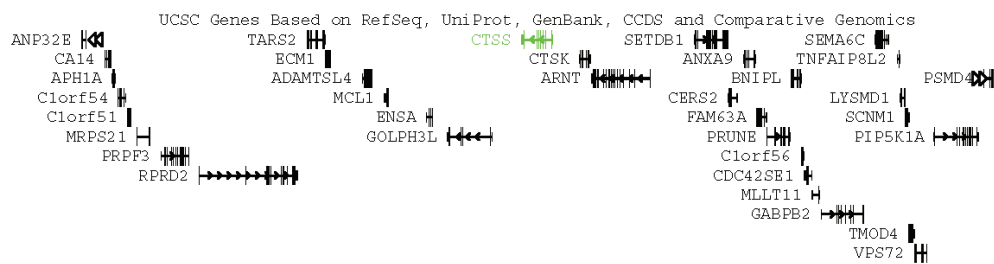
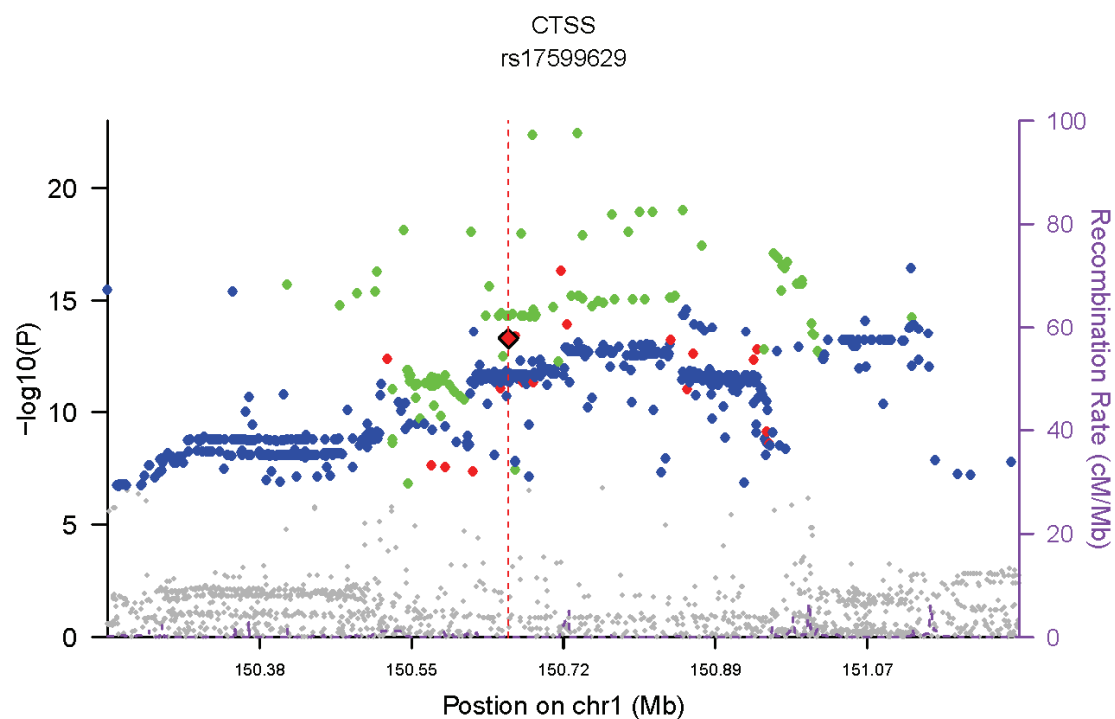
| rsID        | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs6625711 | rs4844289 | imputed | Result Type |
|-------------|----------|-------|-------|------|--------|----------|------------|-----------|-----------|---------|-------------|
| rs6525442   | 70117463 | G     | A     | 0.49 | -0.042 | 3.11e-02 | 0.1462     | 0.722     | <0.2      | 1       | MaxLD       |
| rs6625711   | 70139850 | A     | T     | 0.42 | 0.030  | 1.46e-01 | 0.3088     | 1.000     | <0.2      | 1       | PC Risk     |
| rs56232551  | 70396389 | T     | C     | 0.18 | -0.143 | 3.26e-09 | 0.1159     | <0.2      | 0.327     | 1       | Flanking    |
| rs4844289   | 70407983 | G     | A     | 0.39 | -0.167 | 2.45e-19 | 0.1946     | <0.2      | 1.000     | 1       | PC Risk     |
| rs747181    | 70432708 | A     | G     | 0.31 | -0.221 | 4.01e-31 | -          | <0.2      | 0.512     | 0       | Peak        |
| rs184587106 | 70438659 | A     | C     | 0.09 | -0.225 | 3.63e-11 | 0.0497     | <0.2      | <0.2      | 1       | Flanking    |

## Supplementary Figure 3 - Regional association plots for each of the genes placed in Group 2

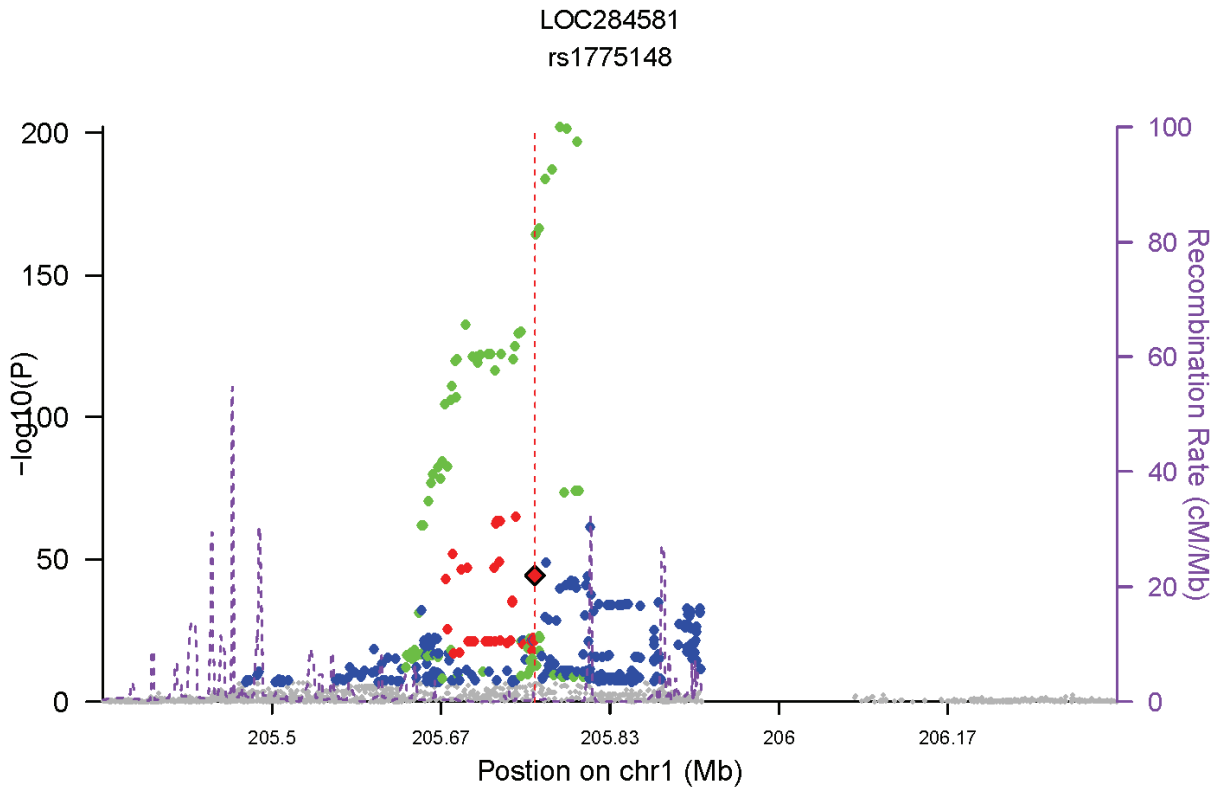
Regional association plots display eQTL results for the target gene listed in the title and all SNPs in the target gene region. All PC risk-SNPs in the region are listed in the second line of the title. The x-axis shows the chromosomal position of the SNPs (with expressed genes in the region displayed below) and the y-axis is the  $-\log_{10}(\text{p-value})$  obtained by regressing normalized expression levels for the target gene on the number of minor alleles of each SNP genotype adjusted for histologic characteristics and 14 expression principal components. The PC risk-SNP position is indicated by a dotted red vertical line with the eQTL result displayed as a diamond. Colored points show all Bonferroni significant results with the color defined by LD between the SNP and the PC risk-SNP (LD  $r^2 > 0.5$  red, between 0.2 – 0.5 green, and  $\leq 0.2$  blue). If the region contains multiple PC risk-SNPs, the points are colored based on LD with the PC risk-SNP that is in highest LD with the eQTL peak associated SNP. The eQTL result for this PC risk-SNP is displayed as diamond, the data points for all of the other PC risk-SNPs are displayed as an open circle.

The table below the LD plot shows results for the peak-SNP (Result Type = Peak) and the most upstream and downstream SNPs (Result Type = Flanking) surpassing the Bonferroni significance threshold ( $P < 1.96\text{E-}07$  for primary analysis and  $P < 3.02\text{E-}08$  for second stage) as well as the top result for each PC risk SNP (Result Type = PC Risk) and, if a SNP in LD ( $r^2 > 0.5$ ) with the PC risk SNP has a stronger association than the PC risk SNP (i.e., lower p-value), then the LD SNP with the strongest association is also presented (Result Type = MaxLD). Finally, if all of these SNPs have a single direction of effect, e.g., all have positive beta coefficients thus increasing gene expression, and if any Bonferroni significant results were

observed in the opposite direction, then the strongest result among the opposite direction SNPs is also presented (Result Type = ReverseBeta).

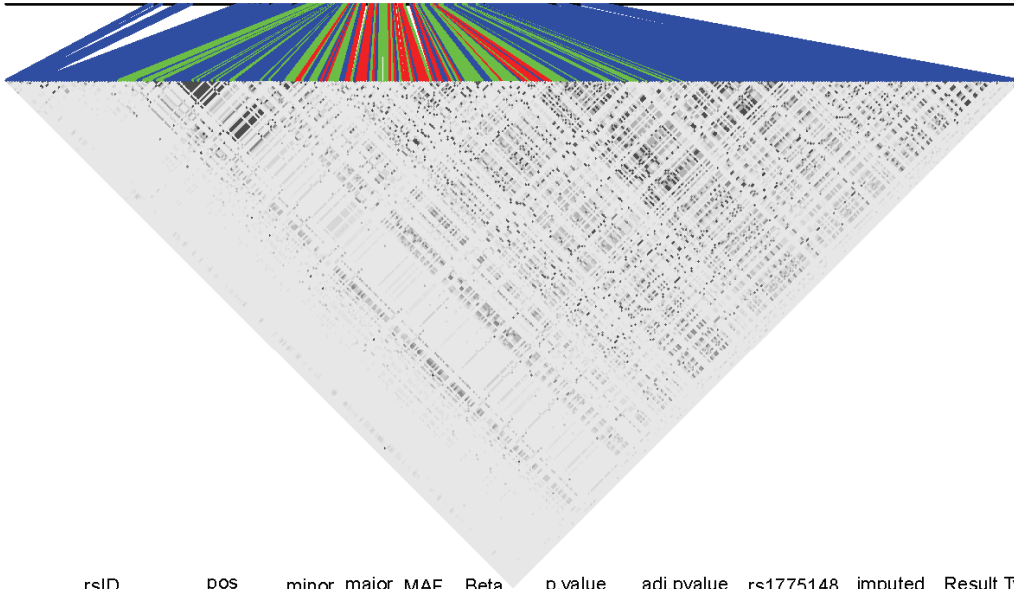


| rsID        | pos       | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs17599629 | imputed | Result Type |
|-------------|-----------|-------|-------|------|--------|----------|------------|------------|---------|-------------|
| rs143192984 | 149758064 | A     | G     | 0.08 | -0.207 | 3.43e-09 | 3.07e-02   | <0.2       | 1       | Flanking    |
| rs17599629  | 150658287 | G     | A     | 0.25 | -0.143 | 5.18e-14 | 1.87e-02   | 1.000      | 0       | PC Risk     |
| rs75056606  | 150718602 | G     | T     | 0.18 | -0.174 | 4.94e-17 | 3.58e-02   | 0.636      | 0       | MaxLD       |
| rs12568757  | 150729793 | G     | A     | 0.42 | 0.130  | 6.02e-16 | 1.25e-10   | 0.206      | 0       | ReverseBeta |
| rs41271951  | 150737220 | G     | A     | 0.11 | -0.252 | 3.70e-23 | -          | 0.345      | 1       | Peak        |
| rs78685532  | 150738197 | C     | T     | 0.42 | 0.130  | 6.02e-16 | 1.25e-10   | 0.206      | 0       | ReverseBeta |
| rs7534124   | 150739073 | C     | T     | 0.42 | 0.130  | 6.02e-16 | 1.25e-10   | 0.206      | 1       | ReverseBeta |
| rs34834099  | 151502427 | T     | C     | 0.07 | -0.198 | 9.37e-09 | 1.20e-02   | <0.2       | 1       | Flanking    |

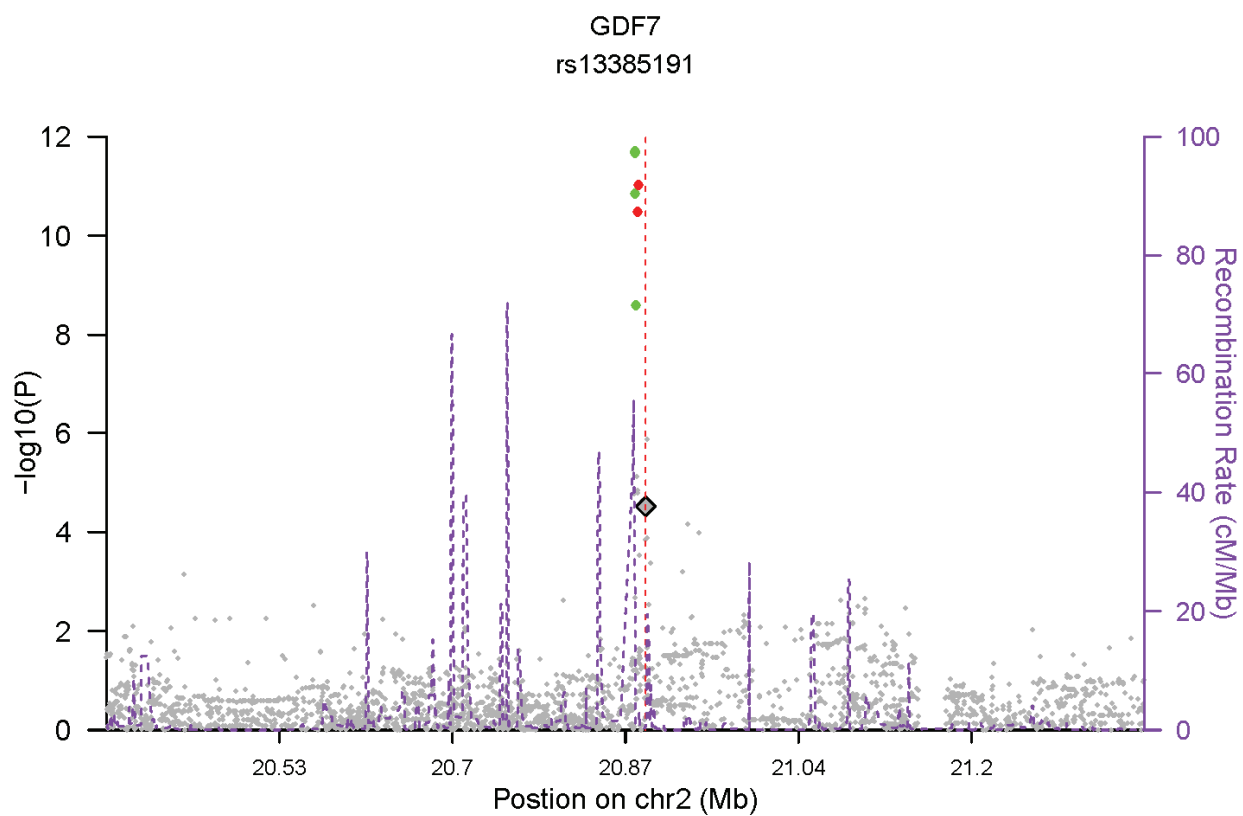


UCSC Genes Based on RefSeq, UniProt, GenBank, CCDS and Comparative Genomics

CDK18 NUCKS1 SLC26A9 Clorf186  
CDK18 RAB7L1  
LOC284578 SLC41A1  
MFSD4 PM20D1  
SLC45A3 LOC284581 CTSE

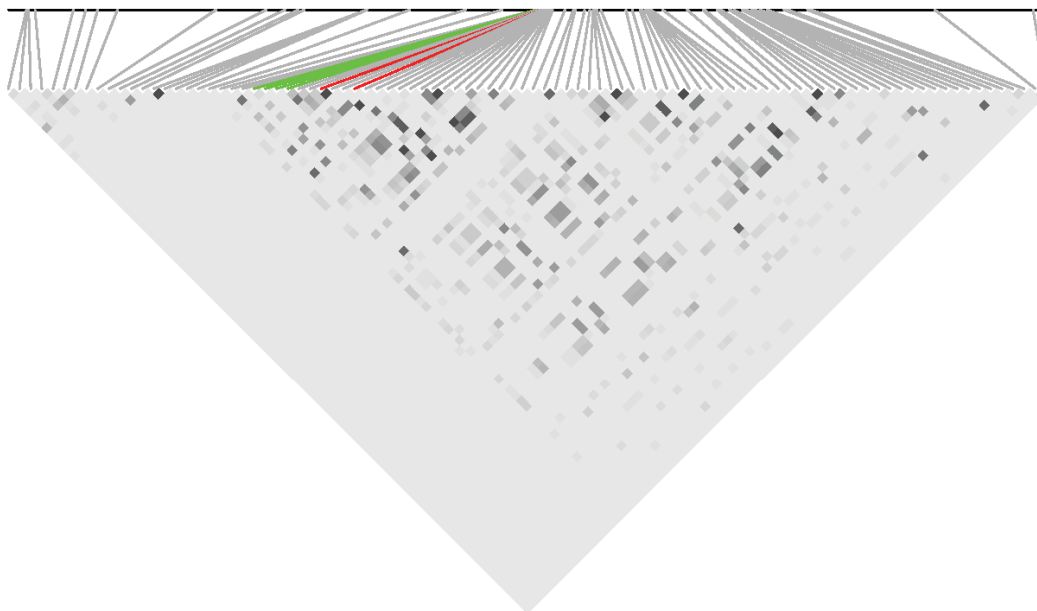


| rsID       | pos       | minor | major | MAF  | Beta   | p.value   | adj.pvalue | rs1775148 | imputed | Result Type |
|------------|-----------|-------|-------|------|--------|-----------|------------|-----------|---------|-------------|
| rs77694338 | 205473772 | C     | T     | 0.27 | 0.573  | 2.41e-08  | 0.82382    | <0.2      | 1       | Flanking    |
| rs708723   | 205739266 | C     | T     | 0.49 | -1.261 | 1.62e-65  | 0.58505    | 0.678     | 0       | MaxLD       |
| rs1775148  | 205757824 | C     | T     | 0.43 | -1.126 | 4.77e-45  | 0.57327    | 1.000     | 1       | PC Risk     |
| rs9438393  | 205782718 | G     | A     | 0.38 | 1.735  | 1.72e-202 | -          | 0.363     | 0       | Peak        |
| rs7413698  | 205921859 | G     | A     | 0.45 | -0.589 | 3.60e-12  | 0.00878    | <0.2      | 0       | Flanking    |

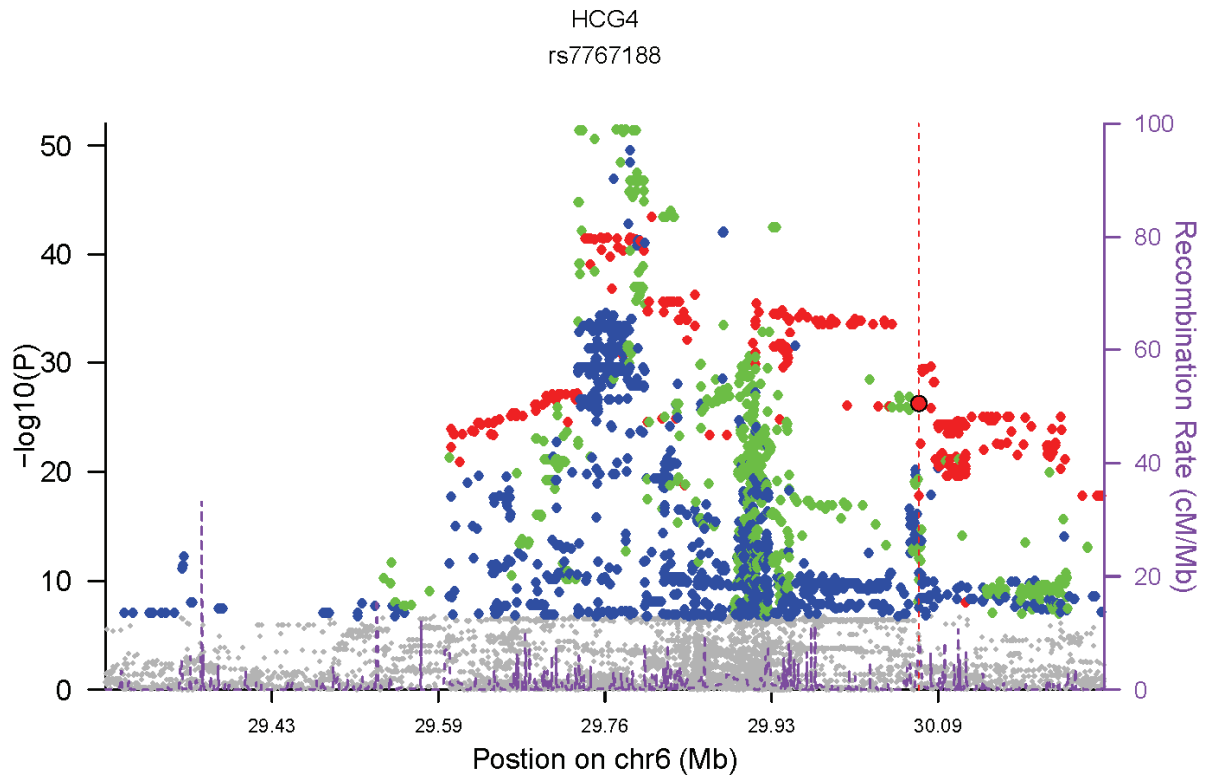


UCSC Genes Based on RefSeq, UniProt, GenBank, CCDS and Comparative Genomics

SDC1 PUM2 RHOB HSPBP3 GDF7 APOB C2orf43

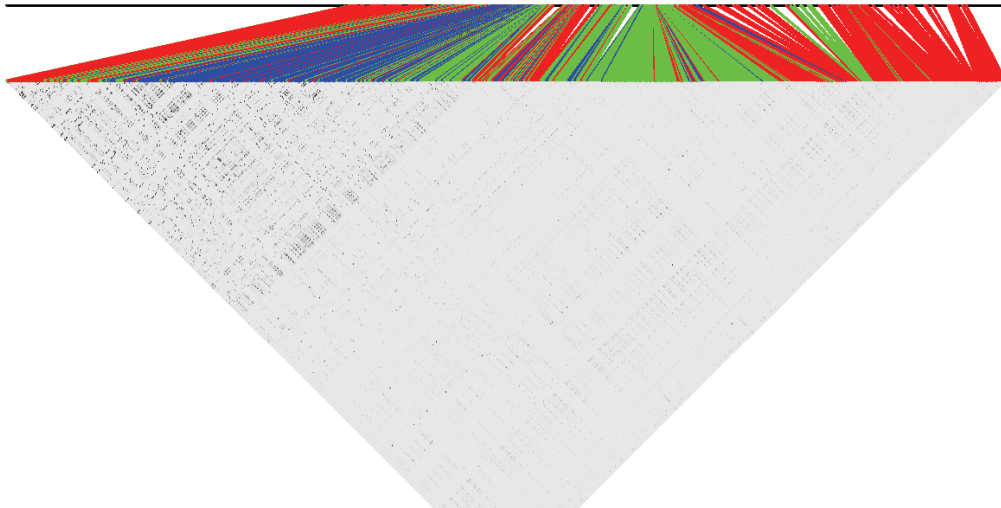


| rsID       | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs13385191 | imputed | Result Type |
|------------|----------|-------|-------|------|--------|----------|------------|------------|---------|-------------|
| rs9306894  | 20878105 | G     | A     | 0.37 | -0.181 | 2.12e-12 | 0.531      | 0.479      | 1       | Flanking    |
| rs9306895  | 20878153 | C     | T     | 0.37 | -0.181 | 2.03e-12 | -          | 0.479      | 1       | Peak        |
| rs2289081  | 20881840 | C     | G     | 0.36 | -0.173 | 9.42e-12 | 0.594      | 0.547      | 1       | MaxLD       |
| rs13385191 | 20888265 | G     | A     | 0.24 | -0.120 | 3.07e-05 | 0.417      | 1.000      | 1       | PC Risk     |

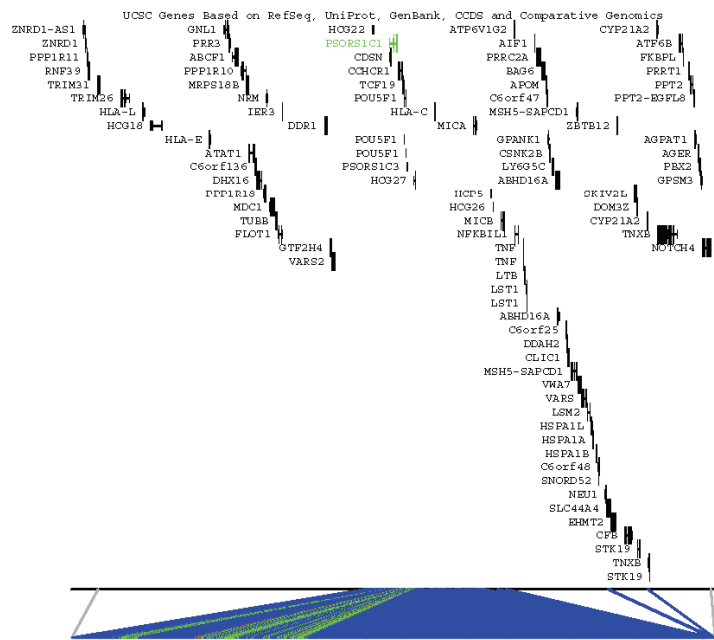
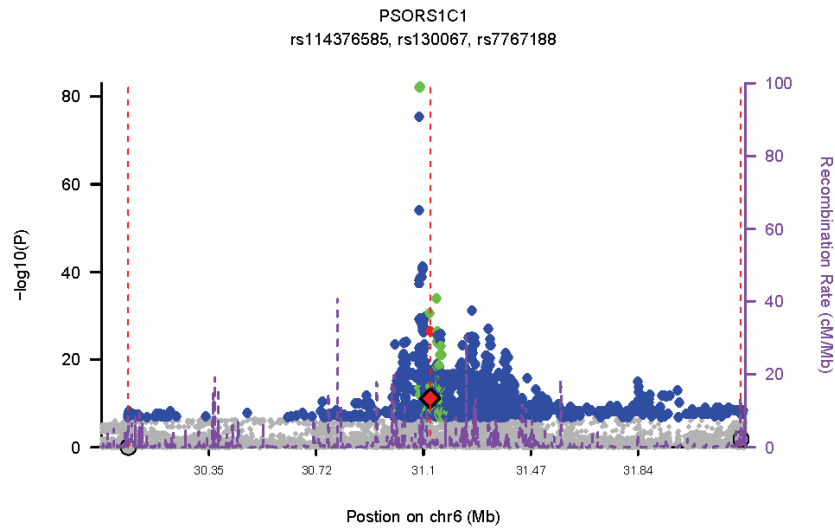


UCSC Genes Based on RefSeq, UniProt, GenBank, CCDS and Comparative Genomics

MAS1L | UBD | MOG | HLA-F | HLA-G | HLA-H | ZNRD1-AS1 | HLA-L | HCG4  
 GABBR1 | HLA-F-AS1 | HLA-A | ZNRD1 | TRIM31 | HCG1  
 HLA-F-AS1 | PPP1R11 | RNF39 | TRIM26

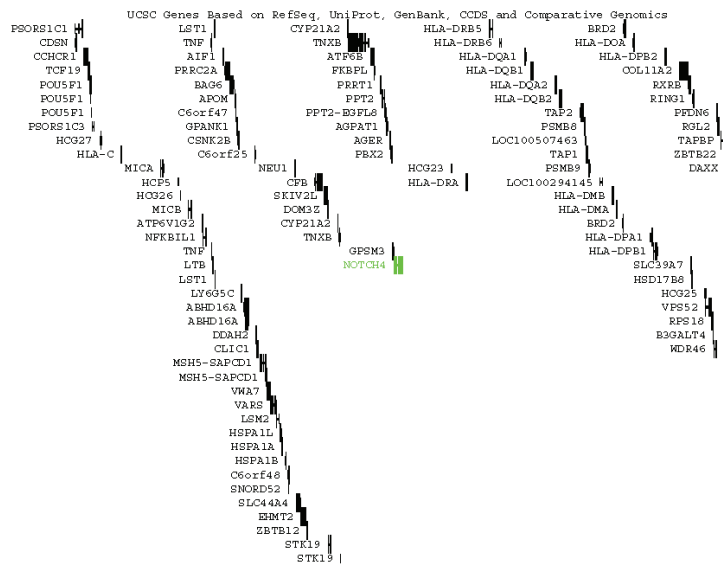
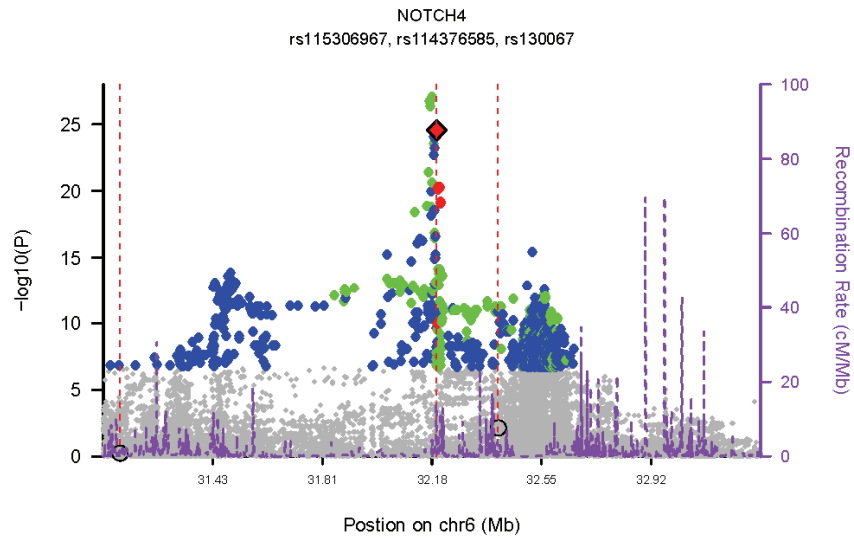


| rsID        | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs7767188 | imputed | Result Type |
|-------------|----------|-------|-------|------|--------|----------|------------|-----------|---------|-------------|
| rs116556815 | 28714044 | G     | C     | 0.15 | -0.261 | 1.60e-08 | 0.032818   | <0.2      | 1       | Flanking    |
| rs114651782 | 29771298 | T     | A     | 0.38 | 0.476  | 3.73e-52 | -          | 0.458     | 1       | Peak        |
| rs2735030   | 29775950 | C     | A     | 0.38 | 0.476  | 3.73e-52 | 0.218861   | 0.458     | 0       | Peak        |
| rs114865932 | 29781011 | T     | A     | 0.38 | 0.476  | 3.73e-52 | 0.218861   | 0.458     | 1       | Peak        |
| rs148465275 | 29806786 | T     | A     | 0.34 | 0.457  | 3.66e-44 | 0.549773   | 0.510     | 1       | MaxLD       |
| rs7767188   | 30073776 | A     | G     | 0.24 | 0.404  | 5.28e-27 | 0.078225   | 1.000     | 0       | PC Risk     |
| rs148642004 | 30838043 | C     | G     | 0.19 | -0.240 | 2.45e-08 | 0.000527   | <0.2      | 1       | Flanking    |



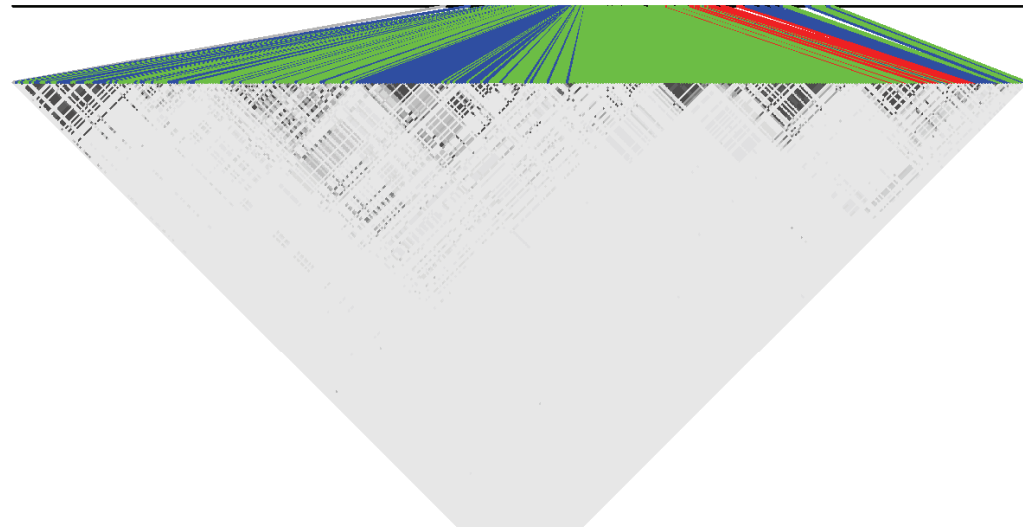
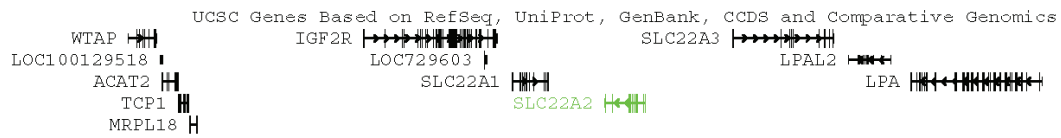
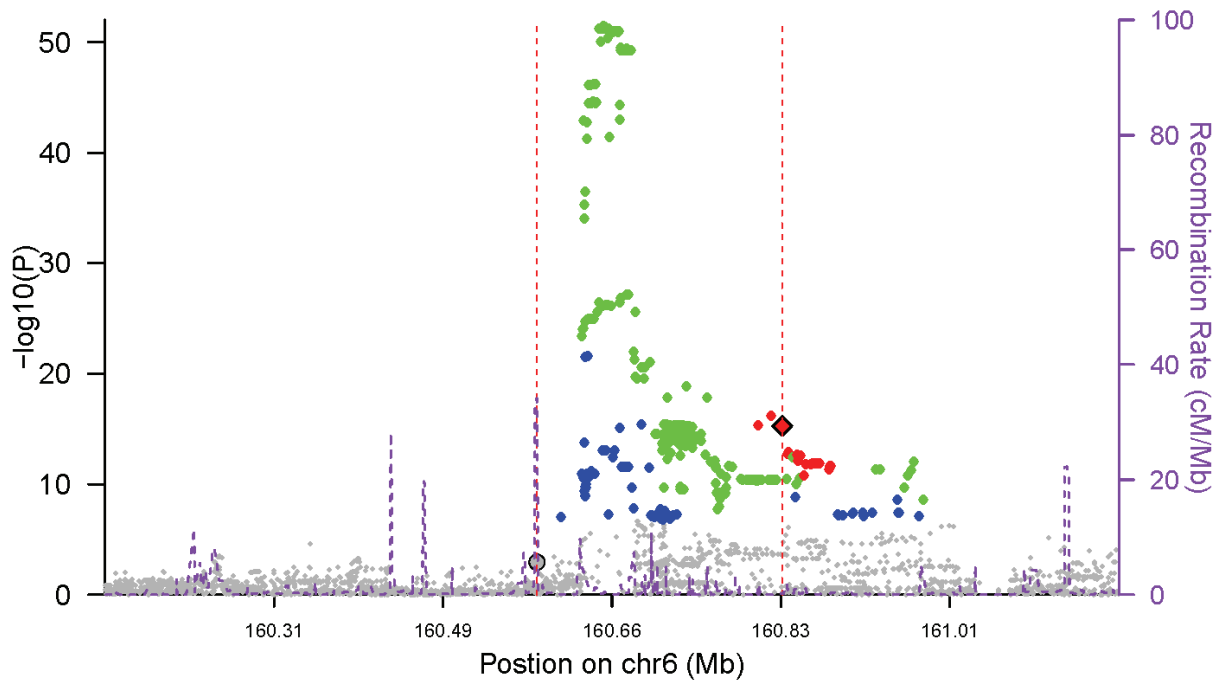
| rsID        | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs7767188 | rs130067 | rs114376585 | imputed | Result Type |
|-------------|----------|-------|-------|------|--------|----------|------------|-----------|----------|-------------|---------|-------------|
| rs7767188   | 30073776 | A     | G     | 0.24 | 0.024  | 7.28e-01 | 0.039248   | 1.000     | <0.2     | <0.2        | 0       | PC Risk     |
| rs116104370 | 30076660 | A     | G     | 0.15 | 0.440  | 6.52e-09 | 0.000233   | <0.2      | <0.2     | <0.2        | 0       | Flanking    |
| rs2022065   | 30121460 | T     | C     | 0.34 | 0.116  | 5.59e-02 | 0.912315   | 0.506     | <0.2     | <0.2        | 0       | MaxLD       |
| rs3130987   | 31085641 | T     | C     | 0.49 | 0.952  | 8.24e-83 | -          | <0.2      | 0.245    | <0.2        | 1       | Peak        |
| rs130067    | 31118511 | G     | T     | 0.21 | 0.481  | 7.55e-12 | 0.001884   | <0.2      | 1.000    | <0.2        | 0       | PC Risk     |
| rs1265109   | 31119589 | T     | G     | 0.28 | 0.670  | 6.56e-27 | 0.044088   | <0.2      | 0.658    | <0.2        | 0       | MaxLD       |
| rs114376585 | 32192331 | A     | G     | 0.38 | -0.149 | 1.05e-02 | 0.508667   | <0.2      | <0.2     | 1.000       | 0       | PC Risk     |
| rs116522847 | 32197219 | G     | T     | 0.45 | 0.227  | 6.10e-05 | 0.806020   | <0.2      | <0.2     | 0.516       | 1       | MaxLD       |
| rs142377682 | 32202086 | T     | G     | 0.15 | -0.468 | 4.63e-09 | 0.171923   | <0.2      | <0.2     | 0.252       | 1       | Flanking    |



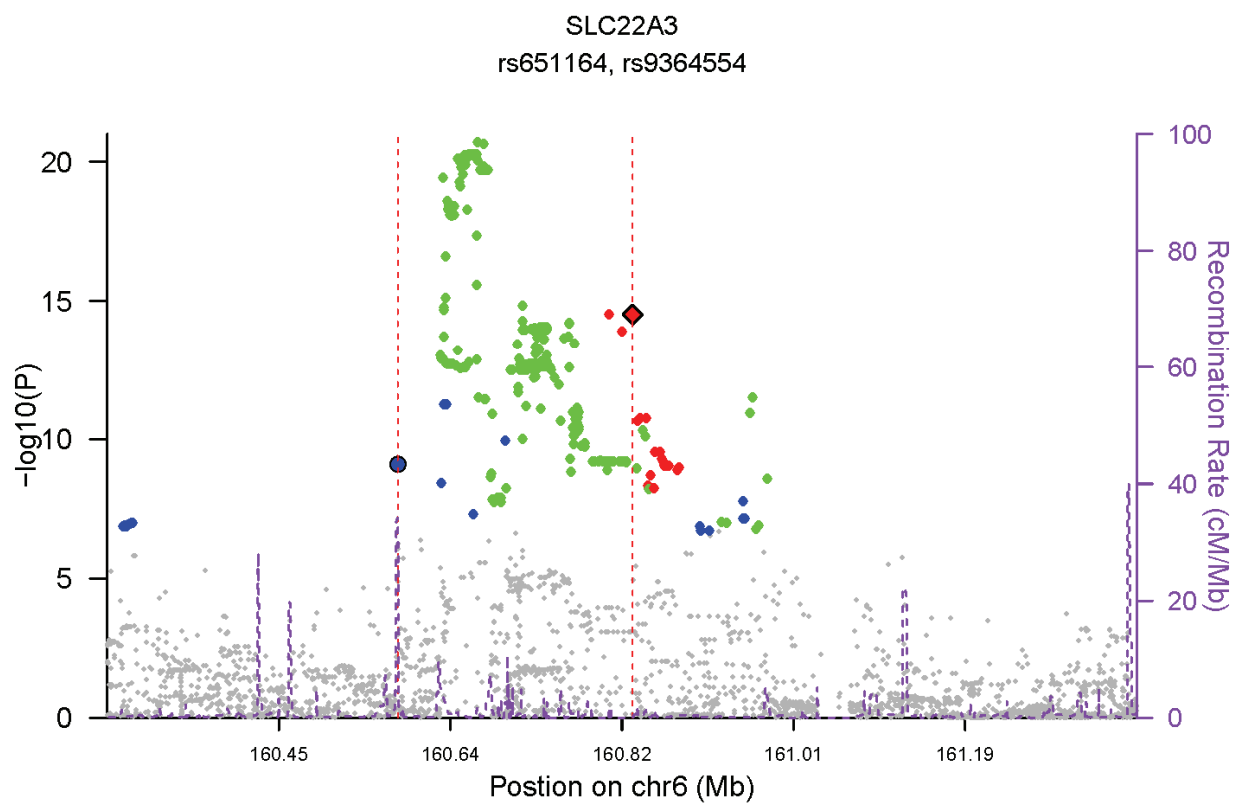


| rsID        | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs130067 | rs114376585 | rs115306967 | imputed | Result Type |
|-------------|----------|-------|-------|------|--------|----------|------------|----------|-------------|-------------|---------|-------------|
| rs1265093   | 31107187 | A     | G     | 0.29 | 0.027  | 1.25e-01 | 1.87e-01   | 0.639    | <0.2        | <0.2        | 0       | MaxLD       |
| rs130067    | 31118511 | G     | T     | 0.21 | 0.012  | 5.38e-01 | 3.97e-01   | 1.000    | <0.2        | <0.2        | 0       | PC Risk     |
| rs113635367 | 31313378 | A     | G     | 0.19 | 0.111  | 2.72e-08 | 3.89e-03   | <0.2     | <0.2        | <0.2        | 1       | Flanking    |
| rs138007308 | 32178773 | T     | C     | 0.50 | 0.160  | 8.75e-28 | -          | <0.2     | 0.244       | <0.2        | 1       | Peak        |
| rs114376585 | 32192331 | A     | G     | 0.38 | 0.157  | 2.69e-25 | 1.11e-10   | <0.2     | 1.000       | <0.2        | 0       | PC Risk     |
| rs115306967 | 32400939 | C     | G     | 0.28 | -0.048 | 6.74e-03 | 7.66e-01   | <0.2     | <0.2        | 1.000       | 1       | PC Risk     |
| rs3135392   | 32409242 | A     | C     | 0.39 | -0.080 | 6.79e-07 | 2.16e-01   | <0.2     | <0.2        | 0.522       | 0       | MaxLD       |
| rs3129718   | 32659838 | T     | C     | 0.15 | 0.125  | 8.14e-09 | 6.38e-02   | <0.2     | <0.2        | <0.2        | 0       | Flanking    |

SLC22A2  
rs651164, rs9364554

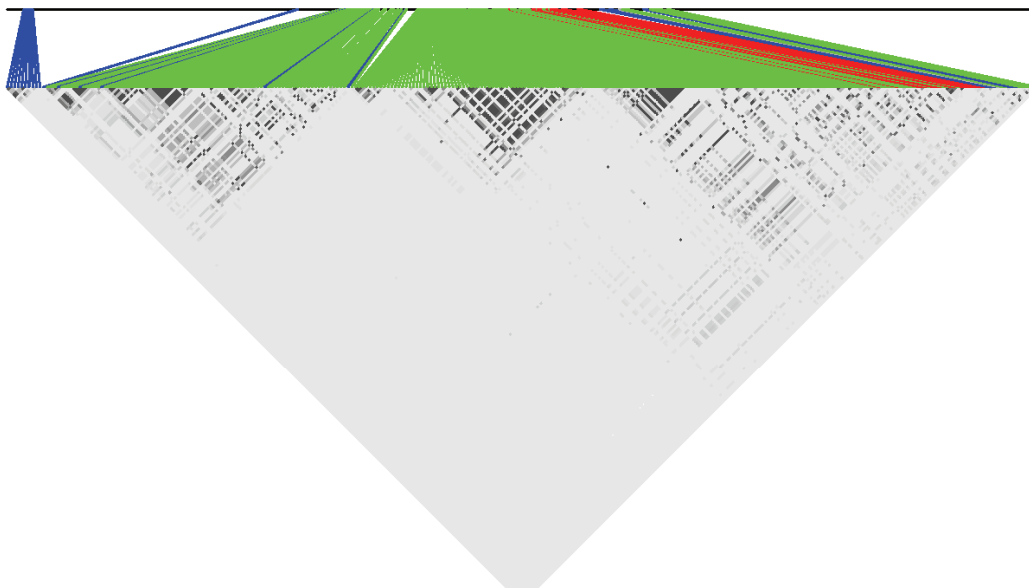


| rsID       | pos       | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs651164 | rs9364554 | imputed | Result Type |
|------------|-----------|-------|-------|------|--------|----------|------------|----------|-----------|---------|-------------|
| rs651164   | 160581374 | A     | G     | 0.31 | 0.170  | 1.02e-03 | 0.885      | 1.000    | <0.2      | 1       | PC Risk     |
| rs4123902  | 160628053 | T     | A     | 0.12 | -0.605 | 4.73e-24 | 0.250      | <0.2     | 0.221     | 1       | Flanking    |
| rs582158   | 160649864 | C     | A     | 0.24 | -0.673 | 4.03e-52 | -          | <0.2     | 0.274     | 1       | Peak        |
| rs3105751  | 160822675 | G     | A     | 0.31 | -0.362 | 7.33e-17 | 0.247      | <0.2     | 0.975     | 1       | MaxLD       |
| rs9364554  | 160833664 | T     | C     | 0.32 | -0.347 | 5.51e-16 | 0.303      | <0.2     | 1.000     | 0       | PC Risk     |
| rs12210186 | 160978997 | G     | A     | 0.13 | -0.377 | 2.49e-09 | 0.188      | <0.2     | 0.232     | 1       | Flanking    |

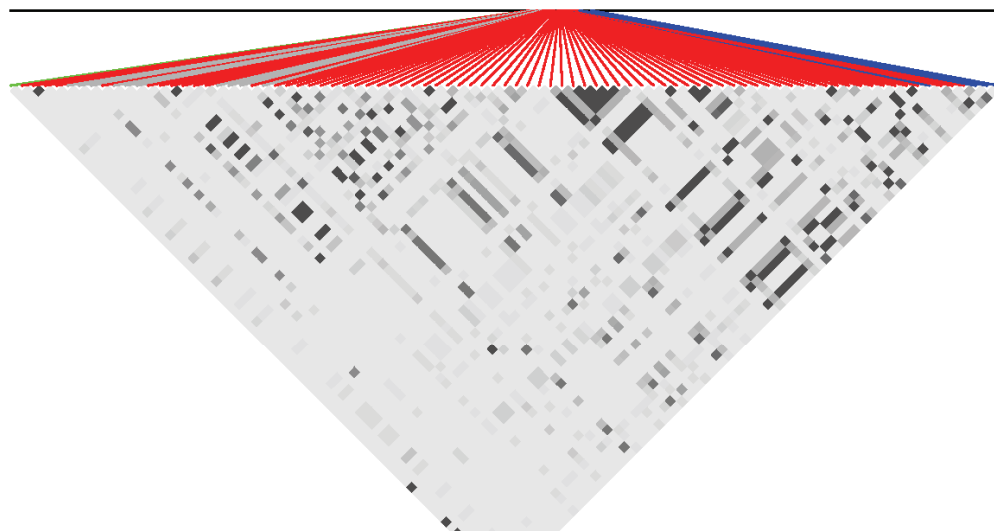
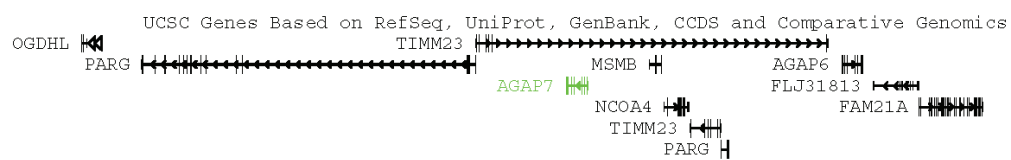
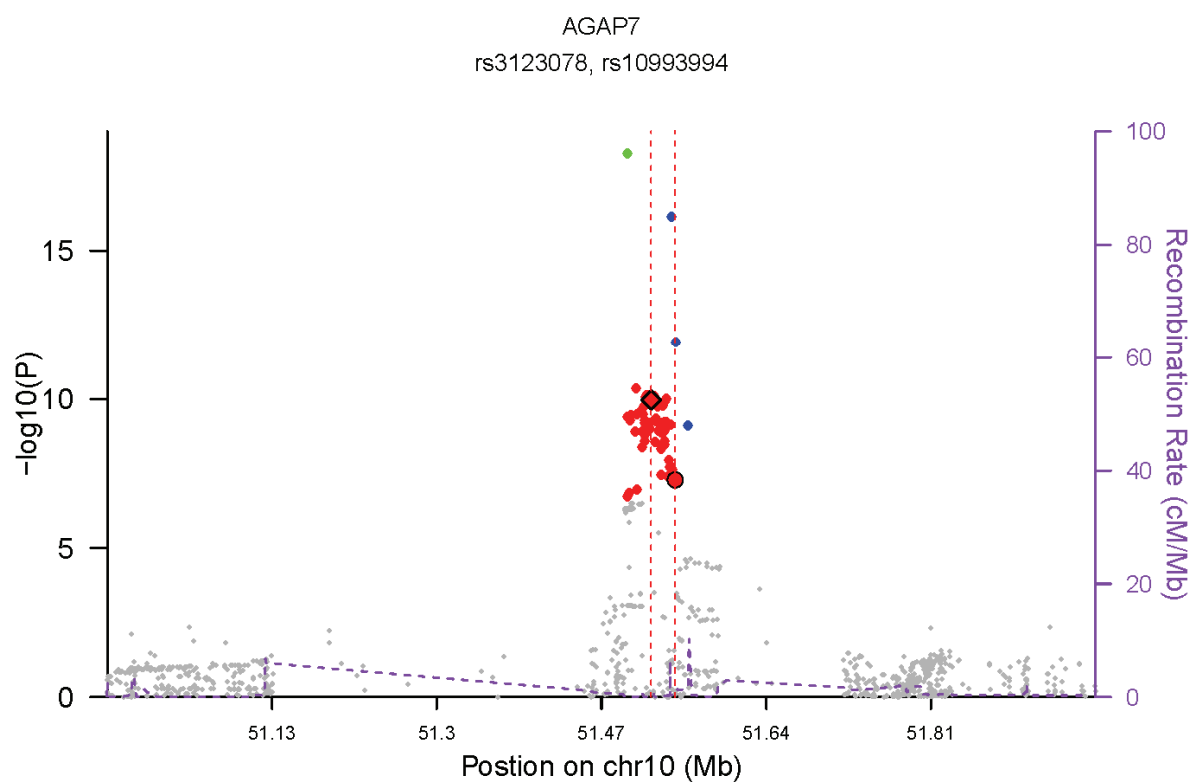


UCSC Genes Based on RefSeq, UniProt, GenBank, CCDS and Comparative Genomics

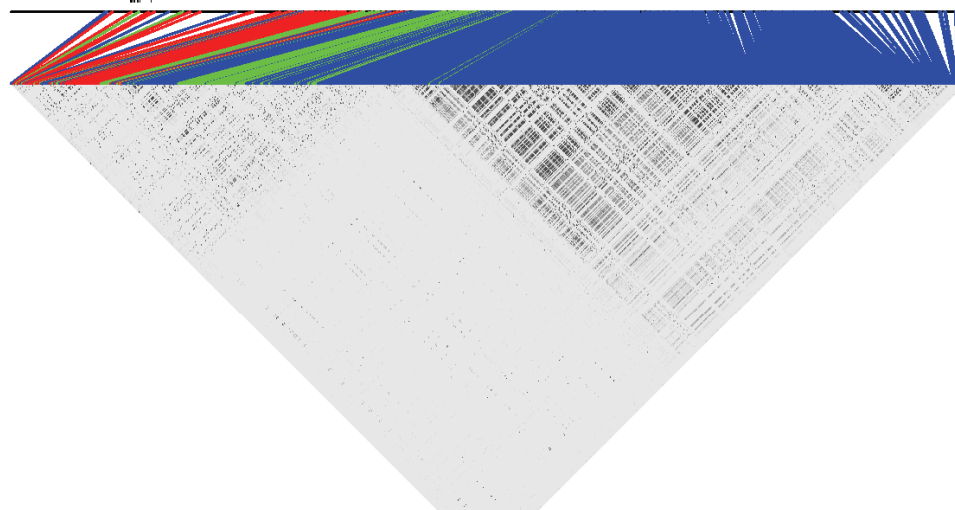
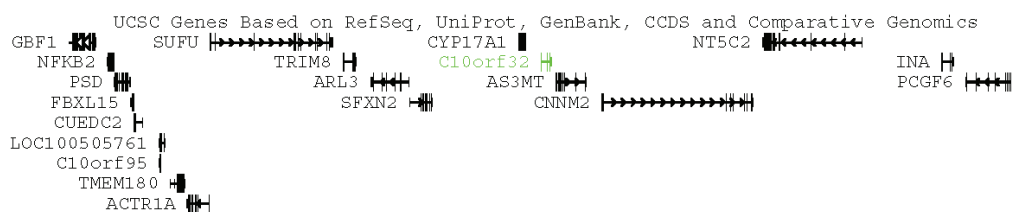
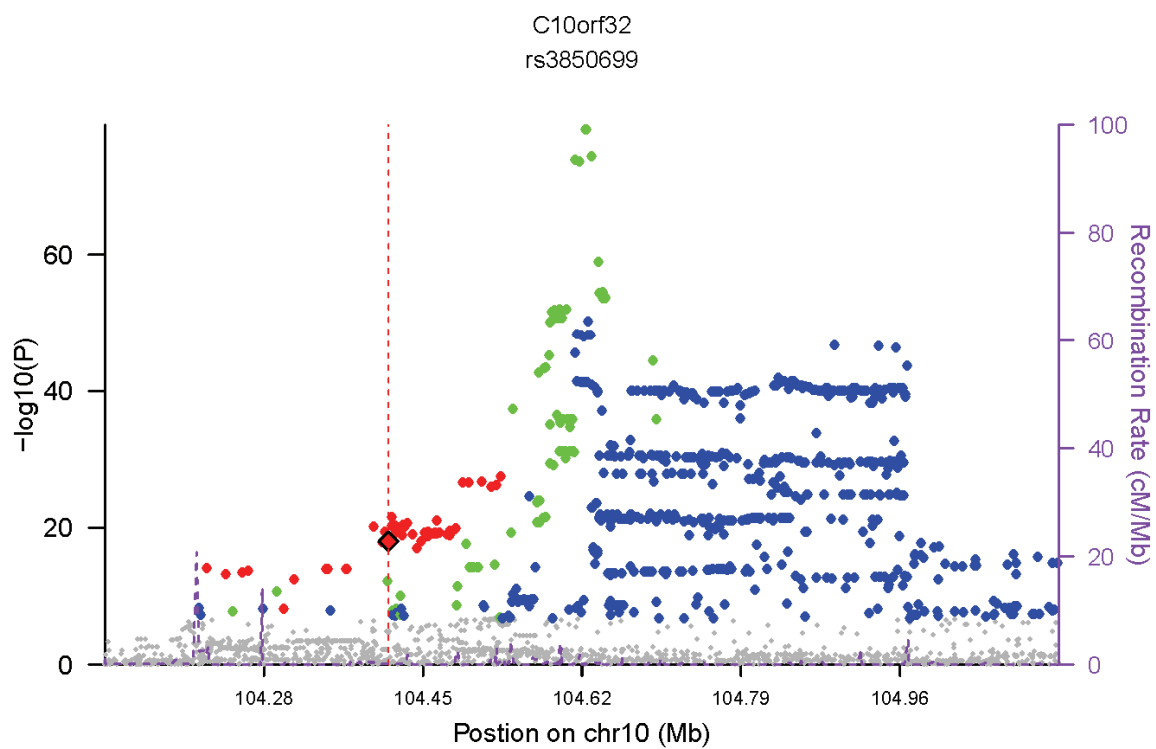
IGF2R IGF2R LOC729603 SLC22A3 SLC22A1 SLC22A2 LPAL2 LPA



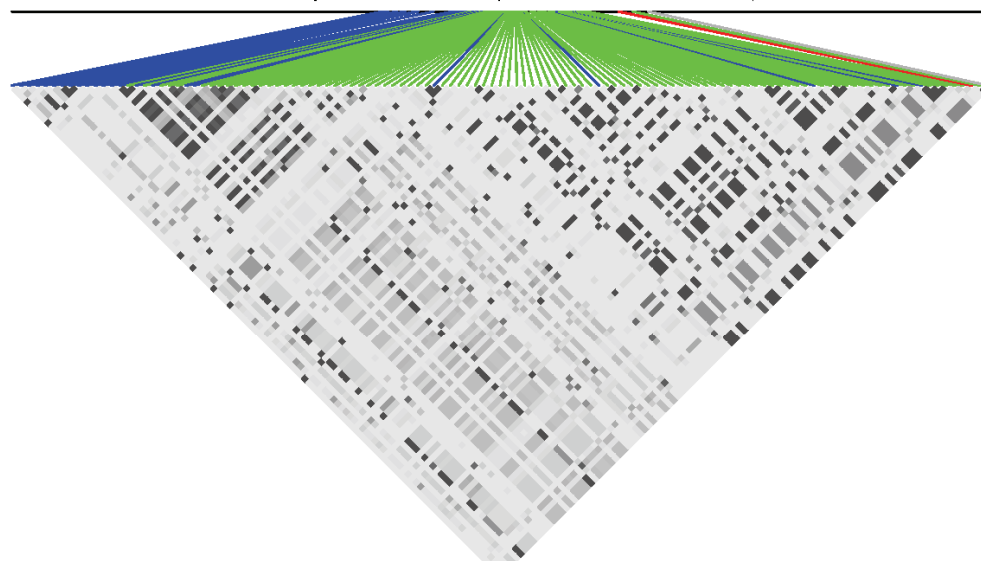
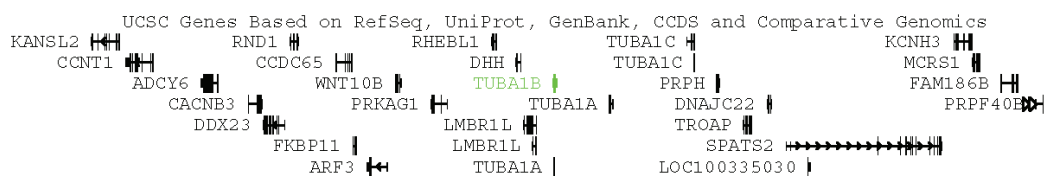
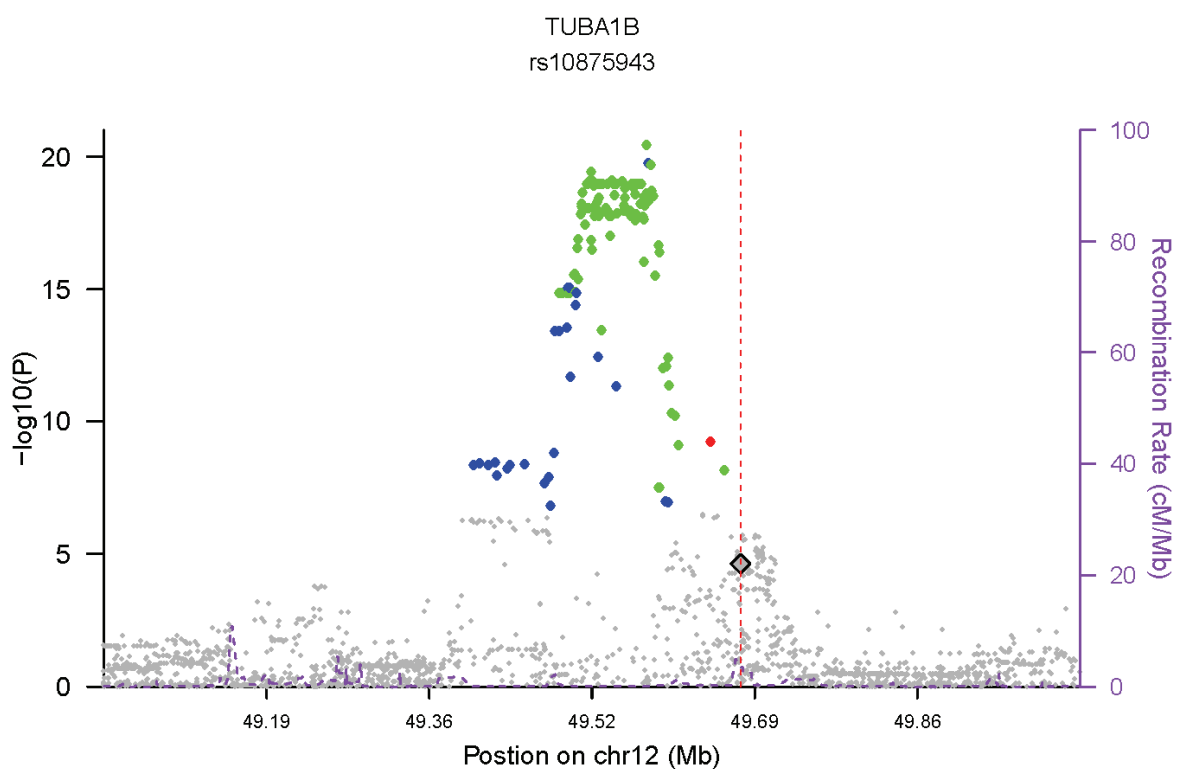
| rsID       | pos       | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs651164 | rs9364554 | imputed | Result Type |
|------------|-----------|-------|-------|------|--------|----------|------------|----------|-----------|---------|-------------|
| rs651164   | 160581374 | A     | G     | 0.31 | 0.302  | 7.58e-10 | 2.08e-05   | 1.000    | <0.2      | 1       | PC Risk     |
| rs316021   | 160668041 | C     | T     | 0.24 | -0.435 | 2.03e-21 | -          | <0.2     | 0.280     | 0       | Peak        |
| rs9364554  | 160833664 | T     | C     | 0.32 | -0.325 | 3.06e-15 | 3.36e-04   | <0.2     | 1.000     | 0       | PC Risk     |
| rs1112444  | 160835192 | A     | C     | 0.32 | -0.325 | 2.89e-15 | 3.29e-04   | <0.2     | 1.000     | 1       | MaxLD       |
| rs12210186 | 160978997 | G     | A     | 0.13 | -0.361 | 2.71e-09 | 5.08e-03   | <0.2     | 0.232     | 1       | Flanking    |



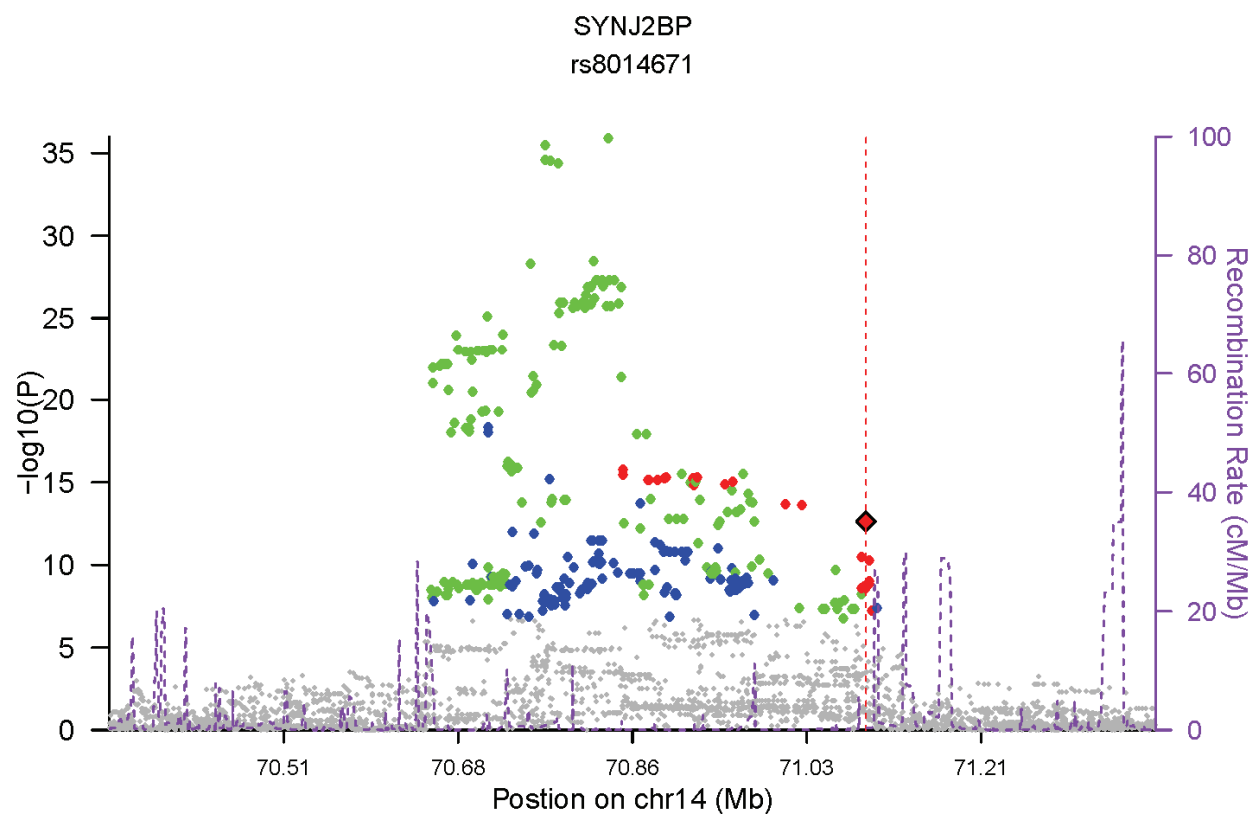
| rsID       | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs3123078 | rs10993994 | imputed | Result Type |
|------------|----------|-------|-------|------|--------|----------|------------|-----------|------------|---------|-------------|
| rs12777595 | 51500625 | C     | G     | 0.15 | 0.478  | 5.70e-19 | -          | 0.219     | <0.2       | 1       | Peak        |
| rs61847060 | 51510203 | A     | G     | 0.46 | 0.252  | 4.36e-11 | 0.00410    | 0.939     | 0.743      | 1       | MaxLD       |
| rs3123078  | 51524971 | C     | T     | 0.48 | 0.242  | 1.05e-10 | 0.00440    | 1.000     | 0.788      | 0       | PC Risk     |
| rs28416634 | 51539271 | A     | G     | 0.49 | -0.232 | 9.22e-10 | 0.00991    | 0.905     | 0.727      | 1       | ReverseBeta |
| rs10993994 | 51549496 | T     | C     | 0.42 | 0.207  | 4.99e-08 | 0.04381    | 0.788     | 1.000      | 0       | PC Risk     |
| rs78267136 | 51563352 | T     | C     | 0.08 | 0.397  | 7.66e-10 | 0.15179    | <0.2      | <0.2       | 1       | Flanking    |



| rsID        | pos       | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs3850699 | imputed | Result Type |
|-------------|-----------|-------|-------|------|--------|----------|------------|-----------|---------|-------------|
| rs150098322 | 104214364 | C     | T     | 0.09 | -0.104 | 6.26e-09 | 0.872      | <0.2      | 1       | Flanking    |
| rs3850699   | 104414221 | G     | A     | 0.27 | -0.094 | 9.75e-19 | 0.694      | 1.000     | 0       | PC Risk     |
| rs12776506  | 104532828 | G     | A     | 0.29 | -0.107 | 2.98e-28 | 0.788      | 0.603     | 1       | MaxLD       |
| rs9527      | 104623578 | T     | C     | 0.22 | -0.174 | 4.58e-79 | -          | 0.288     | 0       | Peak        |
| rs7090337   | 104775483 | A     | G     | 0.42 | 0.074  | 4.25e-15 | 0.739      | <0.2      | 1       | ReverseBeta |
| rs2863733   | 105244565 | G     | A     | 0.30 | -0.060 | 1.43e-08 | 0.856      | <0.2      | 0       | Flanking    |

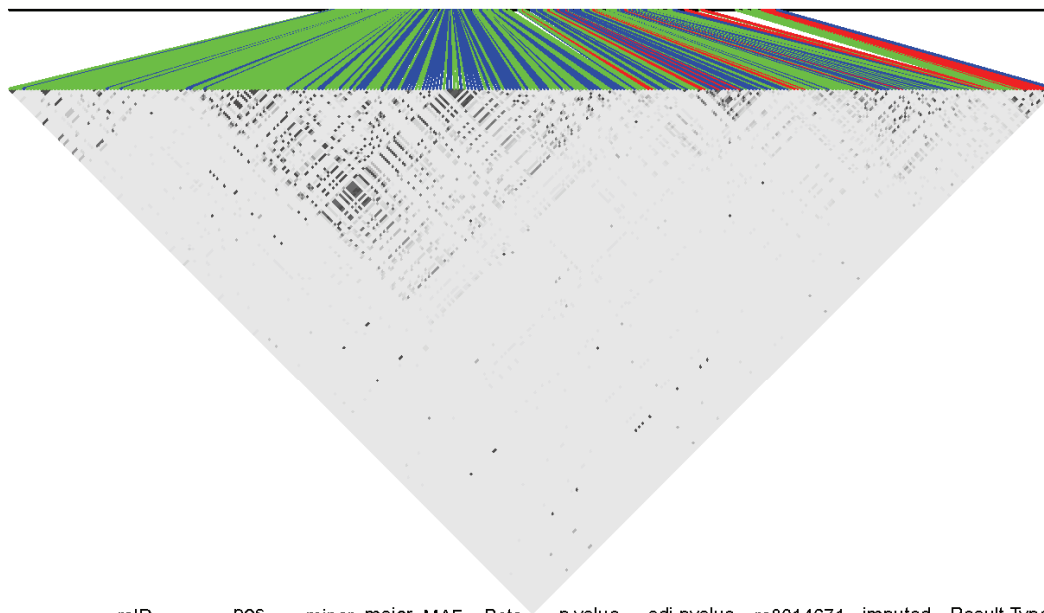


| rsID       | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs10875943 | imputed | Result Type |
|------------|----------|-------|-------|------|--------|----------|------------|------------|---------|-------------|
| rs10875910 | 49402393 | C     | G     | 0.39 | -0.072 | 4.64e-09 | 0.8800     | <0.2       | 1       | Flanking    |
| rs1056875  | 49580180 | C     | T     | 0.34 | -0.125 | 3.79e-21 | -          | 0.216      | 1       | Peak        |
| rs11168936 | 49645240 | C     | T     | 0.38 | -0.079 | 6.13e-10 | 0.0818     | 0.507      | 0       | MaxLD       |
| rs10875940 | 49659756 | A     | C     | 0.35 | -0.087 | 7.31e-09 | 0.1228     | 0.307      | 1       | Flanking    |
| rs10875943 | 49676010 | C     | T     | 0.30 | -0.058 | 2.36e-05 | 0.6458     | 1.000      | 1       | PC Risk     |

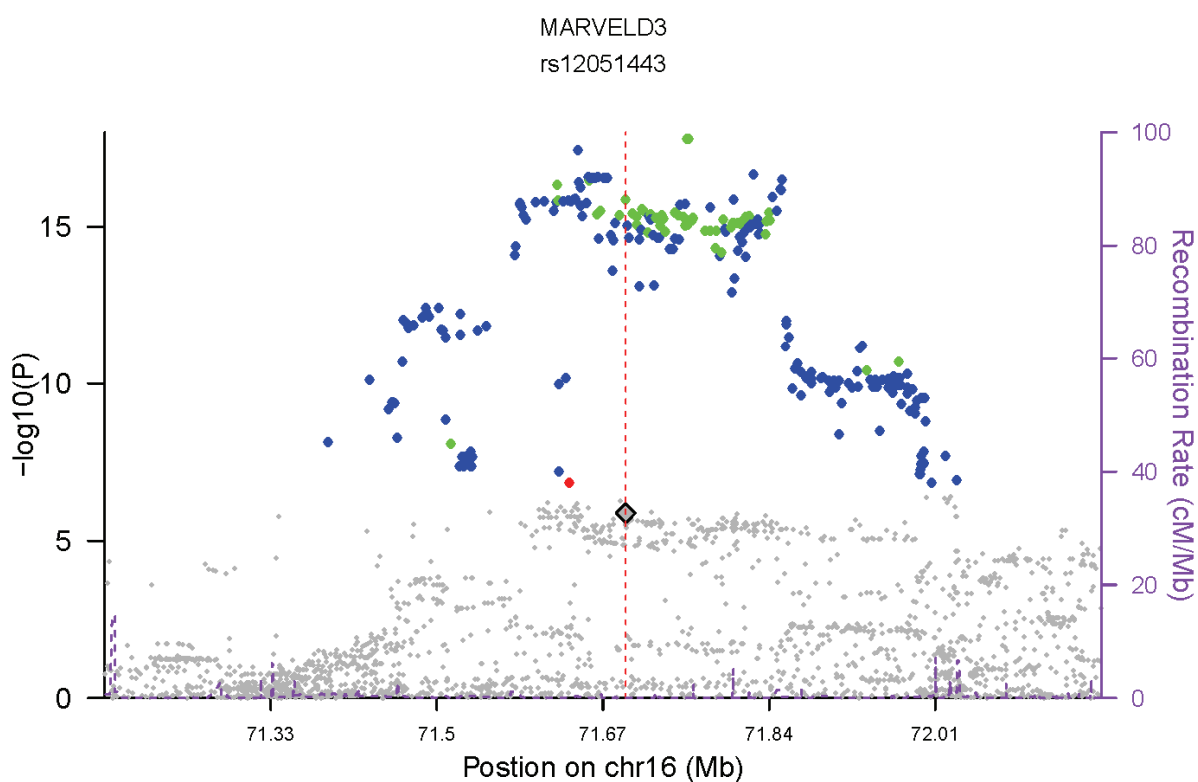


UCSC Genes Based on RefSeq, UniProt, GenBank, CCDS and Comparative Genomics

SMOC1 SLC8A3 MED6 TTC9 MAP3K9 PCNX

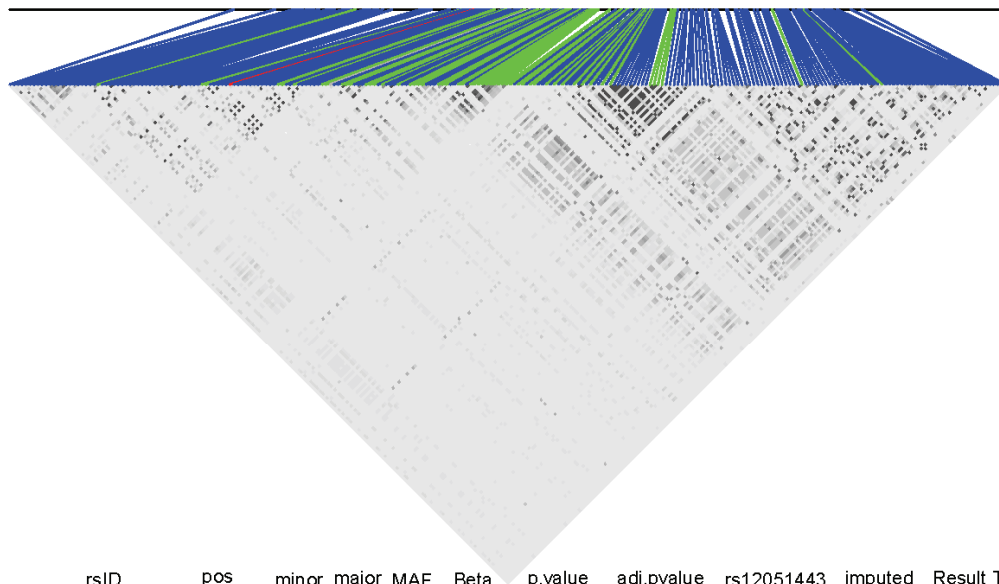


| rsID       | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs8014671 | imputed | Result Type |
|------------|----------|-------|-------|------|--------|----------|------------|-----------|---------|-------------|
| rs12882693 | 70656838 | G     | A     | 0.32 | -0.041 | 3.54e-09 | 0.485      | 0.259     | 1       | Flanking    |
| rs1044527  | 70833819 | G     | C     | 0.45 | 0.082  | 1.26e-36 | -          | 0.434     | 1       | Peak        |
| rs11626414 | 70848680 | A     | G     | 0.44 | 0.055  | 1.67e-16 | 0.273      | 0.509     | 1       | MaxLD       |
| rs8014671  | 71092256 | A     | G     | 0.41 | -0.050 | 2.34e-13 | 0.701      | 1.000     | 0       | PC Risk     |
| rs7145863  | 71098523 | G     | A     | 0.29 | -0.040 | 6.30e-08 | 0.833      | 0.555     | 1       | Flanking    |

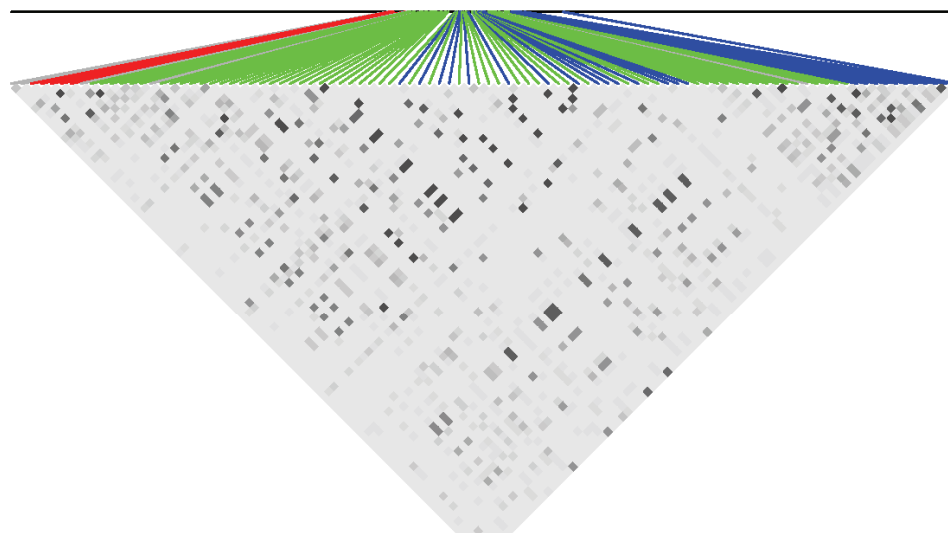
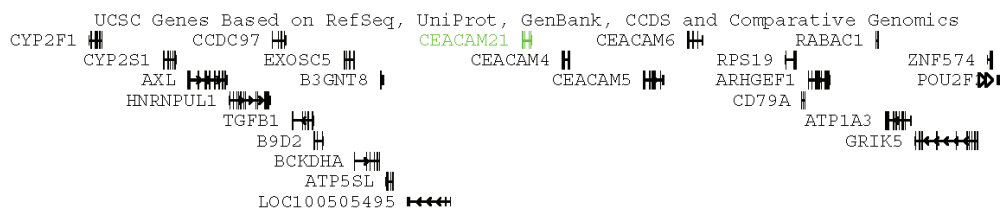
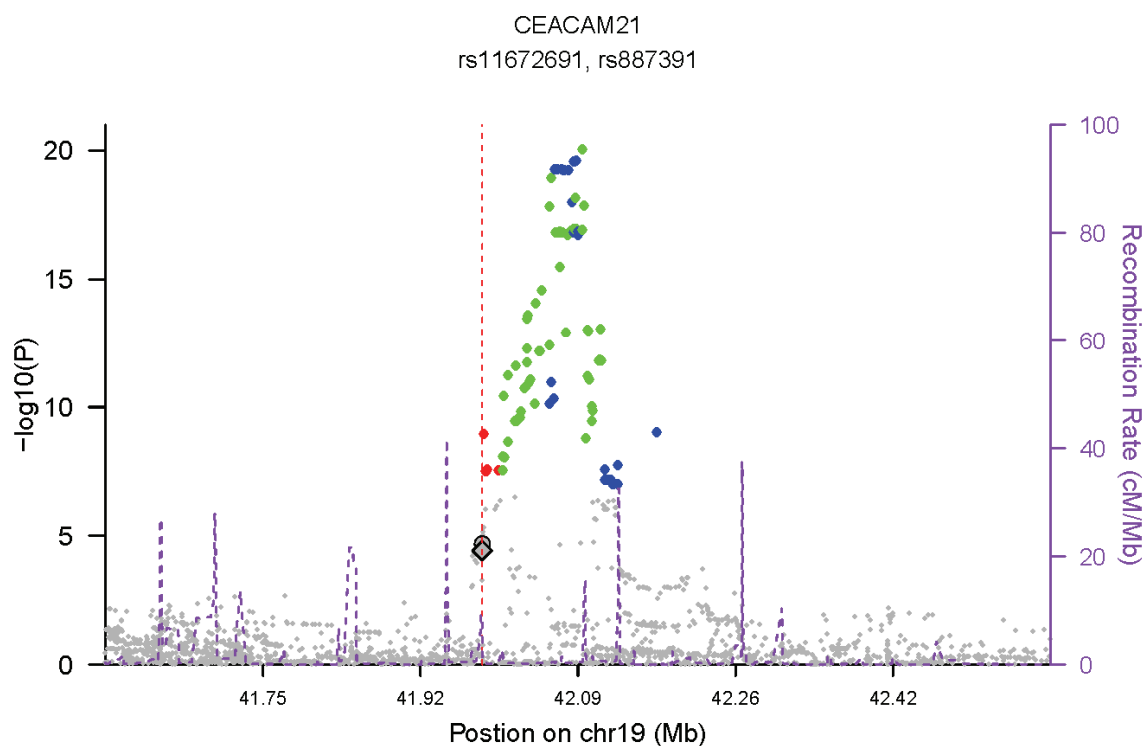


UCSC Genes Based on RefSeq, UniProt, GenBank, CCDS and Comparative Genomics

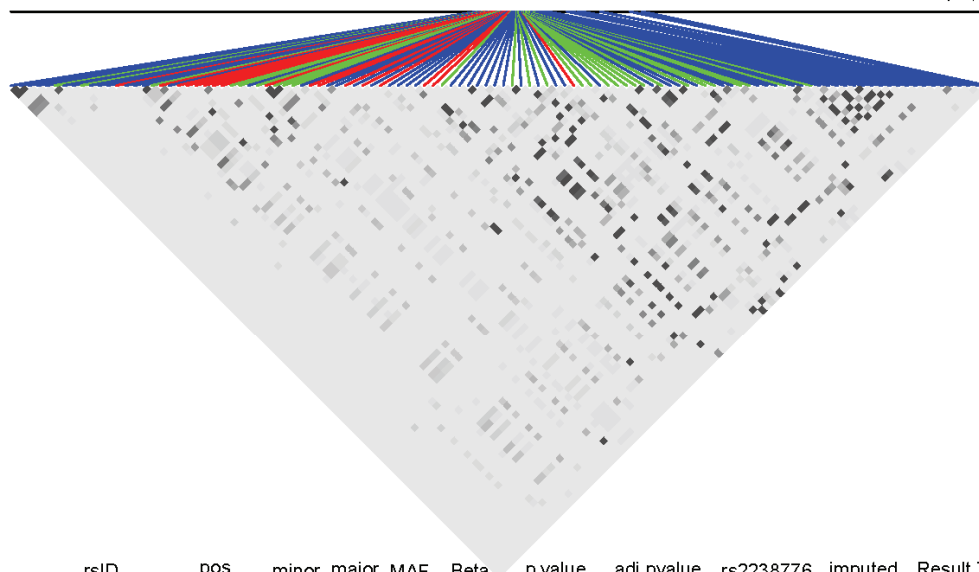
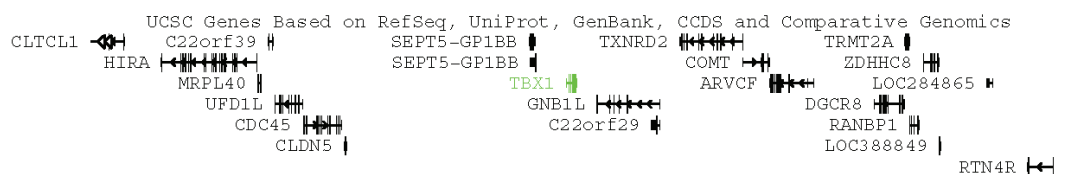
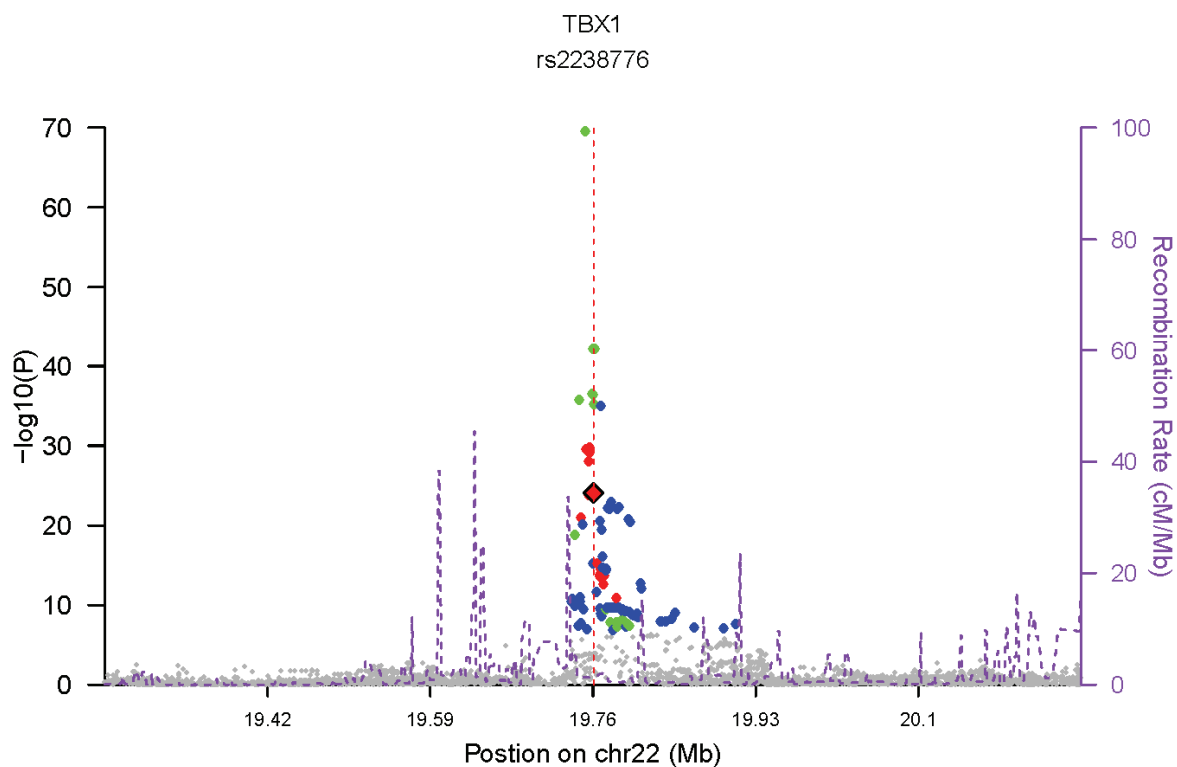
HYDIN    ZNF23    **MARVELD3**    ATXN1L    DHODH  
 FTSJD1    ZNF19    PHLPP2    ZNF821    HP  
 CALB2    TAT    AP1G1    IST1    TXNL4B  
                                          PKD1L3    DHX38  
                                                                  PMFBP1



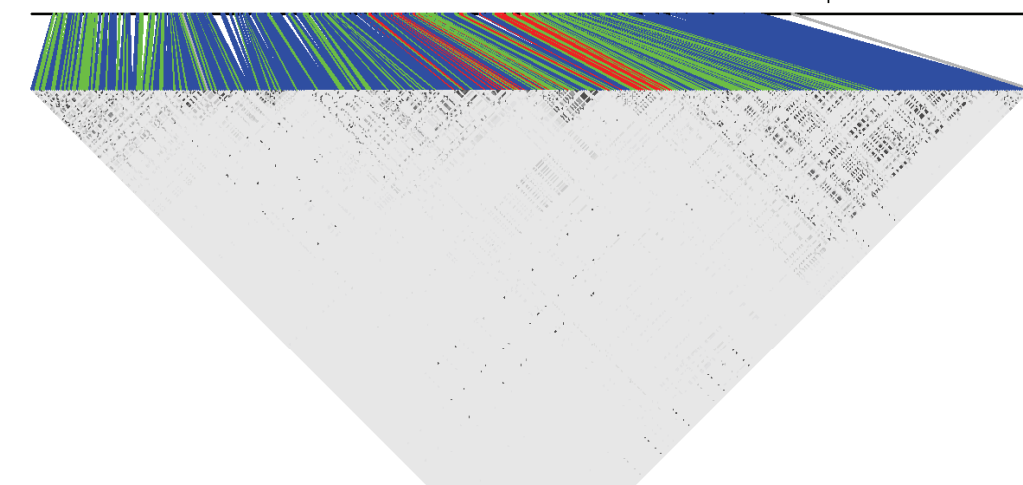
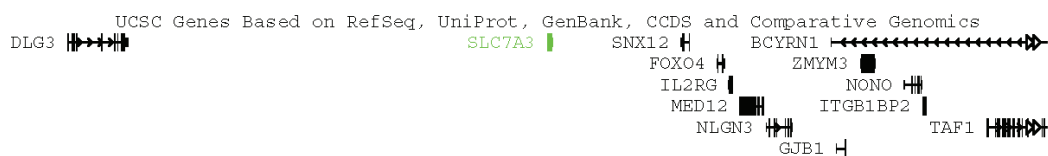
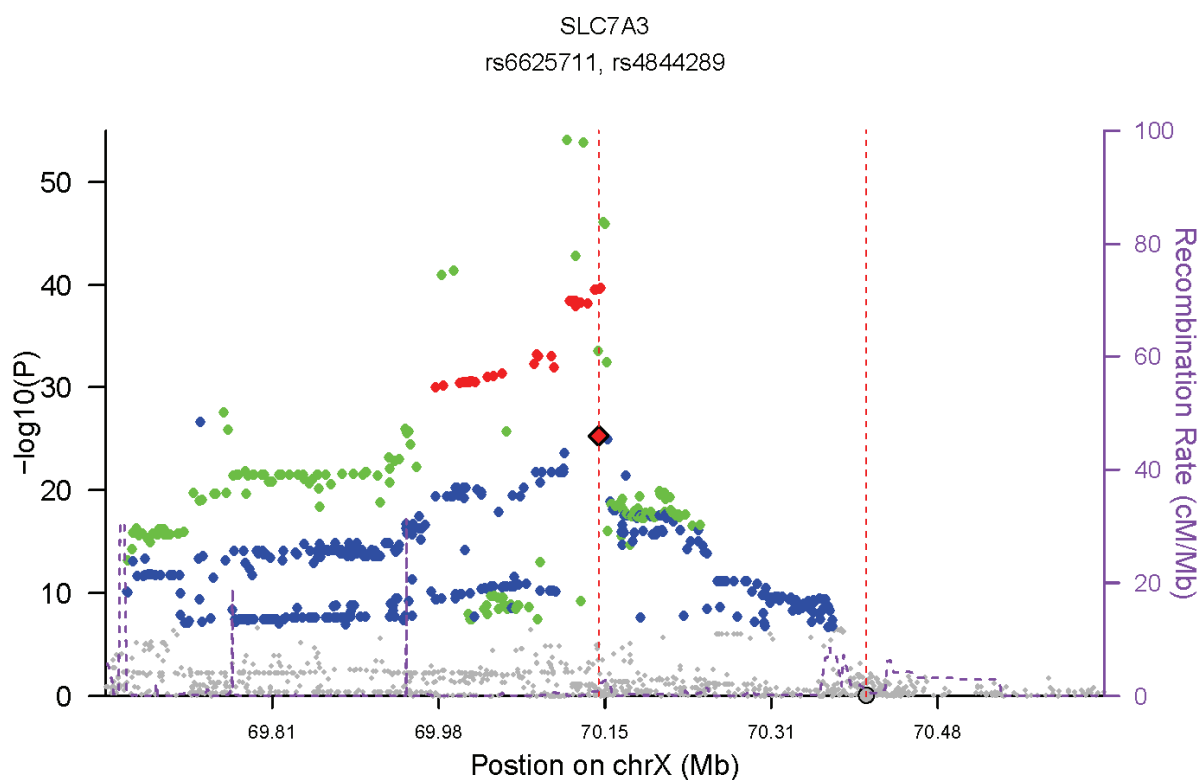
| rsID       | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs12051443 | imputed | Result Type |
|------------|----------|-------|-------|------|--------|----------|------------|------------|---------|-------------|
| rs73588051 | 71388627 | G     | A     | 0.11 | 0.100  | 7.28e-09 | 0.00482    | <0.2       | 1       | Flanking    |
| rs9940142  | 71633873 | G     | A     | 0.38 | -0.059 | 1.43e-07 | 0.66085    | 0.791      | 1       | MaxLD       |
| rs12051443 | 71691329 | A     | G     | 0.34 | -0.054 | 1.32e-06 | 0.67773    | 1.000      | 1       | PC Risk     |
| rs11639902 | 71755852 | C     | T     | 0.37 | 0.095  | 1.65e-18 | -          | 0.283      | 0       | Peak        |
| rs36114735 | 72017683 | T     | C     | 0.13 | 0.091  | 2.08e-08 | 0.01166    | <0.2       | 1       | Flanking    |



| rsID       | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs11672691 | rs887391 | imputed | Result Type |
|------------|----------|-------|-------|------|--------|----------|------------|------------|----------|---------|-------------|
| rs11672691 | 41985587 | A     | G     | 0.25 | -0.148 | 1.97e-05 | 0.6040     | 1.000      | 0.860    | 0       | PC Risk     |
| rs887391   | 41985624 | C     | T     | 0.22 | -0.148 | 3.73e-05 | 0.7097     | 0.860      | 1.000    | 1       | PC Risk     |
| rs8107333  | 41987873 | A     | G     | 0.18 | -0.245 | 1.10e-09 | 0.5151     | 0.578      | 0.679    | 1       | MaxLD       |
| rs3745936  | 42092815 | T     | A     | 0.19 | -0.339 | 9.18e-21 | -          | <0.2       | 0.248    | 1       | Peak        |
| rs4803498  | 42172442 | T     | G     | 0.06 | -0.389 | 9.99e-10 | 0.0135     | <0.2       | <0.2     | 1       | Flanking    |



| rsID       | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs2238776 | imputed | Result Type |
|------------|----------|-------|-------|------|--------|----------|------------|-----------|---------|-------------|
| rs747226   | 19735162 | T     | C     | 0.45 | -0.302 | 4.02e-11 | 0.3576     | <0.2      | 1       | Flanking    |
| rs1978060  | 19749525 | A     | G     | 0.36 | 0.749  | 3.39e-70 | -          | 0.330     | 1       | Peak        |
| rs72646967 | 19754091 | C     | A     | 0.21 | 0.653  | 1.95e-30 | 0.0341     | 0.896     | 1       | MaxLD       |
| rs2238776  | 19757892 | A     | G     | 0.19 | 0.587  | 8.96e-25 | 0.0532     | 1.000     | 1       | PC Risk     |
| rs11089318 | 19907920 | T     | G     | 0.15 | 0.375  | 2.30e-08 | 0.1551     | <0.2      | 1       | Flanking    |



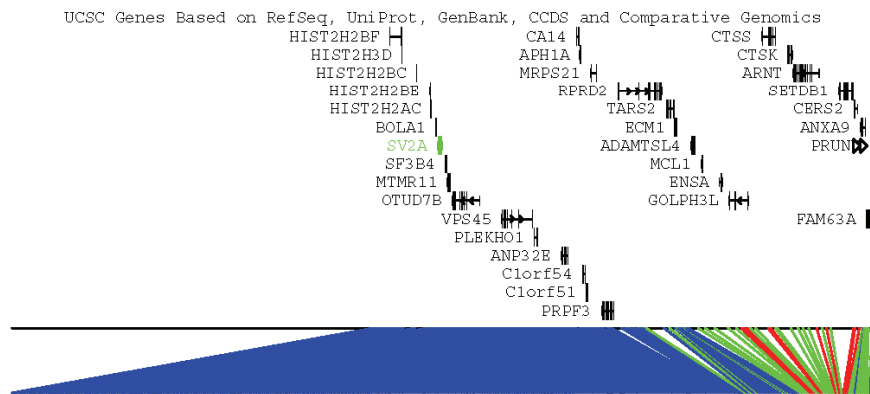
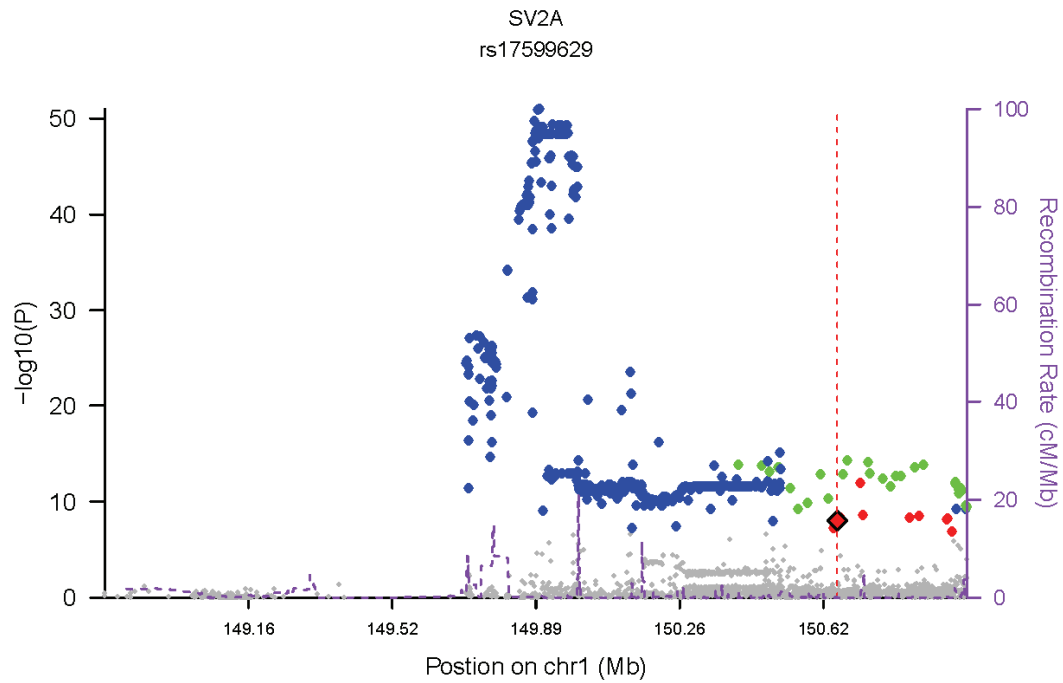
| rsID       | pos      | minor | major | MAF  | Beta   | p.value  | adj.p.value | rs6625711 | rs4844289 | imputed | Result Type |
|------------|----------|-------|-------|------|--------|----------|-------------|-----------|-----------|---------|-------------|
| rs62609681 | 69667815 | C     | T     | 0.25 | 0.256  | 7.35e-11 | 0.88819     | <0.2      | <0.2      | 1       | Flanking    |
| rs4617319  | 70108247 | C     | A     | 0.36 | 0.498  | 7.85e-55 | -           | 0.367     | <0.2      | 0       | Peak        |
| rs6525442  | 70117463 | G     | A     | 0.49 | -0.427 | 1.17e-38 | 0.00232     | 0.722     | <0.2      | 1       | ReverseBeta |
| rs6625711  | 70139850 | A     | T     | 0.42 | 0.377  | 5.20e-26 | 0.00192     | 1.000     | <0.2      | 1       | PC Risk     |
| rs5937025  | 70142030 | C     | T     | 0.48 | 0.424  | 1.88e-40 | 0.00224     | 0.759     | <0.2      | 1       | MaxLD       |
| rs4844286  | 70371574 | G     | T     | 0.44 | 0.204  | 5.43e-09 | 0.98319     | <0.2      | <0.2      | 1       | Flanking    |
| rs7066438  | 70399819 | T     | A     | 0.31 | 0.071  | 5.65e-02 | 0.11992     | <0.2      | 0.653     | 1       | MaxLD       |
| rs4844289  | 70407983 | G     | A     | 0.39 | 0.012  | 7.41e-01 | 0.25106     | <0.2      | 1.000     | 1       | PC Risk     |

## Supplementary Figure 4 - Regional association plots for each of the genes placed in Group 3

Regional association plots display eQTL results for the target gene listed in the title and all SNPs in the target gene region. All PC risk-SNPs in the region are listed in the second line of the title. The x-axis shows the chromosomal position of the SNPs (with expressed genes in the region displayed below) and the y-axis is the  $-\log_{10}(\text{p-value})$  obtained by regressing normalized expression levels for the target gene on the number of minor alleles of each SNP genotype adjusted for histologic characteristics and 14 expression principal components. The PC risk-SNP position is indicated by a dotted red vertical line with the eQTL result displayed as a diamond. Colored points show all Bonferroni significant results with the color defined by LD between the SNP and the PC risk-SNP (LD  $r^2 > 0.5$  red, between 0.2 – 0.5 green, and  $\leq 0.2$  blue). If the region contains multiple PC risk-SNPs, the points are colored based on LD with the PC risk-SNP that is in highest LD with the eQTL peak associated SNP. The eQTL result for this PC risk-SNP is displayed as diamond, the data points for all of the other PC risk-SNPs are displayed as an open circle.

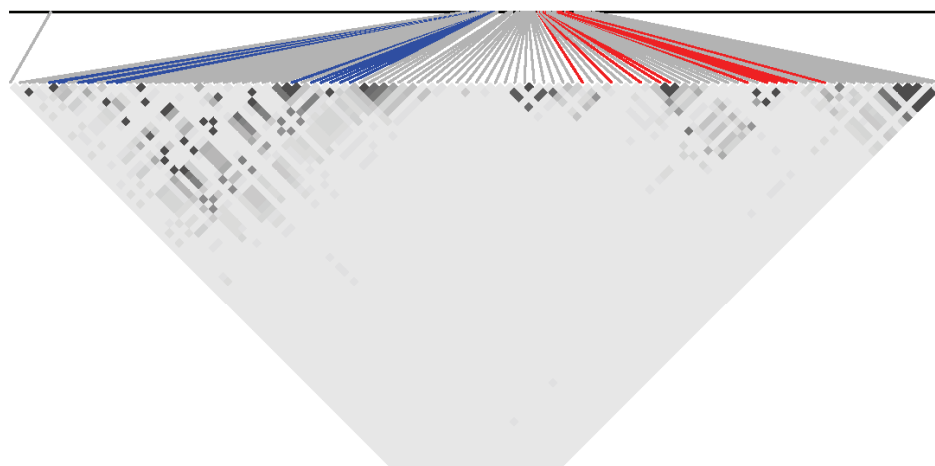
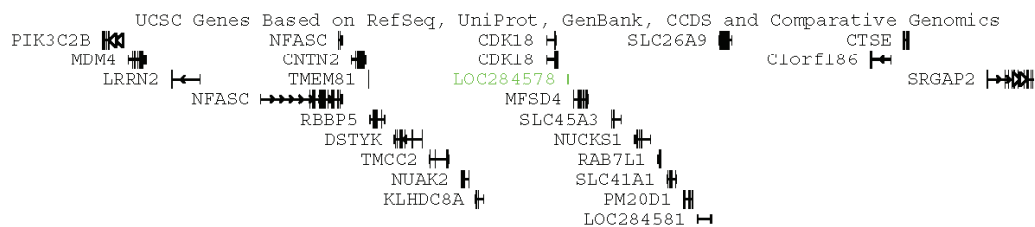
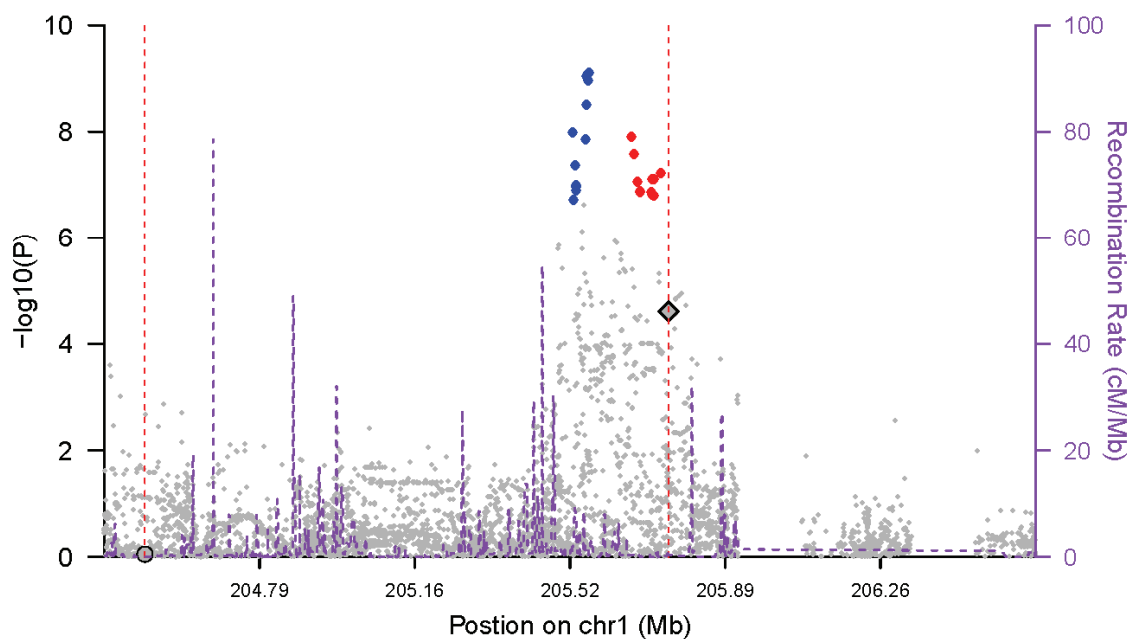
The table below the LD plot shows results for the peak-SNP (Result Type = Peak) and the most upstream and downstream SNPs (Result Type = Flanking) surpassing the Bonferroni significance threshold ( $P < 1.96\text{E-}07$  for primary analysis and  $P < 3.02\text{E-}08$  for second stage) as well as the top result for each PC risk SNP (Result Type = PC Risk) and, if a SNP in LD ( $r^2 > 0.5$ ) with the PC risk SNP has a stronger association than the PC risk SNP (i.e., lower p-value), then the LD SNP with the strongest association is also presented (Result Type = MaxLD). Finally, if all of these SNPs have a single direction of effect, e.g., all have positive beta coefficients thus increasing gene expression, and if any Bonferroni significant results were

observed in the opposite direction, then the strongest result among the opposite direction SNPs is also presented (Result Type = ReverseBeta).

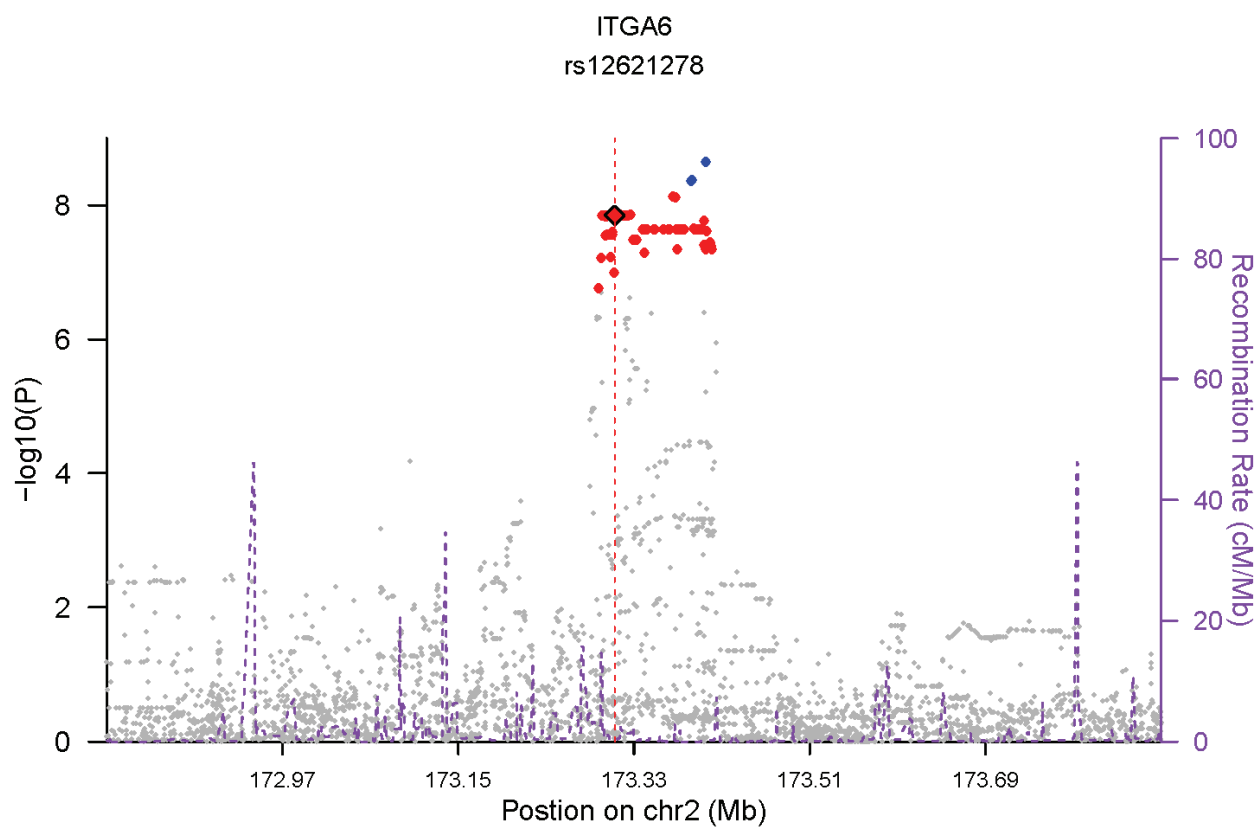


| rsID        | pos       | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs17599629 | imputed | Result Type |
|-------------|-----------|-------|-------|------|--------|----------|------------|------------|---------|-------------|
| rs147317935 | 149712677 | A     | G     | 0.09 | -0.368 | 4.38e-25 | 0.16810    | <0.2       | 1       | Flanking    |
| rs16836630  | 149898951 | C     | G     | 0.07 | -0.446 | 1.09e-51 | -          | <0.2       | 1       | Peak        |
| rs17599629  | 150658287 | G     | A     | 0.25 | -0.116 | 9.51e-09 | 0.04221    | 1.000      | 0       | PC Risk     |
| rs75056606  | 150718602 | G     | T     | 0.18 | -0.156 | 1.10e-12 | 0.00215    | 0.636      | 0       | MaxLD       |
| rs4418603   | 150989274 | G     | A     | 0.09 | -0.184 | 4.05e-10 | 0.27179    | 0.220      | 1       | Flanking    |

LOC284578  
rs1775148, rs4245739

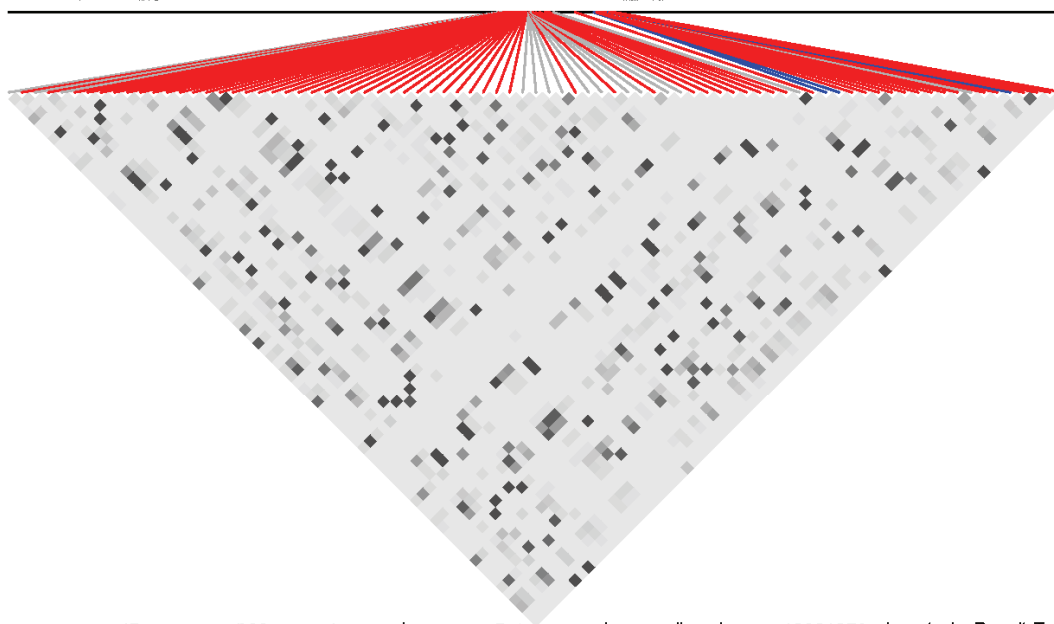


| rsID        | pos       | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs4245739 | rs1775148 | imputed | Result Type |
|-------------|-----------|-------|-------|------|--------|----------|------------|-----------|-----------|---------|-------------|
| rs4245739   | 204518842 | C     | A     | 0.26 | 0.008  | 8.74e-01 | 6.43e-01   | 1.000     | <0.2      | 0       | PC Risk     |
| rs5010868   | 204550366 | A     | T     | 0.34 | 0.044  | 3.95e-01 | 2.78e-01   | 0.617     | <0.2      | 1       | MaxLD       |
| rs149649212 | 205532538 | G     | T     | 0.12 | 0.423  | 1.03e-08 | 7.48e-03   | <0.2      | <0.2      | 1       | Flanking    |
| rs12041432  | 205570770 | A     | G     | 0.13 | 0.399  | 8.03e-10 | -          | <0.2      | <0.2      | 1       | Peak        |
| rs6673687   | 205670369 | T     | A     | 0.43 | -0.251 | 1.25e-08 | 1.26e-06   | <0.2      | 0.545     | 1       | MaxLD       |
| rs708723    | 205739266 | C     | T     | 0.49 | -0.234 | 6.12e-08 | 6.12e-07   | <0.2      | 0.678     | 0       | Flanking    |
| rs1775148   | 205757824 | C     | T     | 0.43 | -0.189 | 2.45e-05 | 5.15e-05   | <0.2      | 1.000     | 1       | PC Risk     |

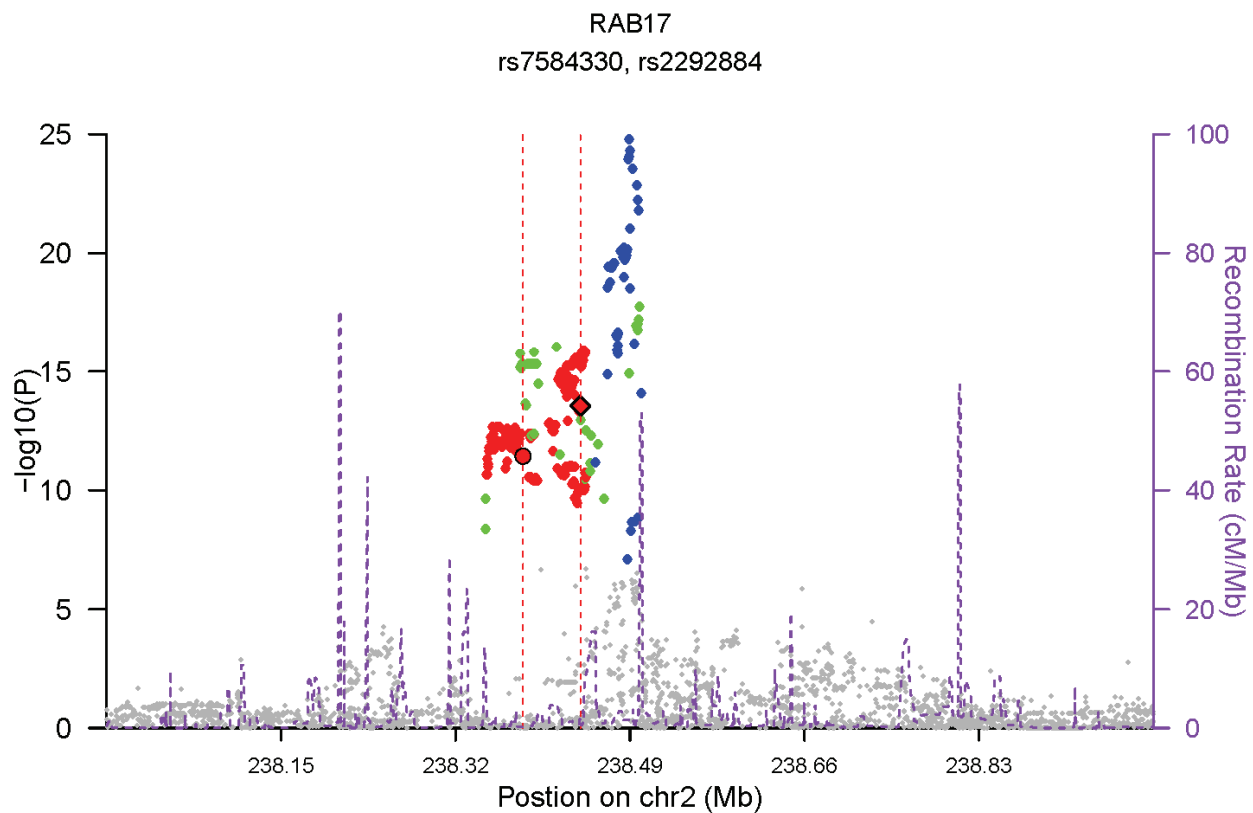


UCSC Genes Based on RefSeq, UniProt, GenBank, CCDS and Comparative Genomics

HAT1 METAP1D ITGA6 PDK1 RAPGEF4

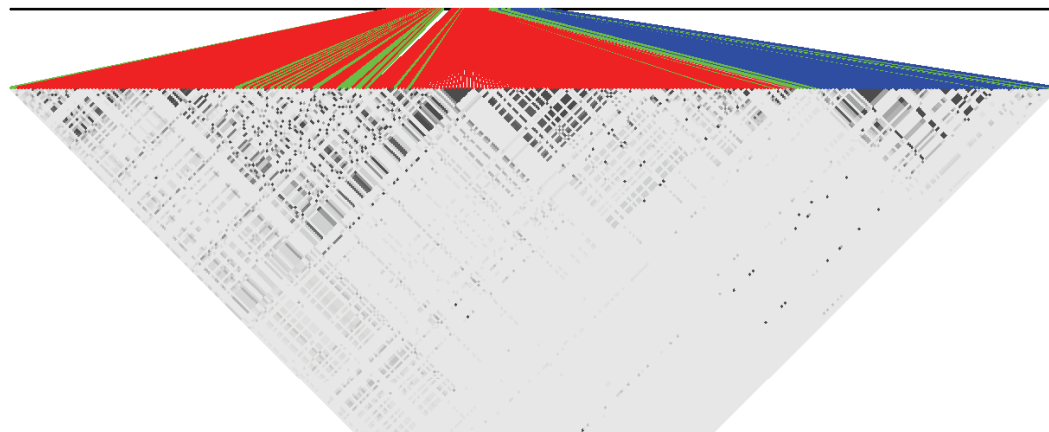


| rsID        | pos       | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs12621278 | imputed | Result Type |
|-------------|-----------|-------|-------|------|--------|----------|------------|------------|---------|-------------|
| rs12053442  | 173295405 | C     | G     | 0.05 | -0.128 | 1.75e-07 | 0.000568   | 0.868      | 1       | Flanking    |
| rs12621278  | 173311553 | G     | A     | 0.05 | -0.136 | 1.42e-08 | 0.000167   | 1.000      | 1       | PC Risk     |
| rs16860643  | 173371278 | G     | A     | 0.05 | -0.138 | 7.39e-09 | 0.000122   | 0.885      | 0       | MaxLD       |
| rs7591769   | 173404886 | A     | G     | 0.22 | -0.072 | 2.26e-09 | -          | <0.2       | 1       | Peak        |
| rs115160117 | 173411004 | C     | G     | 0.05 | -0.138 | 4.52e-08 | 0.000517   | 0.901      | 1       | Flanking    |

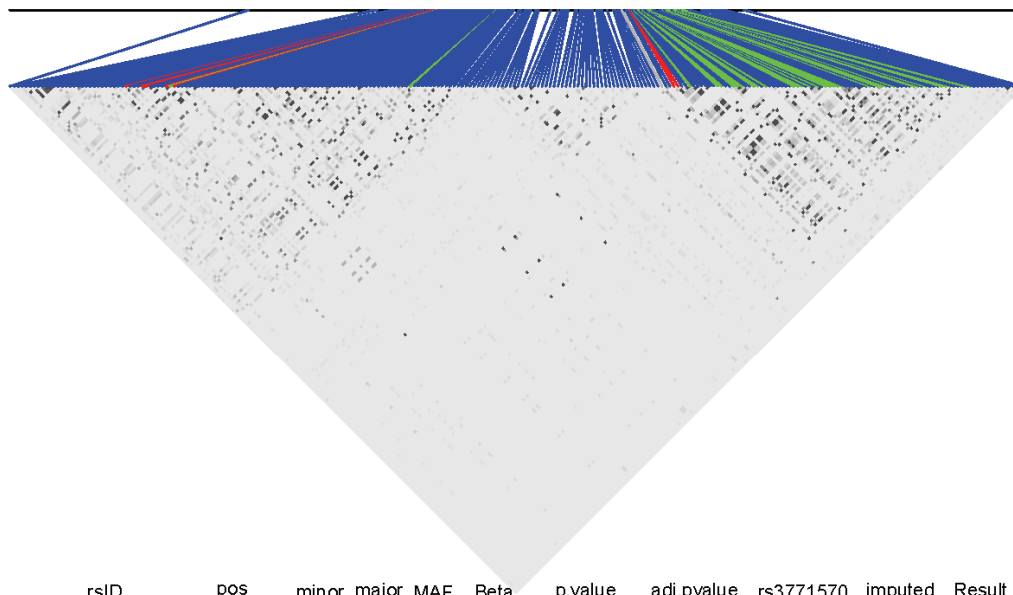
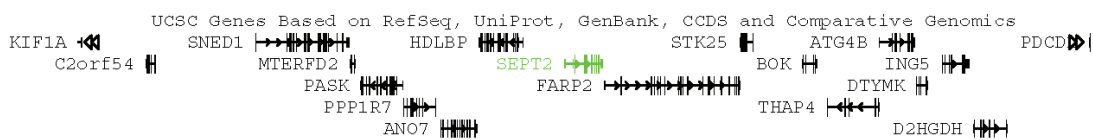
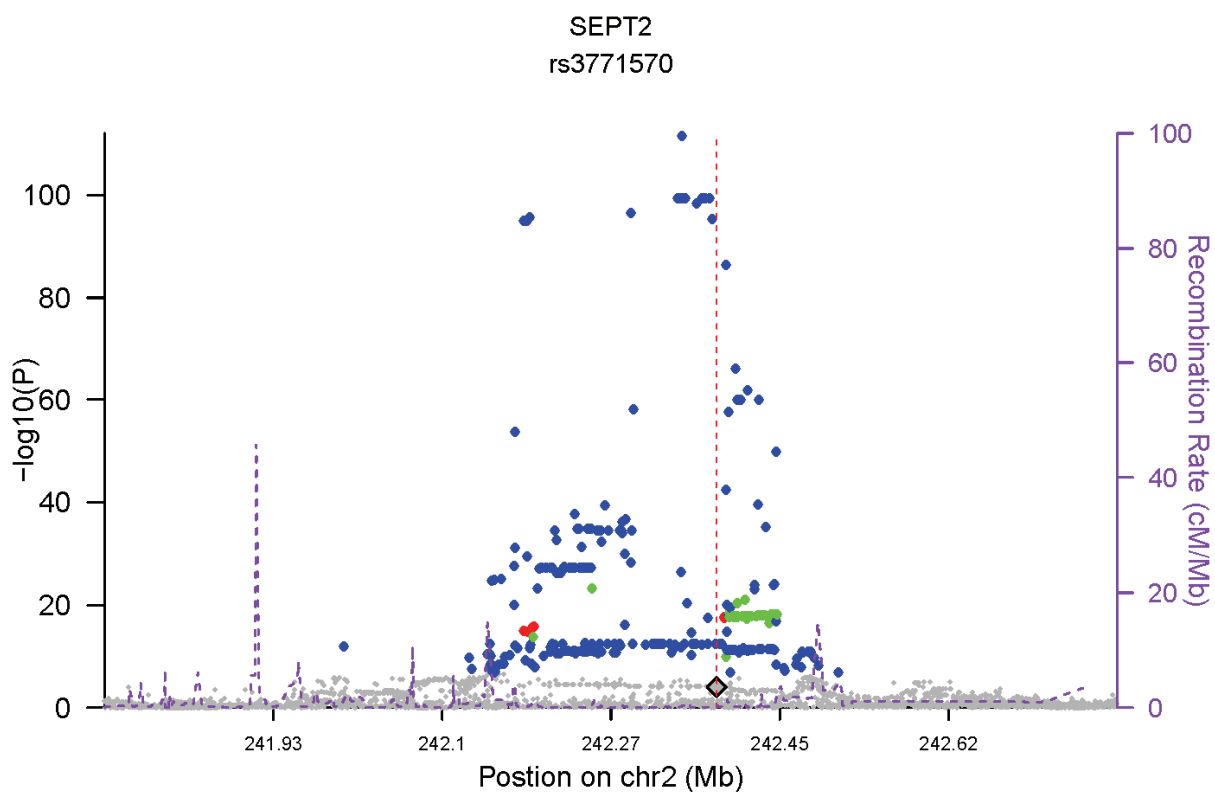


UCSC Genes Based on RefSeq, UniProt, GenBank, CCDS and Comparative Genomics

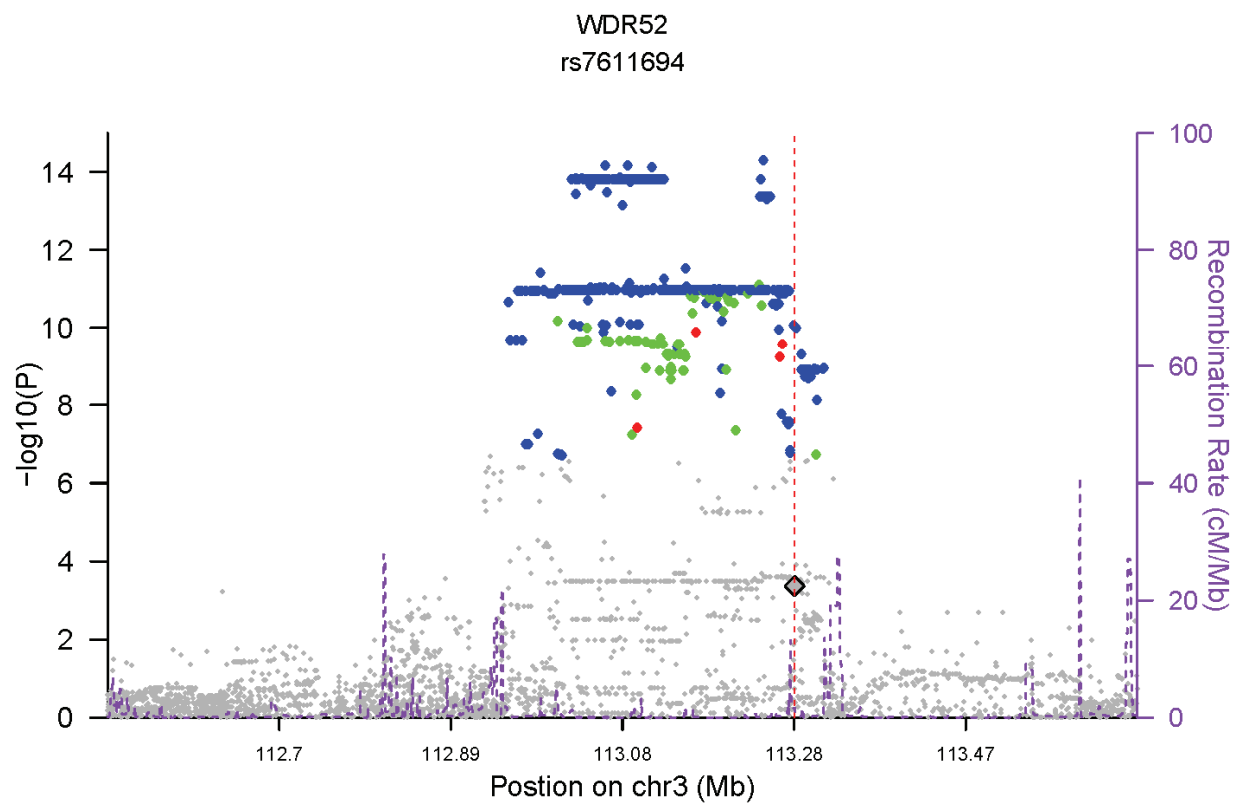
COPS8 COL6A3 MLPH RAB17 LRRFIP1 RBM44 RAMP1 UBE2F SCLY



| rsID        | pos       | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs7584330 | rs2292884 | imputed | Result Type |
|-------------|-----------|-------|-------|------|--------|----------|------------|-----------|-----------|---------|-------------|
| rs12471077  | 238351337 | T     | C     | 0.14 | -0.213 | 4.35e-09 | 2.04e-02   | 0.345     | 0.288     | 0       | Flanking    |
| rs7584330   | 238387228 | G     | A     | 0.28 | -0.192 | 3.54e-12 | 3.77e-04   | 1.000     | 0.690     | 0       | PC Risk     |
| rs79618460  | 238419959 | C     | T     | 0.16 | -0.276 | 9.21e-17 | 2.21e-04   | 0.515     | 0.481     | 1       | MaxLD       |
| rs2292884   | 238443226 | G     | A     | 0.27 | -0.204 | 2.84e-14 | 7.70e-05   | 0.690     | 1.000     | 0       | PC Risk     |
| rs74003103  | 238446699 | A     | G     | 0.17 | -0.268 | 1.32e-16 | 7.87e-04   | 0.503     | 0.551     | 1       | MaxLD       |
| rs74003104  | 238446823 | T     | C     | 0.17 | -0.268 | 1.32e-16 | 7.87e-04   | 0.503     | 0.551     | 1       | MaxLD       |
| rs74003105  | 238446851 | C     | T     | 0.17 | -0.268 | 1.32e-16 | 7.87e-04   | 0.503     | 0.551     | 0       | MaxLD       |
| rs74003106  | 238447004 | G     | A     | 0.17 | -0.268 | 1.32e-16 | 7.87e-04   | 0.503     | 0.551     | 0       | MaxLD       |
| rs13404216  | 238491258 | A     | C     | 0.36 | -0.271 | 1.67e-25 | -          | <0.2      | <0.2      | 1       | Peak        |
| rs113771323 | 238491714 | T     | C     | 0.09 | 0.428  | 5.22e-25 | 2.60e-21   | <0.2      | <0.2      | 1       | ReverseBeta |
| rs10929236  | 238502591 | G     | A     | 0.32 | -0.208 | 8.50e-15 | 1.96e-06   | <0.2      | <0.2      | 0       | Flanking    |

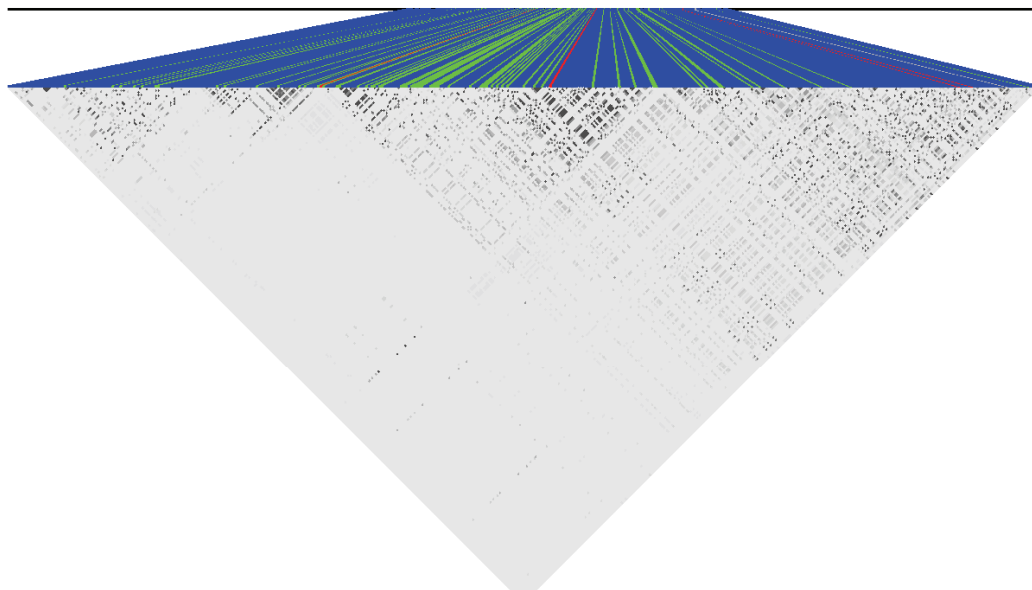


| rsID        | pos       | minor | major | MAF  | Beta   | p.value   | adj.pvalue | rs3771570 | imputed | Result Type |
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| rs79100040  | 242000648 | A     | G     | 0.09 | 0.102  | 1.42e-12  | 4.04e-01   | <0.2      | 0       | Flanking    |
| rs115271170 | 242347614 | T     | C     | 0.10 | 0.248  | 3.33e-112 | -          | <0.2      | 1       | Peak        |
| rs3771570   | 242382864 | T     | C     | 0.16 | -0.044 | 9.12e-05  | 5.73e-02   | 1.000     | 1       | PC Risk     |
| rs3771578   | 242391212 | T     | C     | 0.26 | 0.080  | 2.18e-18  | 5.65e-02   | 0.507     | 1       | MaxLD       |
| rs10201714  | 242488000 | A     | G     | 0.45 | -0.050 | 7.18e-09  | 9.67e-06   | <0.2      | 1       | Flanking    |

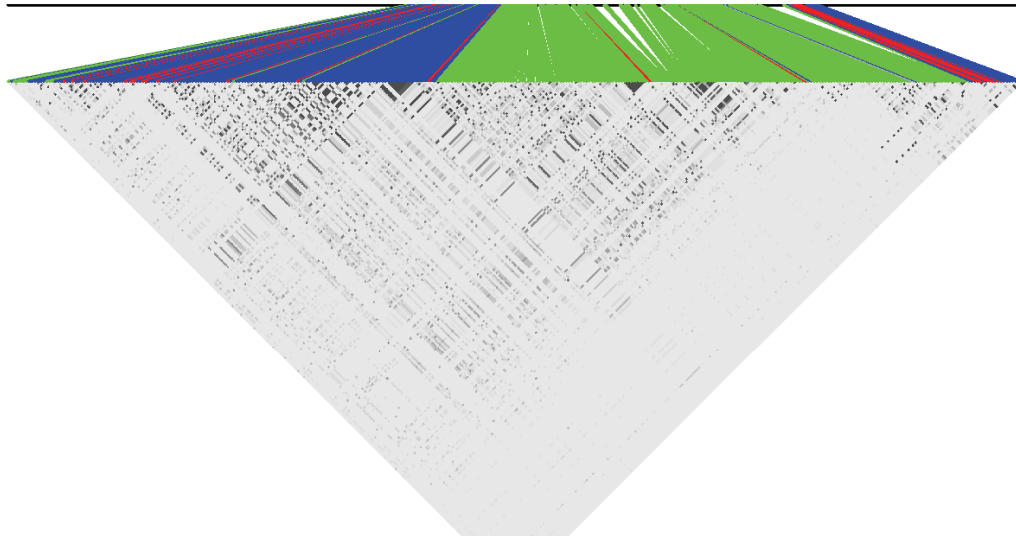
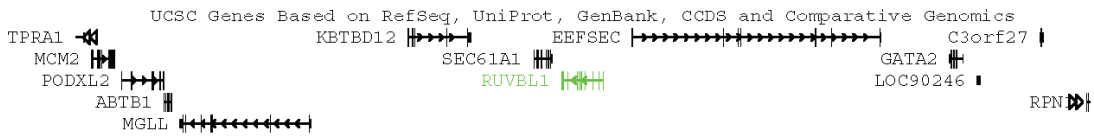
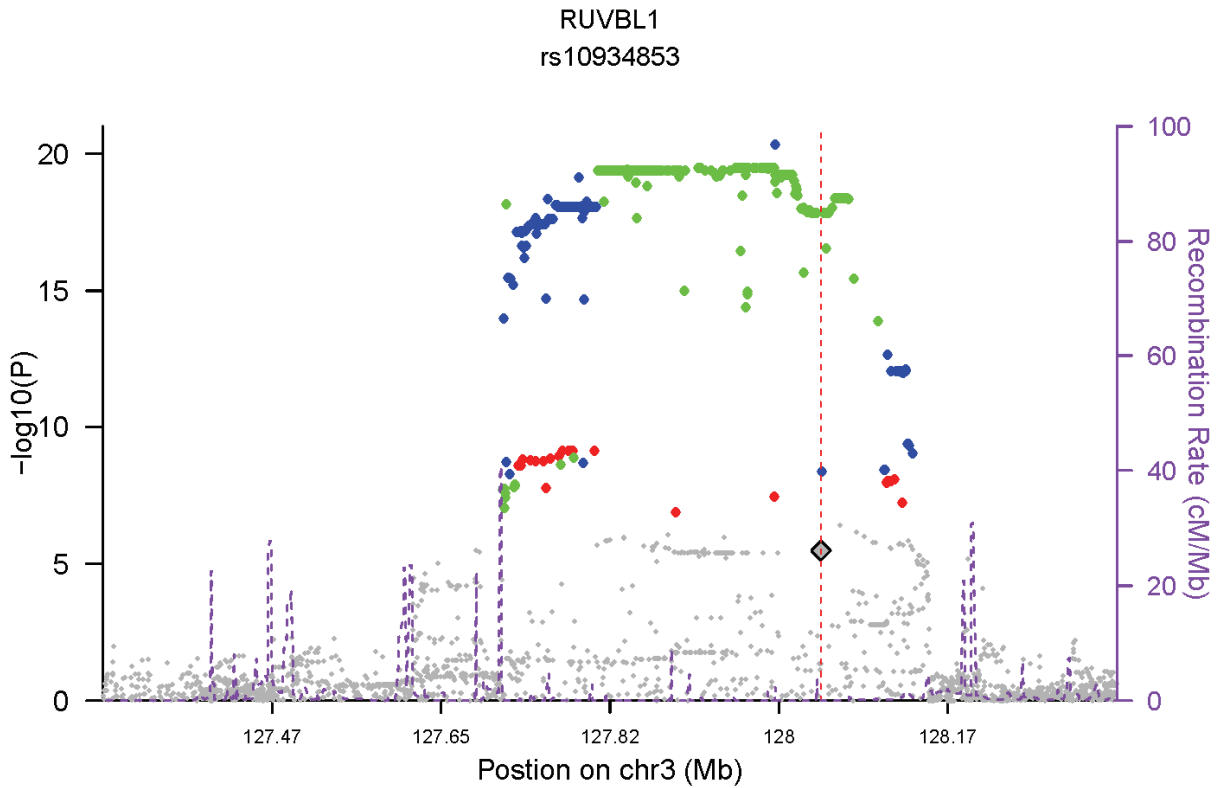


UCSC Genes Based on RefSeq, UniProt, GenBank, CCDS and Comparative Genomics

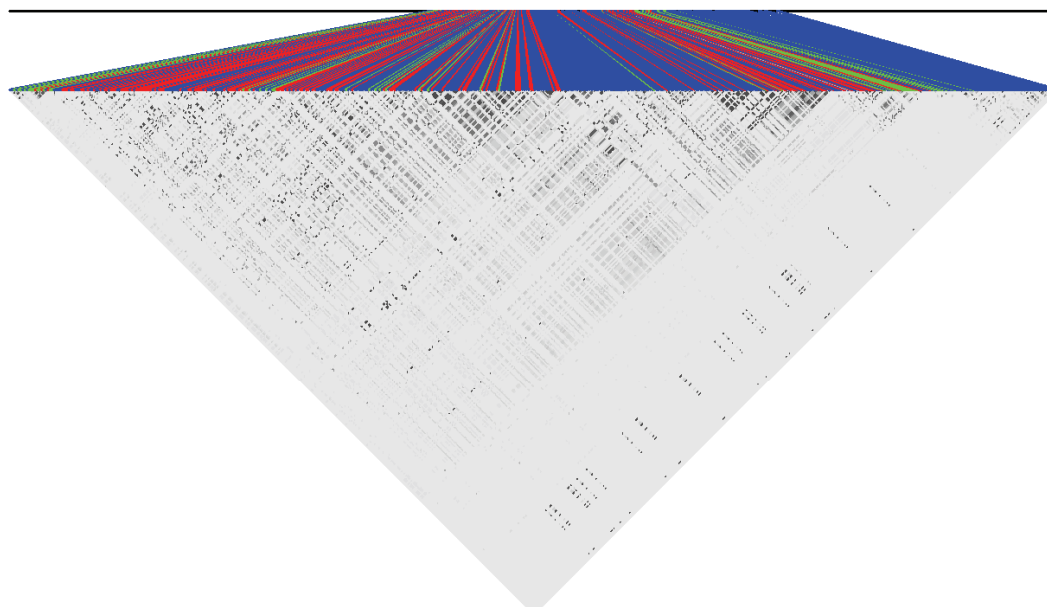
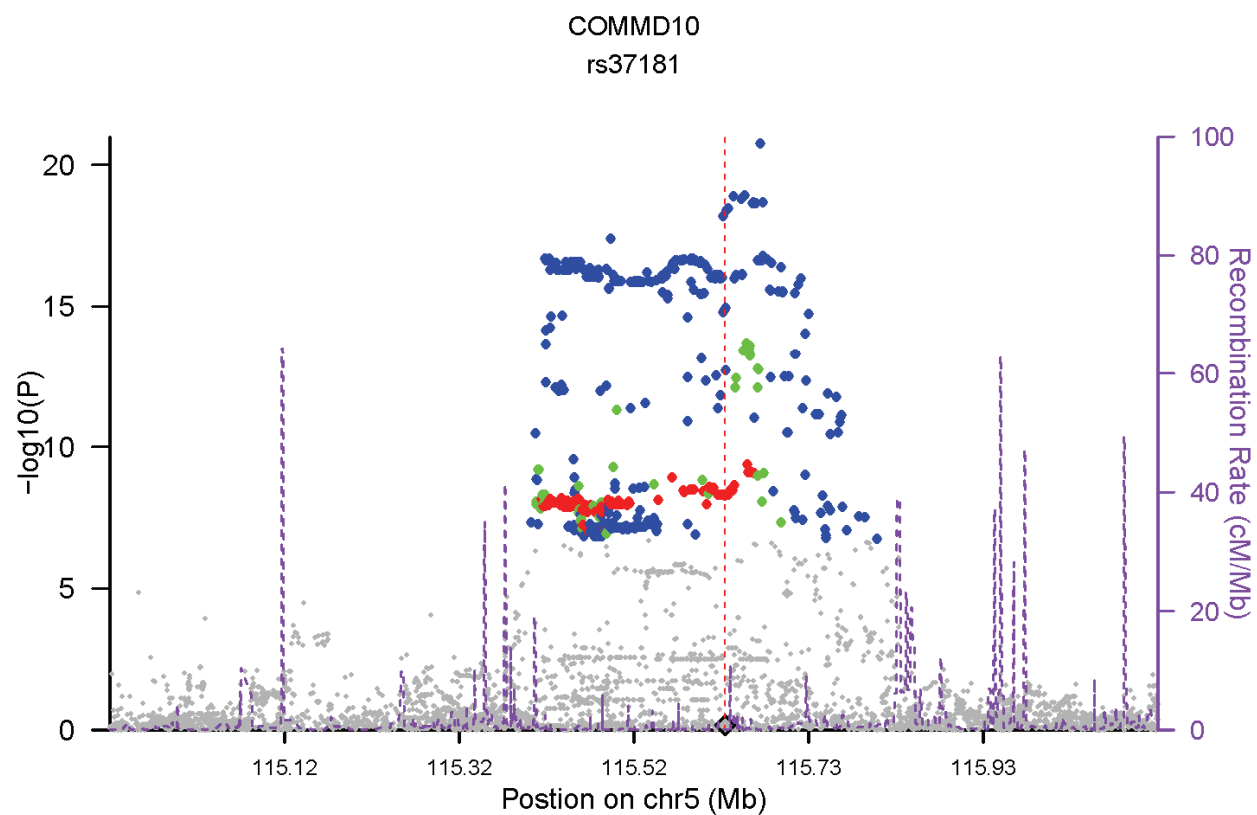
CD200R1 BOC SIDT1 GRAMD1C   
 GTPBP8 WDR52 KIAA2018 NAA50   
 C3orf17 SPICE1 ATP6V1A



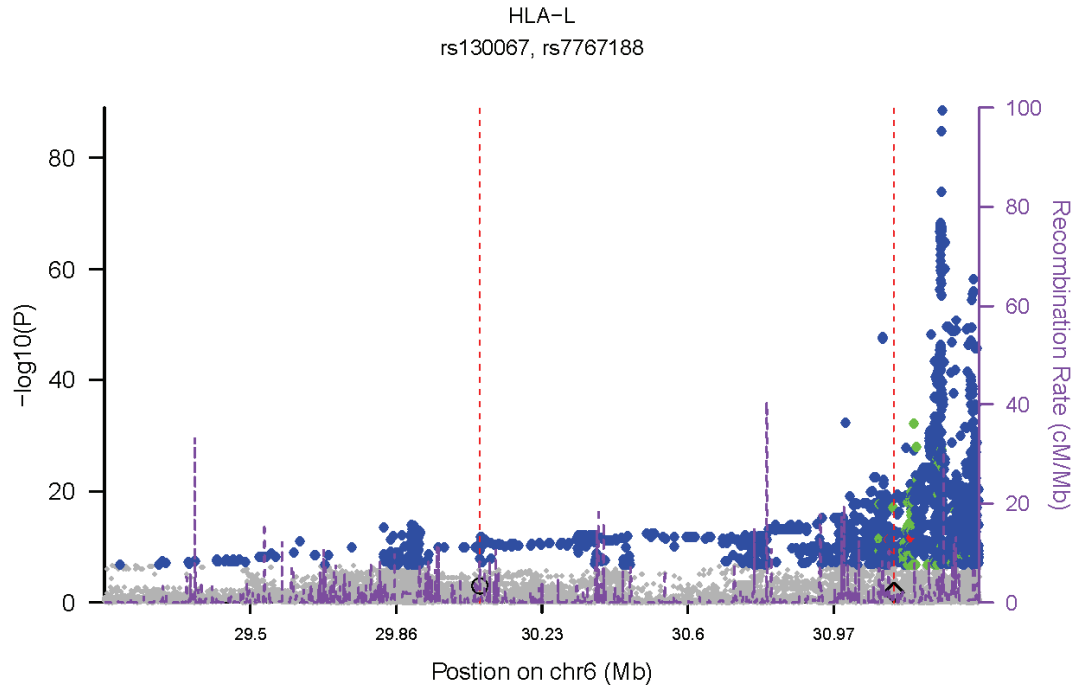
| rsID        | pos       | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs7611694 | imputed | Result Type |
|-------------|-----------|-------|-------|------|--------|----------|------------|-----------|---------|-------------|
| rs116425520 | 112955254 | T     | C     | 0.03 | -0.226 | 2.25e-11 | 2.00e-02   | <0.2      | 1       | Flanking    |
| rs2129430   | 113165773 | C     | G     | 0.43 | -0.074 | 1.30e-10 | 6.08e-06   | 0.508     | 1       | MaxLD       |
| rs2007579   | 113241623 | A     | G     | 0.05 | -0.198 | 5.09e-15 | -          | <0.2      | 1       | Peak        |
| rs7611694   | 113275624 | C     | A     | 0.40 | -0.041 | 4.28e-04 | 2.29e-03   | 1.000     | 0       | PC Risk     |
| rs138921562 | 113308528 | A     | G     | 0.03 | -0.206 | 1.16e-09 | 1.85e-01   | <0.2      | 1       | Flanking    |



| rsID       | pos       | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs10934853 | imputed | Result Type |
|------------|-----------|-------|-------|------|--------|----------|------------|------------|---------|-------------|
| rs9839080  | 127711997 | T     | C     | 0.44 | 0.047  | 2.03e-08 | 0.3595     | 0.474      | 1       | Flanking    |
| rs74501258 | 127771159 | A     | G     | 0.45 | -0.055 | 2.48e-09 | 0.0687     | 0.350      | 1       | ReverseBeta |
| rs2075402  | 127784262 | C     | T     | 0.43 | 0.051  | 7.69e-10 | 0.2208     | 0.530      | 1       | MaxLD       |
| rs2811415  | 127991527 | A     | G     | 0.17 | 0.099  | 4.60e-21 | -          | <0.2       | 0       | Peak        |
| rs10934853 | 128038373 | A     | C     | 0.30 | 0.042  | 3.32e-06 | 0.7554     | 1.000      | 0       | PC Risk     |
| rs56299192 | 128133006 | T     | A     | 0.09 | 0.092  | 9.82e-10 | 0.1569     | <0.2       | 1       | Flanking    |

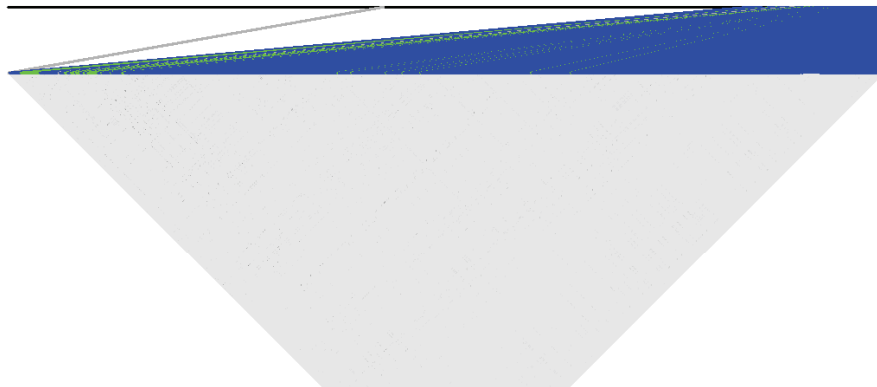


| rsID       | pos       | minor | major | MAF  | Beta  | p.value  | adj.pvalue | rs37181 | imputed | Result Type |
|------------|-----------|-------|-------|------|-------|----------|------------|---------|---------|-------------|
| rs72804805 | 115411582 | C     | G     | 0.15 | 0.069 | 3.30e-11 | 0.00248    | <0.2    | 0       | Flanking    |
| rs37181    | 115630004 | G     | T     | 0.22 | 0.004 | 6.79e-01 | 0.00743    | 1.000   | 1       | PC Risk     |
| rs785373   | 115655585 | C     | G     | 0.36 | 0.048 | 4.31e-10 | 0.33446    | 0.507   | 1       | MaxLD       |
| rs804152   | 115670932 | C     | T     | 0.23 | 0.080 | 1.82e-21 | -          | <0.2    | 0       | Peak        |
| rs56153002 | 115784061 | C     | G     | 0.09 | 0.066 | 2.83e-08 | 0.05587    | <0.2    | 0       | Flanking    |

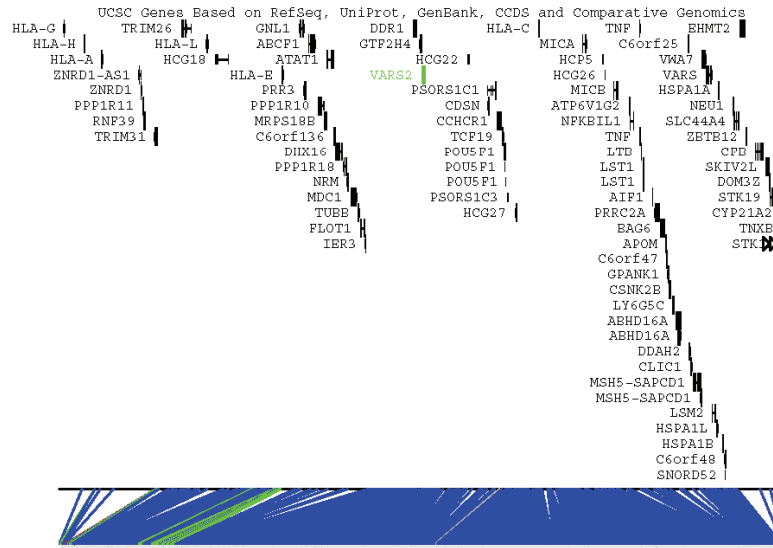
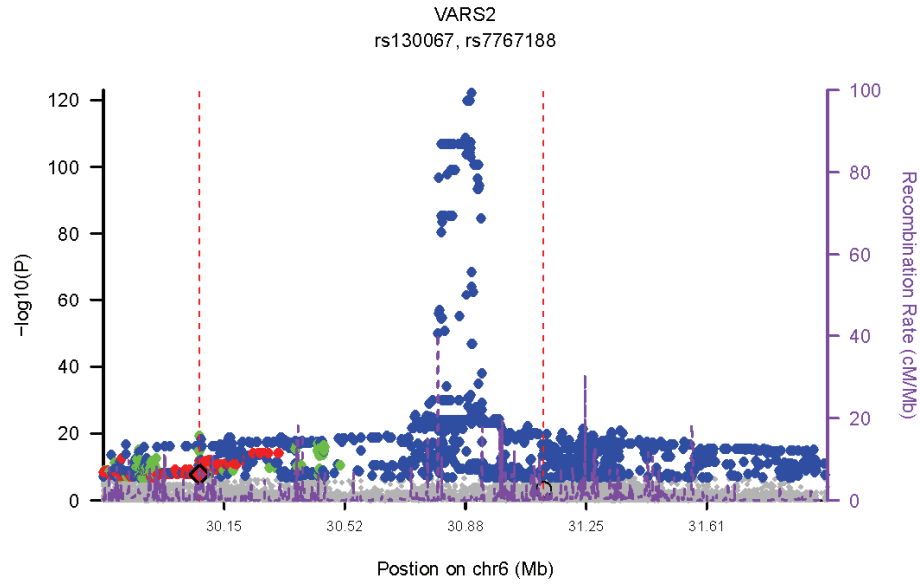


UCSC Genes Based on RefSeq, UniProt, GenBank, CCDS and Comparative Genomics

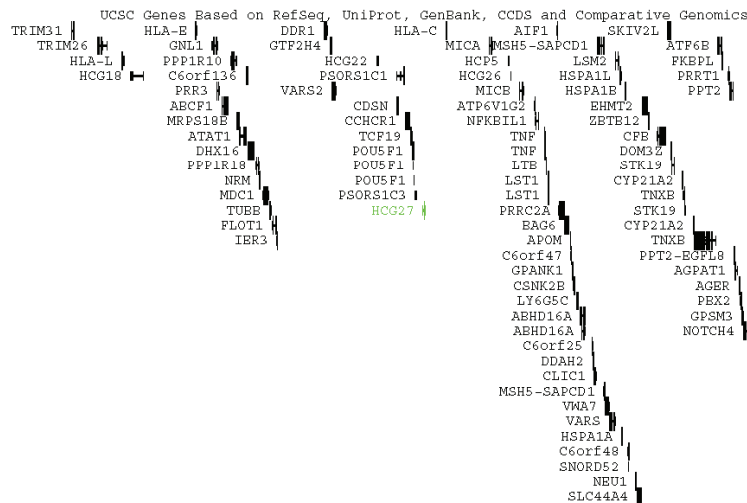
|           |       |           |       |          |         |          |       |
|-----------|-------|-----------|-------|----------|---------|----------|-------|
| MAS1L     | HCG4  | TRIM31    | HLA-L | HLA-E    | ABCF1   | DDR1     | HLA-C |
| UBD       | HLA-H | HLA-A     | HLA-L | HLA-E    | ATAT1   | GTF2H4   |       |
| GABBR1    | MOG   | ZNRD1-AS1 | HCG18 | ATAT1    | PRR3    | HCG22    |       |
| HLA-F     | ZNRD1 | PPP1R11   |       | MRPS18B  | PPPIR10 | PSORS1C1 |       |
| HLA-F-AS1 | RNF39 | TRIM26    |       | C6orf136 | DXH16   | CDSN     |       |
| HLA-F-AS1 |       |           |       | PPP1R18  | NRM     | CCHCR1   |       |
| HLA-G     |       |           |       | MDC1     | TUBB    | TCF19    |       |
|           |       |           |       | PLOT1    | IER3    | POU5F1   |       |
|           |       |           |       |          |         | POU5F1   |       |
|           |       |           |       |          |         | PSORS1C3 |       |
|           |       |           |       |          |         | HCG27    |       |



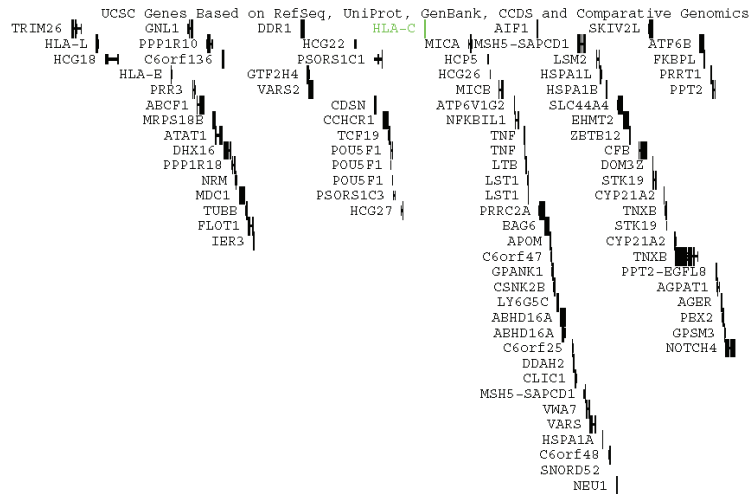
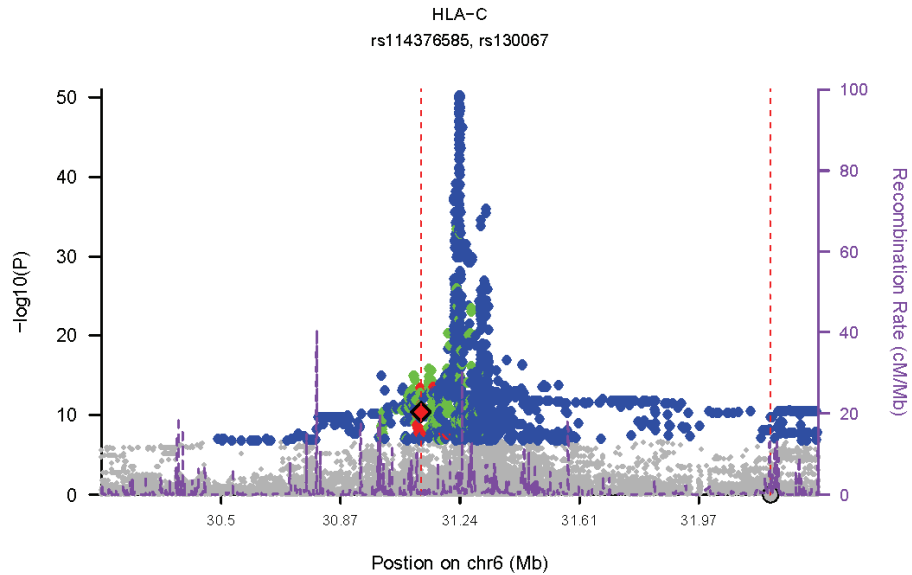
| rsID        | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs7767188 | rs130067 | imputed | Result Type |
|-------------|----------|-------|-------|------|--------|----------|------------|-----------|----------|---------|-------------|
| rs147080558 | 29413003 | T     | C     | 0.09 | -0.416 | 1.75e-08 | 0.06307    | <0.2      | <0.2     | 1       | Flanking    |
| rs3823374   | 29944148 | A     | C     | 0.36 | 0.219  | 5.93e-07 | 0.03724    | 0.518     | <0.2     | 0       | MaxLD       |
| rs3823375   | 29944158 | C     | T     | 0.36 | 0.219  | 5.93e-07 | 0.03724    | 0.518     | <0.2     | 0       | MaxLD       |
| rs7767188   | 30073776 | A     | G     | 0.24 | 0.165  | 8.24e-04 | 0.04196    | 1.000     | <0.2     | 0       | PC Risk     |
| rs130067    | 31118511 | G     | T     | 0.21 | 0.126  | 1.51e-02 | 0.00719    | <0.2      | 1.000    | 0       | PC Risk     |
| rs139078838 | 31164511 | T     | C     | 0.31 | 0.322  | 2.39e-12 | 0.41570    | <0.2      | 0.557    | 1       | MaxLD       |
| rs115212502 | 31242151 | C     | T     | 0.43 | -0.691 | 4.01e-89 | -          | <0.2      | <0.2     | 1       | Peak        |
| rs114949789 | 31334601 | T     | C     | 0.18 | -0.354 | 5.64e-11 | 0.21759    | <0.2      | <0.2     | 1       | Flanking    |



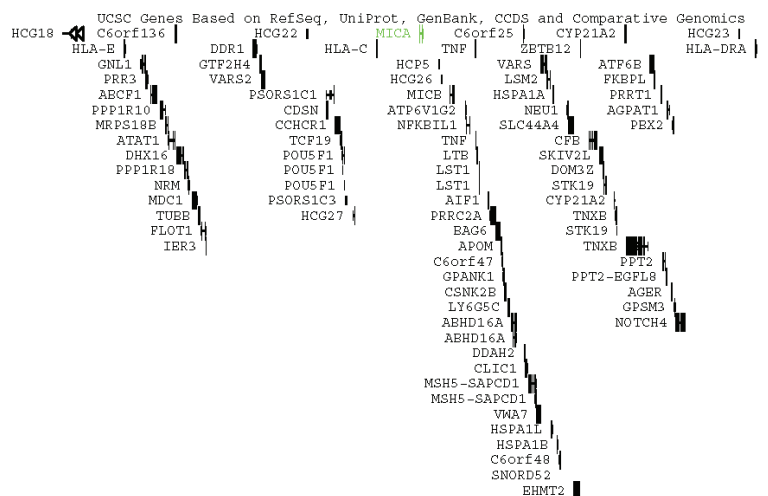
| rsID        | pos      | minor | major | MAF  | Beta   | p.value   | adj.pvalue | rs7767188 | rs130067 | imputed | Result Type |
|-------------|----------|-------|-------|------|--------|-----------|------------|-----------|----------|---------|-------------|
| rs116078832 | 29784503 | G     | A     | 0.35 | 0.096  | 4.87e-09  | 0.122360   | 0.517     | <0.2     | 1       | Flanking    |
| rs7767188   | 30073776 | A     | G     | 0.24 | 0.104  | 1.67e-08  | 0.000301   | 1.000     | <0.2     | 0       | PC Risk     |
| rs9261639   | 30237859 | A     | G     | 0.30 | 0.125  | 1.04e-14  | 0.000010   | 0.624     | <0.2     | 0       | MaxLD       |
| rs115591439 | 30252836 | T     | A     | 0.30 | 0.125  | 1.04e-14  | 0.000010   | 0.624     | <0.2     | 1       | MaxLD       |
| rs147212564 | 30254678 | A     | G     | 0.30 | 0.125  | 1.04e-14  | 0.000010   | 0.624     | <0.2     | 1       | MaxLD       |
| rs115368375 | 30257497 | G     | C     | 0.30 | 0.125  | 1.04e-14  | 0.000010   | 0.624     | <0.2     | 1       | MaxLD       |
| rs261946    | 30271334 | G     | A     | 0.30 | 0.125  | 1.04e-14  | 0.000010   | 0.624     | <0.2     | 0       | MaxLD       |
| rs115267644 | 30272459 | A     | G     | 0.30 | 0.125  | 1.04e-14  | 0.000010   | 0.624     | <0.2     | 1       | MaxLD       |
| rs116555278 | 30285650 | A     | T     | 0.30 | 0.125  | 1.04e-14  | 0.000010   | 0.624     | <0.2     | 1       | MaxLD       |
| rs2844750   | 30313268 | A     | G     | 0.30 | 0.125  | 1.04e-14  | 0.000010   | 0.624     | <0.2     | 0       | MaxLD       |
| rs2844749   | 30314116 | A     | G     | 0.30 | 0.125  | 1.04e-14  | 0.000010   | 0.624     | <0.2     | 0       | MaxLD       |
| rs114078037 | 30315011 | A     | T     | 0.30 | 0.125  | 1.04e-14  | 0.000010   | 0.624     | <0.2     | 1       | MaxLD       |
| rs2844651   | 30900664 | T     | C     | 0.46 | -0.288 | 8.36e-123 | -          | <0.2      | <0.2     | 0       | Peak        |
| rs1265093   | 31107187 | A     | G     | 0.29 | 0.103  | 3.42e-09  | 0.015398   | <0.2      | 0.639    | 0       | MaxLD       |
| rs130067    | 31118511 | G     | T     | 0.21 | 0.068  | 4.55e-04  | 0.779739   | <0.2      | 1.000    | 0       | PC Risk     |
| rs149411182 | 31973863 | T     | C     | 0.47 | 0.090  | 2.06e-08  | 0.210808   | <0.2      | <0.2     | 1       | Flanking    |



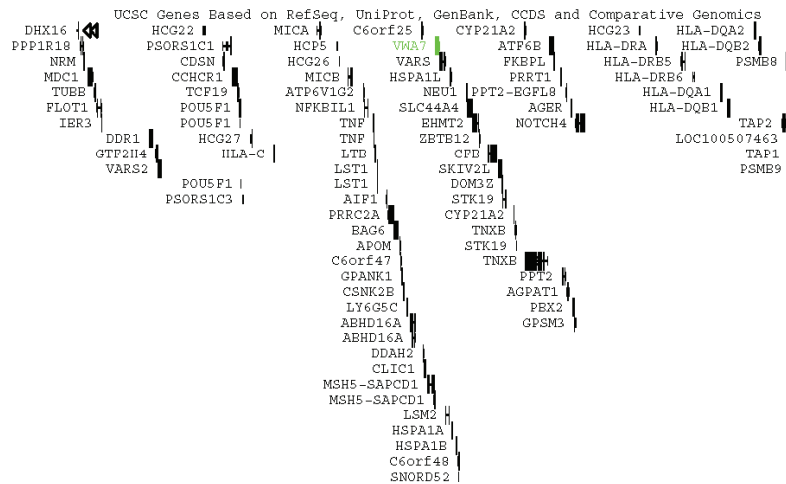
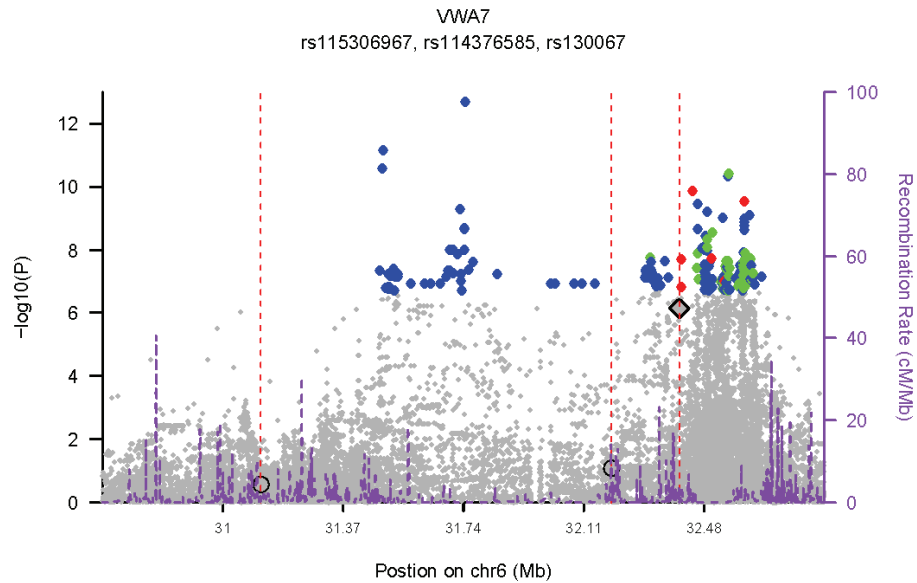
| rsID        | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs7767188 | rs130067 | rs114376585 | imputed | Result Type |
|-------------|----------|-------|-------|------|--------|----------|------------|-----------|----------|-------------|---------|-------------|
| rs7767188   | 30073776 | A     | G     | 0.24 | 0.063  | 9.87e-02 | 3.51e-02   | 1.000     | <0.2     | <0.2        | 0       | PC Risk     |
| rs183830067 | 30217185 | T     | A     | 0.31 | 0.149  | 3.19e-05 | 4.54e-04   | 0.514     | <0.2     | <0.2        | 1       | MaxLD       |
| rs114637387 | 30711805 | C     | G     | 0.10 | -0.302 | 1.60e-08 | 2.11e-03   | <0.2      | <0.2     | <0.2        | 1       | Flanking    |
| rs130067    | 31118511 | G     | T     | 0.21 | 0.278  | 1.36e-12 | 2.32e-04   | <0.2      | 1.000    | <0.2        | 0       | PC Risk     |
| rs6930065   | 31173669 | C     | T     | 0.34 | 0.457  | 4.41e-54 | -          | <0.2      | <0.2     | <0.2        | 0       | Peak        |
| rs145076668 | 31188436 | T     | C     | 0.13 | 0.526  | 2.74e-30 | 9.42e-08   | <0.2      | 0.565    | <0.2        | 1       | MaxLD       |
| rs114376585 | 32192331 | A     | G     | 0.38 | -0.012 | 7.05e-01 | 6.50e-01   | <0.2      | <0.2     | 1.000       | 0       | PC Risk     |
| rs116522847 | 32197219 | G     | T     | 0.45 | 0.030  | 3.43e-01 | 3.06e-01   | <0.2      | <0.2     | 0.516       | 1       | MaxLD       |
| rs140250697 | 32230354 | A     | G     | 0.37 | -0.187 | 9.01e-09 | 1.87e-02   | <0.2      | <0.2     | <0.2        | 1       | Flanking    |



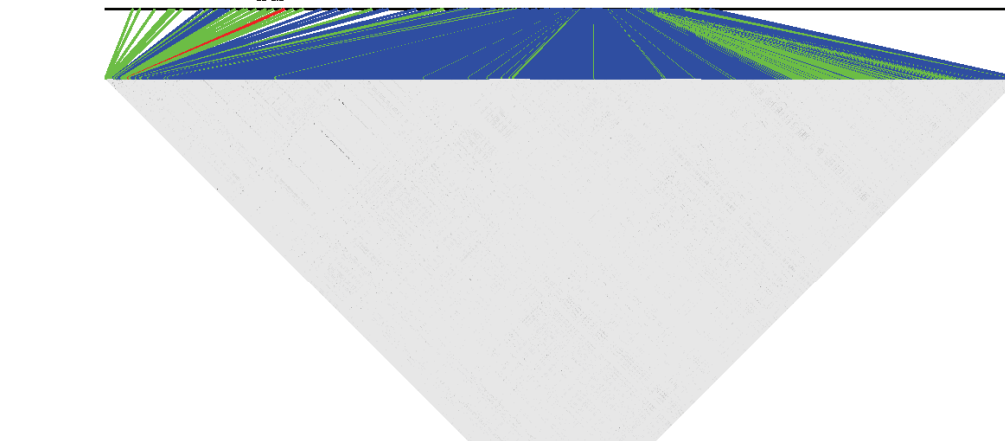
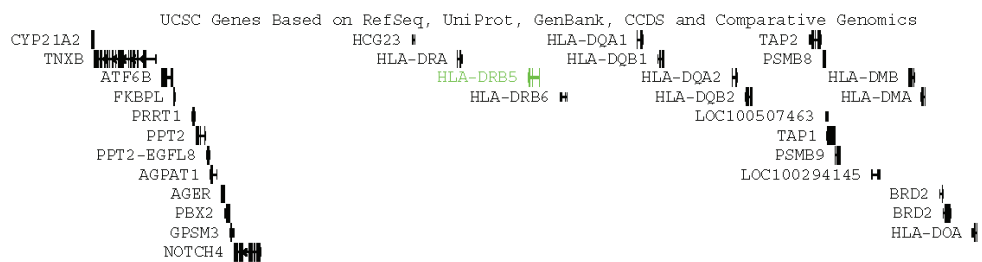
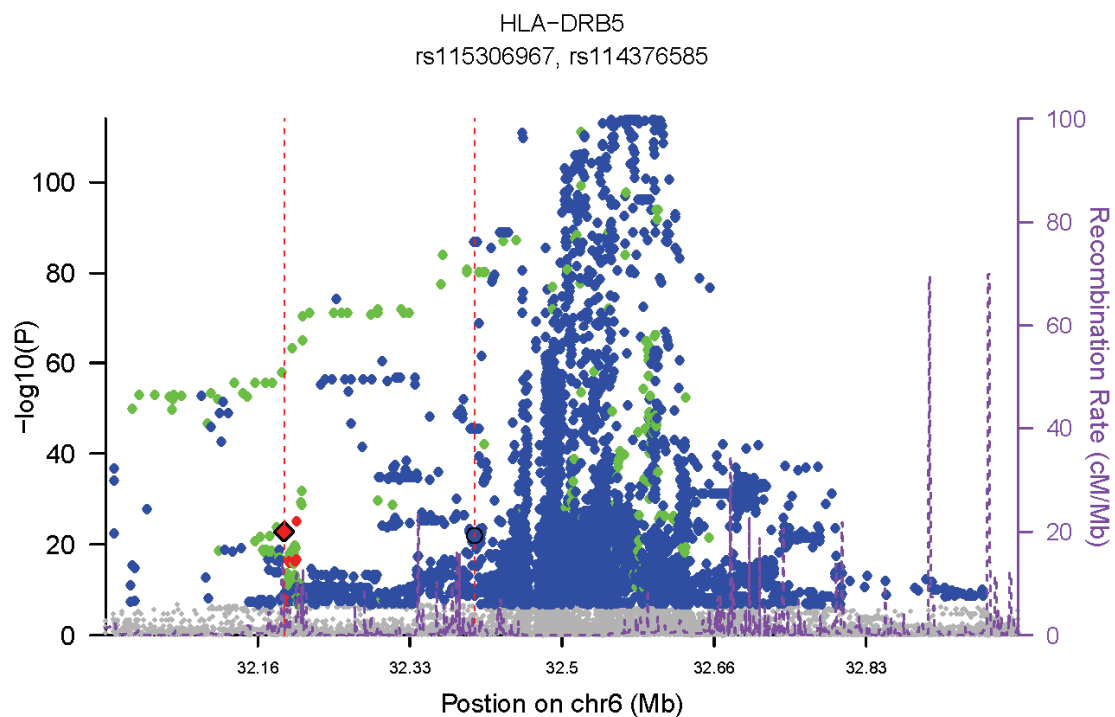
| rsID        | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs130067 | rs114376585 | imputed | Result Type |
|-------------|----------|-------|-------|------|--------|----------|------------|----------|-------------|---------|-------------|
| rs149067179 | 30743729 | A     | G     | 0.10 | 0.219  | 2.41e-08 | 0.994468   | <0.2     | <0.2        | 1       | Flanking    |
| rs130067    | 31118511 | G     | T     | 0.21 | -0.196 | 4.29e-11 | 0.000263   | 1.000    | <0.2        | 0       | PC Risk     |
| rs144721865 | 31156041 | T     | C     | 0.28 | -0.204 | 3.09e-11 | 0.000590   | 0.637    | <0.2        | 1       | MaxLD       |
| rs78848968  | 31240010 | G     | A     | 0.32 | 0.343  | 5.67e-51 | -          | <0.2     | <0.2        | 0       | Peak        |
| rs114376585 | 32192331 | A     | G     | 0.38 | -0.003 | 9.06e-01 | 0.089796   | <0.2     | 1.000       | 0       | PC Risk     |
| rs116522847 | 32197219 | G     | T     | 0.45 | -0.091 | 1.44e-04 | 0.931817   | <0.2     | 0.516       | 1       | MaxLD       |
| rs3129939   | 32336766 | G     | A     | 0.17 | 0.187  | 1.67e-08 | 0.054610   | <0.2     | <0.2        | 0       | Flanking    |



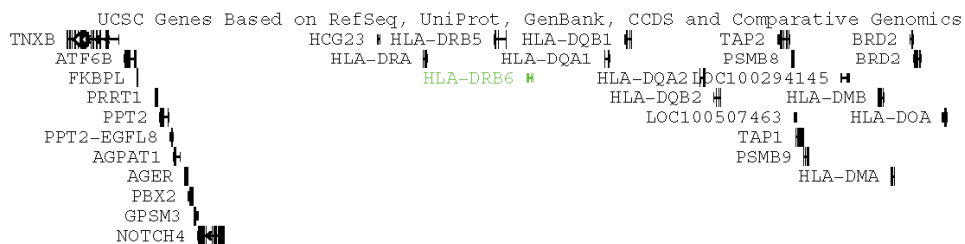
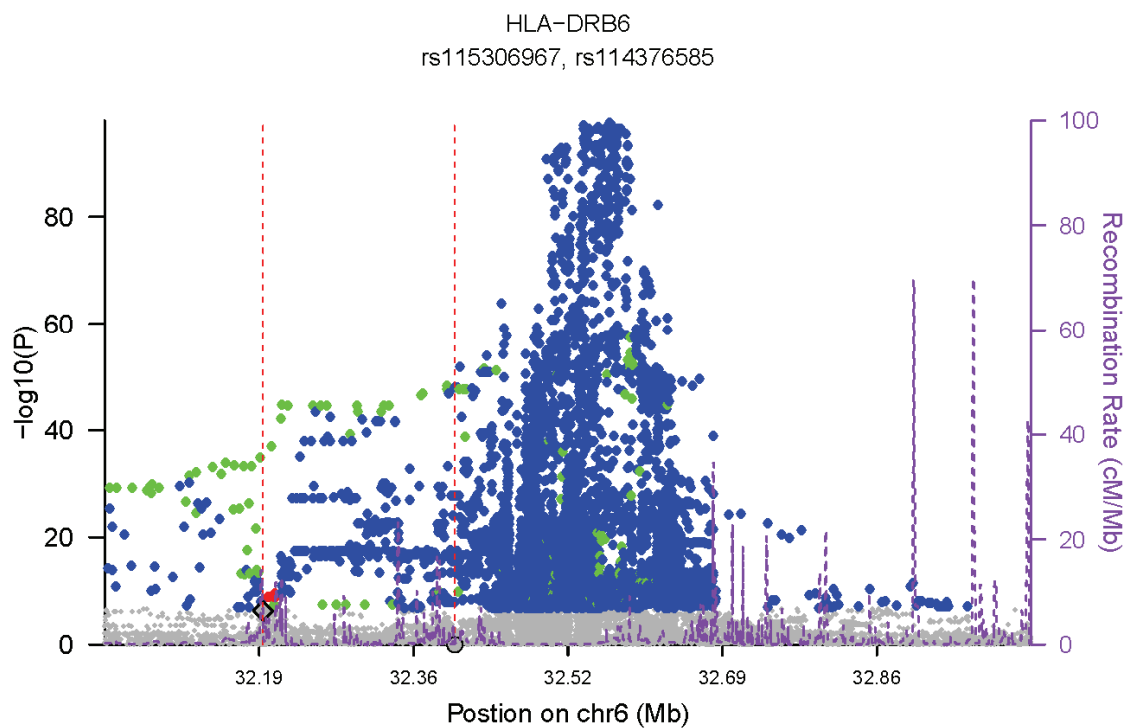
| rsID        | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs130067 | rs114376585 | rs115306967 | imputed | Result Type |
|-------------|----------|-------|-------|------|--------|----------|------------|----------|-------------|-------------|---------|-------------|
| rs1264372   | 30769726 | T     | C     | 0.25 | 0.138  | 1.44e-08 | 0.000455   | <0.2     | <0.2        | <0.2        | 0       | Flanking    |
| rs130067    | 31118511 | G     | T     | 0.21 | 0.085  | 1.02e-03 | 0.088742   | 1.000    | <0.2        | <0.2        | 0       | PC Risk     |
| rs115683835 | 31221299 | A     | G     | 0.13 | 0.180  | 7.25e-09 | 0.002950   | 0.553    | <0.2        | <0.2        | 1       | MaxLD       |
| rs148355290 | 31383304 | A     | G     | 0.27 | -0.374 | 9.13e-80 | -          | <0.2     | <0.2        | <0.2        | 1       | Peak        |
| rs114376585 | 32192331 | A     | G     | 0.38 | 0.090  | 1.48e-05 | 0.119371   | <0.2     | 1.000       | <0.2        | 0       | PC Risk     |
| rs116522847 | 32197219 | G     | T     | 0.45 | -0.103 | 3.39e-07 | 0.002029   | <0.2     | 0.516       | <0.2        | 1       | MaxLD       |
| rs743862    | 32381939 | C     | T     | 0.33 | -0.060 | 4.15e-03 | 0.769695   | <0.2     | <0.2        | 0.532       | 0       | MaxLD       |
| rs115306967 | 32400939 | C     | G     | 0.28 | -0.019 | 4.12e-01 | 0.220896   | <0.2     | <0.2        | 1.000       | 1       | PC Risk     |
| rs112941517 | 32480174 | C     | A     | 0.35 | -0.151 | 6.69e-09 | 0.034710   | <0.2     | <0.2        | <0.2        | 1       | Flanking    |



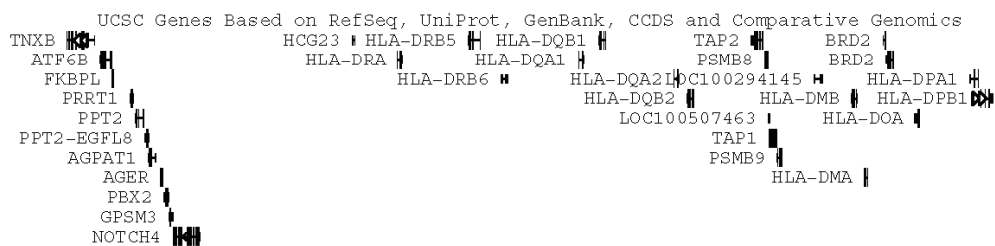
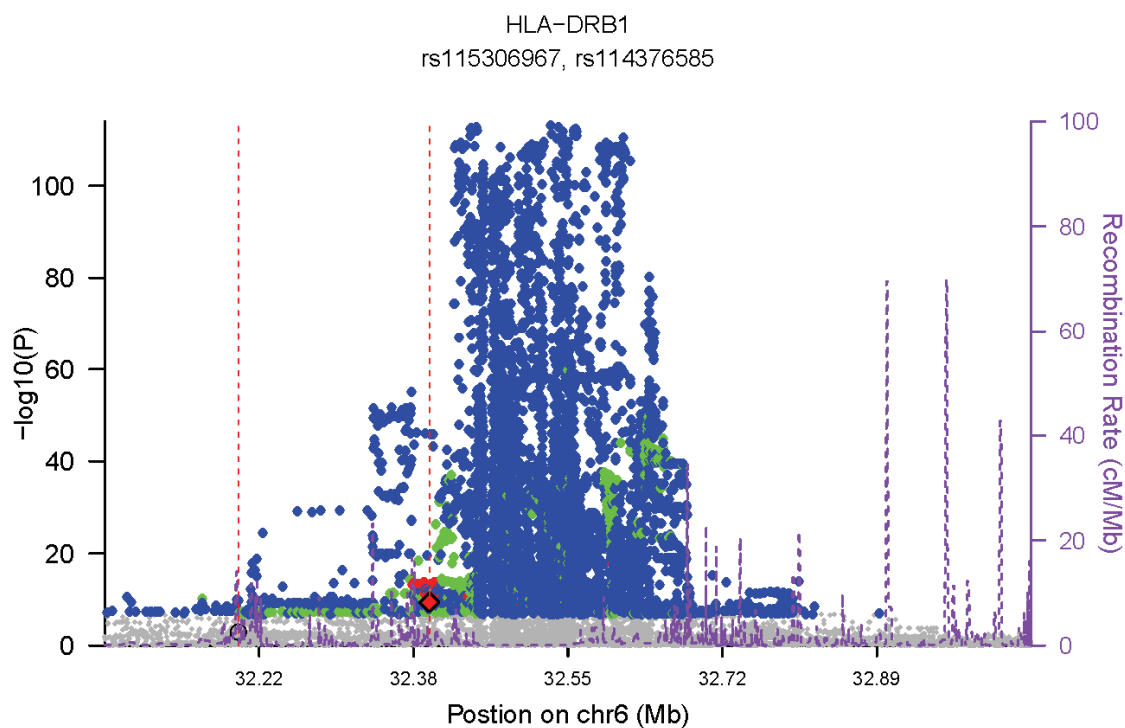
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|-------------|----------|-------|-------|------|--------|----------|------------|----------|-------------|-------------|---------|-------------|
| rs130067    | 31118511 | G     | T     | 0.21 | 0.035  | 2.61e-01 | 2.30e-01   | 1.000    | <0.2        | <0.2        | 0       | PC Risk     |
| rs145076668 | 31188436 | T     | C     | 0.13 | 0.102  | 7.70e-03 | 3.19e-02   | 0.565    | <0.2        | <0.2        | 1       | MaxLD       |
| rs141114485 | 31492157 | G     | C     | 0.35 | -0.170 | 2.70e-11 | 2.73e-05   | <0.2     | <0.2        | <0.2        | 1       | Flanking    |
| rs2736426   | 31745284 | C     | T     | 0.48 | 0.182  | 2.02e-13 | -          | <0.2     | <0.2        | <0.2        | 0       | Peak        |
| rs114376585 | 32192331 | A     | G     | 0.38 | 0.044  | 8.00e-02 | 7.67e-01   | <0.2     | 1.000       | <0.2        | 0       | PC Risk     |
| rs141507970 | 32206103 | C     | G     | 0.37 | 0.059  | 2.12e-02 | 3.59e-01   | <0.2     | 0.627       | <0.2        | 1       | MaxLD       |
| rs115306967 | 32400939 | C     | G     | 0.28 | -0.139 | 7.30e-07 | 3.07e-04   | <0.2     | <0.2        | 1.000       | 1       | PC Risk     |
| rs143466021 | 32443223 | A     | G     | 0.35 | -0.176 | 1.35e-10 | 2.45e-06   | <0.2     | <0.2        | 0.578       | 1       | MaxLD       |
| rs28374650  | 32623367 | T     | C     | 0.25 | -0.163 | 2.99e-08 | 8.99e-06   | <0.2     | <0.2        | <0.2        | 1       | Flanking    |



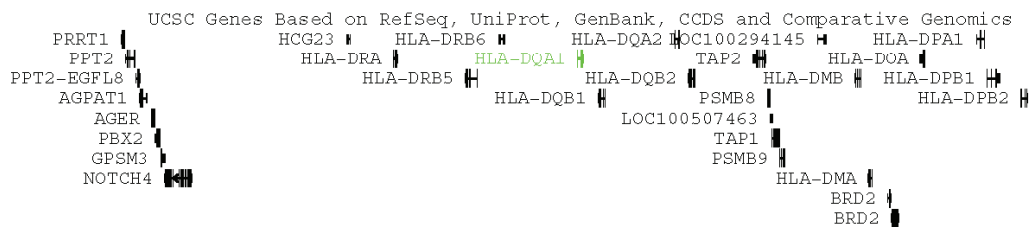
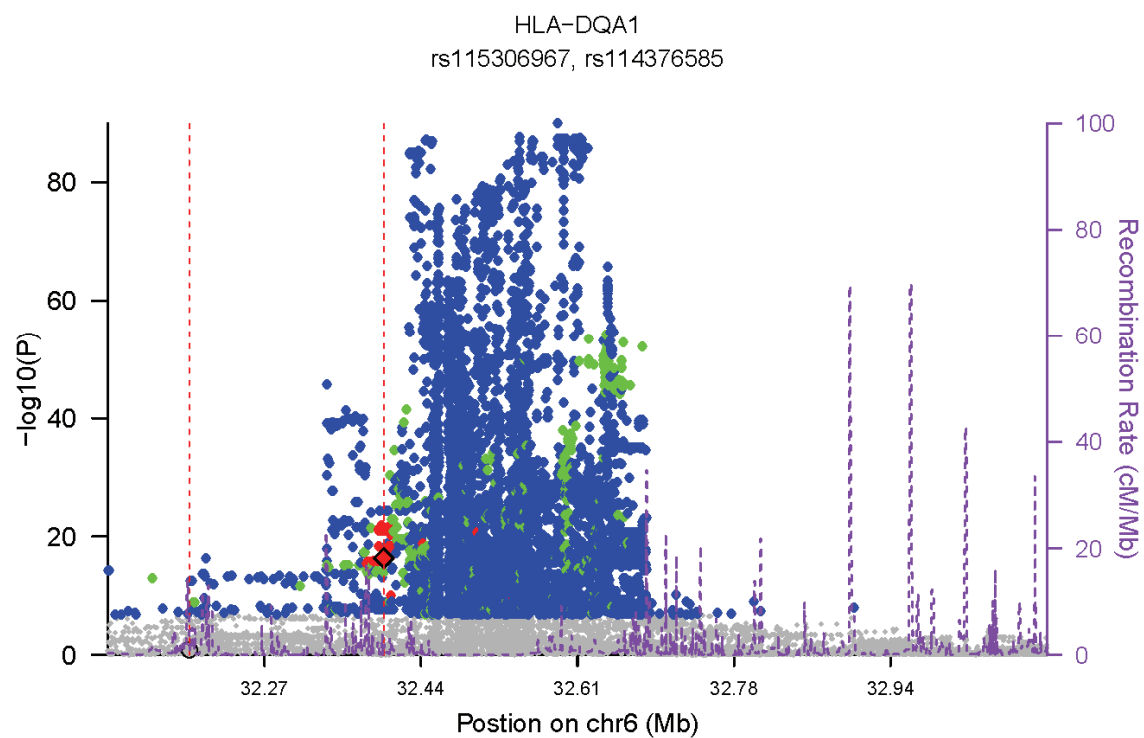
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|-------------|----------|-------|-------|------|--------|-----------|------------|-------------|-------------|---------|-------------|
| rs2516450   | 31387157 | C     | T     | 0.15 | 0.523  | 1.80e-21  | 8.88e-01   | <0.2        | <0.2        | 0       | Flanking    |
| rs114376585 | 32192331 | A     | G     | 0.38 | 0.399  | 1.54e-23  | 5.33e-08   | 1.000       | <0.2        | 0       | PC Risk     |
| rs141507970 | 32206103 | C     | G     | 0.37 | 0.419  | 1.11e-25  | 1.15e-06   | 0.627       | <0.2        | 1       | MaxLD       |
| rs115306967 | 32400939 | C     | G     | 0.28 | -0.440 | 8.52e-23  | 3.41e-18   | <0.2        | 1.000       | 1       | PC Risk     |
| rs143466021 | 32443223 | A     | G     | 0.35 | -0.556 | 1.56e-39  | 9.91e-31   | <0.2        | 0.578       | 1       | MaxLD       |
| rs9271085   | 32576152 | T     | C     | 0.17 | 0.988  | 1.67e-114 | -          | <0.2        | <0.2        | 1       | Peak        |
| rs114014593 | 33045966 | A     | G     | 0.40 | -0.234 | 1.33e-08  | 1.89e-03   | <0.2        | <0.2        | 1       | Flanking    |



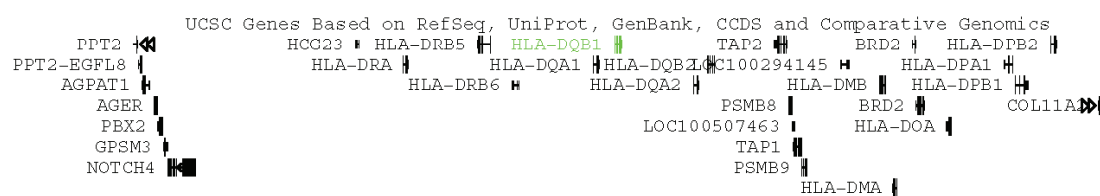
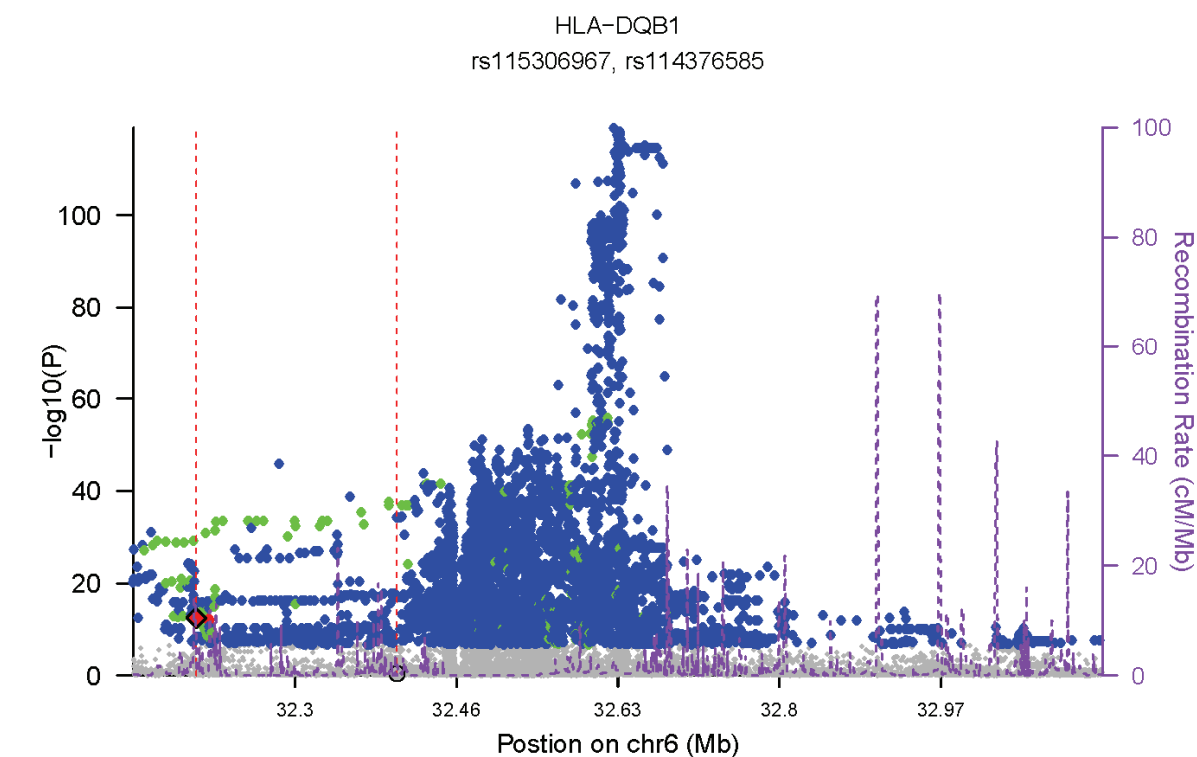
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|-------------|----------|-------|-------|------|--------|----------|-------------|-------------|-------------|---------|-------------|
| rs2596471   | 31428911 | A     | G     | 0.18 | -0.767 | 2.06e-10 | 0.1400      | <0.2        | <0.2        | 0       | Flanking    |
| rs114376585 | 32192331 | A     | G     | 0.38 | -0.466 | 5.69e-07 | 0.0409      | 1.000       | <0.2        | 0       | PC Risk     |
| rs141507970 | 32206103 | C     | G     | 0.37 | -0.586 | 2.88e-10 | 0.2843      | 0.627       | <0.2        | 1       | MaxLD       |
| rs115306967 | 32400939 | C     | G     | 0.28 | 0.008  | 9.41e-01 | 0.0990      | <0.2        | 1.000       | 1       | PC Risk     |
| rs3129887   | 32410691 | A     | G     | 0.17 | 0.527  | 3.07e-05 | 0.6536      | <0.2        | 0.507       | 0       | MaxLD       |
| rs9270804   | 32569422 | A     | T     | 0.28 | -1.842 | 3.31e-98 | -           | <0.2        | <0.2        | 1       | Peak        |
| rs114383918 | 32936607 | C     | A     | 0.08 | -1.008 | 1.30e-08 | 0.1255      | <0.2        | <0.2        | 1       | Flanking    |



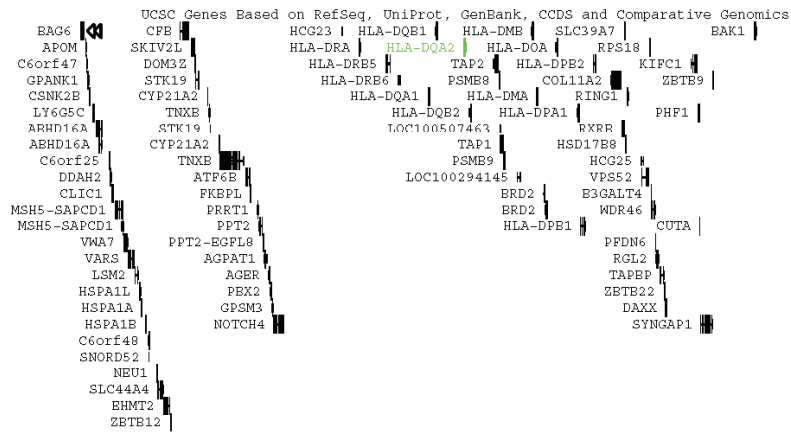
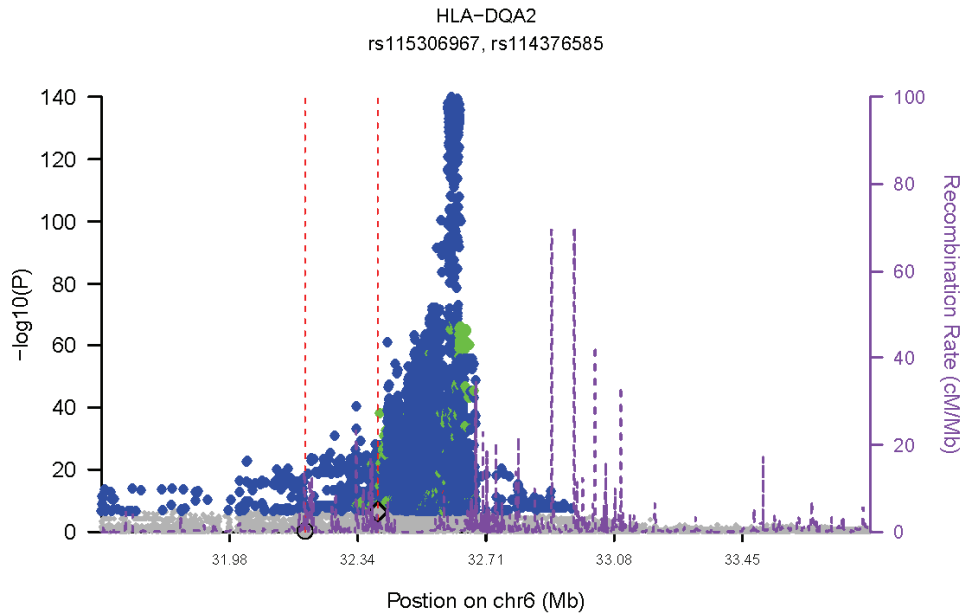
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|-------------|----------|-------|-------|------|--------|-----------|------------|-------------|-------------|---------|-------------|
| rs2253051   | 31462002 | C     | G     | 0.13 | -0.206 | 2.55e-08  | 0.846      | <0.2        | <0.2        | 1       | Flanking    |
| rs114376585 | 32192331 | A     | G     | 0.38 | -0.081 | 1.01e-03  | 0.972      | 1.000       | <0.2        | 0       | PC Risk     |
| rs141507970 | 32206103 | C     | G     | 0.37 | -0.092 | 1.90e-04  | 0.117      | 0.627       | <0.2        | 1       | MaxLD       |
| rs115306967 | 32400939 | C     | G     | 0.28 | 0.169  | 4.22e-10  | 0.669      | <0.2        | 1.000       | 1       | PC Risk     |
| rs146320947 | 32534206 | A     | G     | 0.35 | -0.455 | 7.06e-114 | -          | <0.2        | <0.2        | 1       | Peak        |
| rs114143157 | 32601019 | A     | G     | 0.34 | 0.227  | 1.96e-18  | 0.609      | <0.2        | 0.544       | 1       | MaxLD       |
| rs2071536   | 32821447 | T     | C     | 0.12 | -0.214 | 3.83e-09  | 0.506      | <0.2        | <0.2        | 1       | Flanking    |



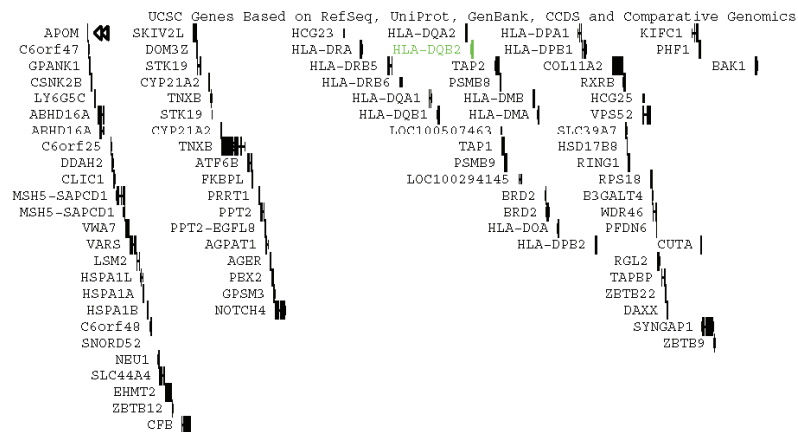
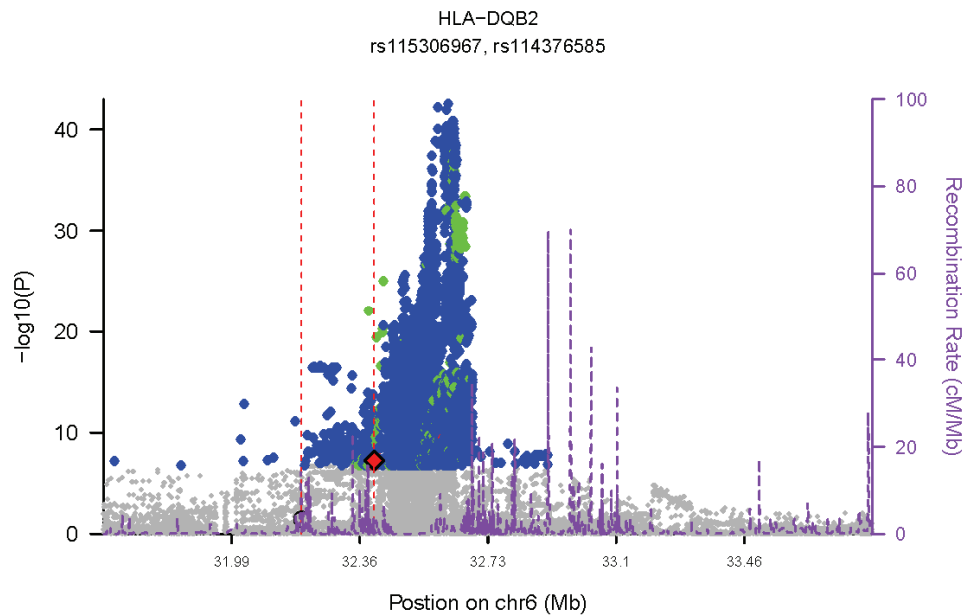
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|-------------|----------|-------|-------|------|--------|----------|------------|-------------|-------------|---------|-------------|
| rs112247058 | 31606376 | C     | T     | 0.51 | -0.164 | 2.14e-08 | 0.020389   | <0.2        | <0.2        | 1       | Flanking    |
| rs114376585 | 32192331 | A     | G     | 0.38 | -0.047 | 1.16e-01 | 0.525691   | 1.000       | <0.2        | 0       | PC Risk     |
| rs141507970 | 32206103 | C     | G     | 0.37 | -0.070 | 1.99e-02 | 0.560389   | 0.627       | <0.2        | 1       | MaxLD       |
| rs115306967 | 32400939 | C     | G     | 0.28 | 0.271  | 4.14e-17 | 0.006047   | <0.2        | 1.000       | 1       | PC Risk     |
| rs28383313  | 32587117 | G     | C     | 0.33 | -0.509 | 1.19e-90 | -          | <0.2        | <0.2        | 1       | Peak        |
| rs114143157 | 32601019 | A     | G     | 0.34 | 0.347  | 5.38e-30 | 0.001486   | <0.2        | 0.544       | 1       | MaxLD       |
| rs2071556   | 32904601 | G     | T     | 0.37 | -0.180 | 9.82e-09 | 0.000656   | <0.2        | <0.2        | 0       | Flanking    |



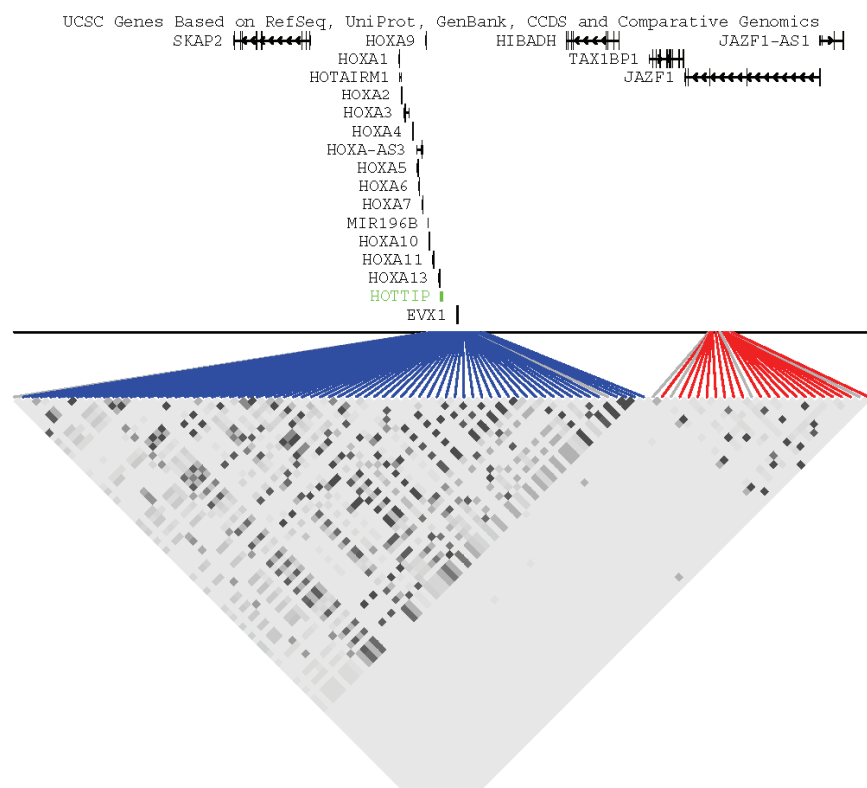
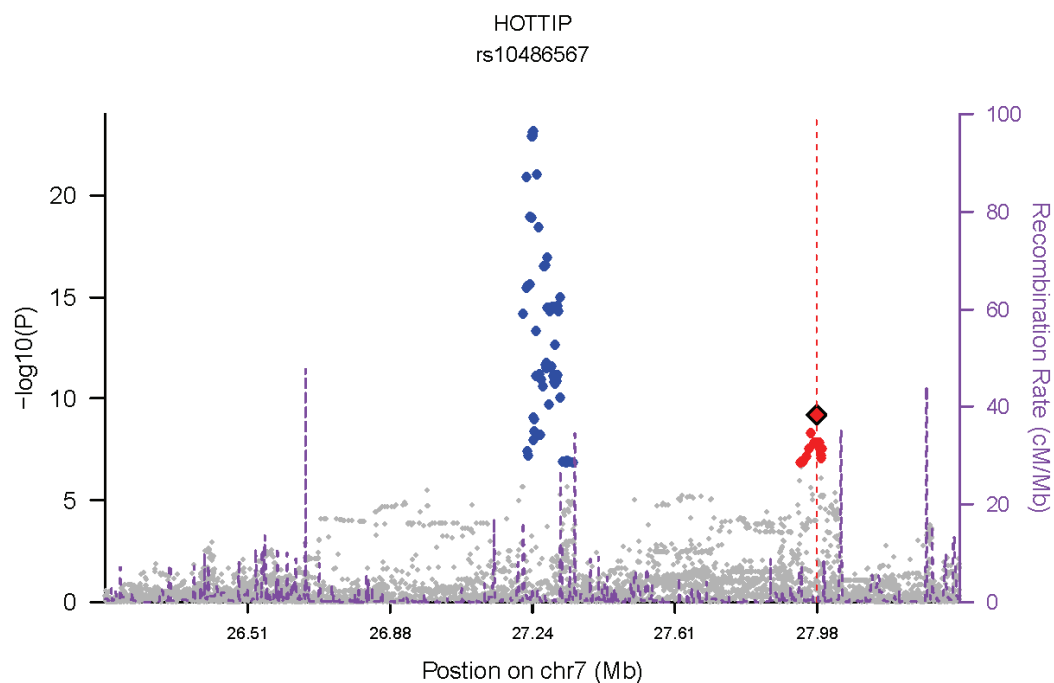
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|-------------|----------|-------|-------|------|--------|-----------|------------|-------------|-------------|---------|-------------|
| rs2857709   | 31532814 | A     | G     | 0.16 | 0.564  | 1.44e-19  | 1.01e-01   | <0.2        | <0.2        | 0       | Flanking    |
| rs114376585 | 32192331 | A     | G     | 0.38 | 0.340  | 3.56e-13  | 3.23e-08   | 1.000       | <0.2        | 0       | PC Risk     |
| rs9267853   | 32195251 | T     | C     | 0.38 | 0.342  | 2.65e-13  | 4.43e-08   | 0.997       | <0.2        | 0       | MaxLD       |
| rs115306967 | 32400939 | C     | G     | 0.28 | -0.055 | 3.10e-01  | 7.44e-01   | <0.2        | 1.000       | 1       | PC Risk     |
| rs9269349   | 32540517 | G     | A     | 0.26 | -0.242 | 6.98e-05  | 2.65e-01   | <0.2        | 0.514       | 1       | MaxLD       |
| rs9273394   | 32627082 | A     | G     | 0.28 | 0.938  | 1.83e-119 | -          | <0.2        | <0.2        | 1       | Peak        |
| rs114554250 | 33196570 | A     | G     | 0.04 | -0.616 | 2.86e-08  | 1.07e-07   | <0.2        | <0.2        | 1       | Flanking    |



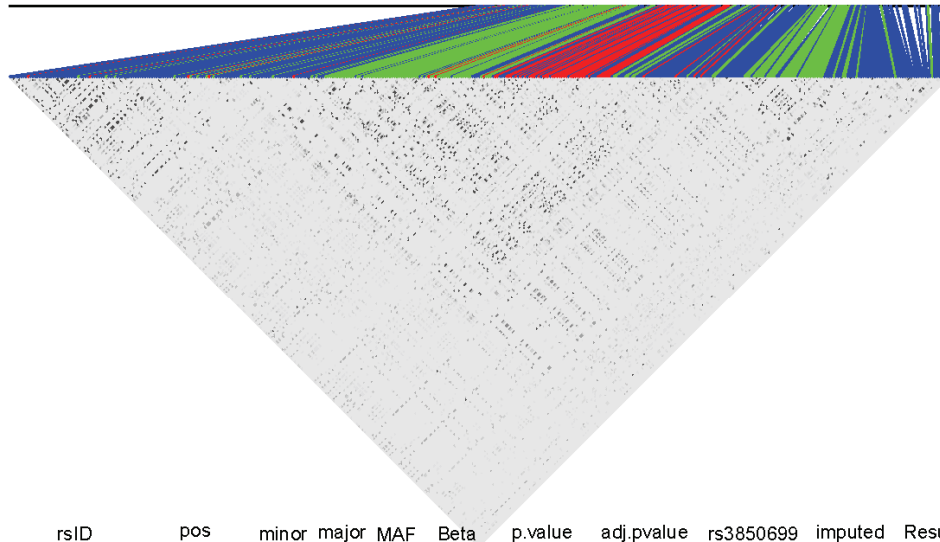
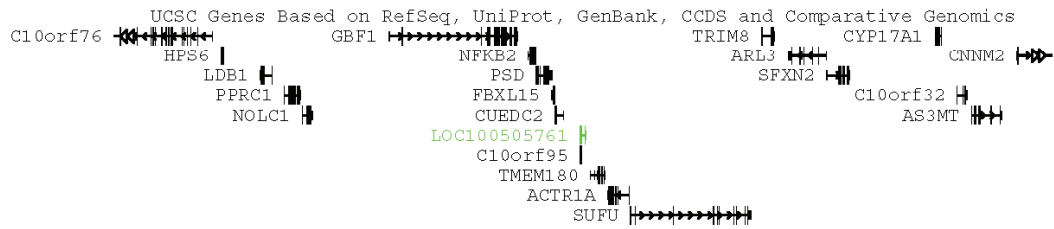
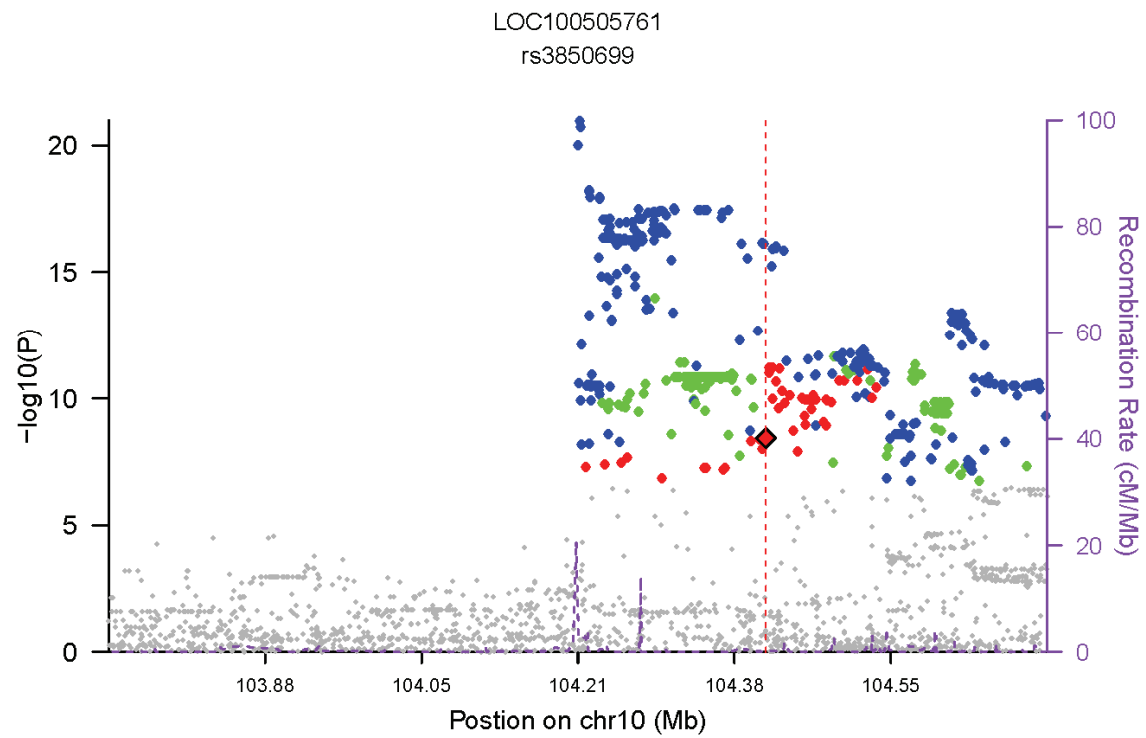
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| rs114558910 | 31611158 | T     | C     | 0.20 | -0.872 | 3.58e-12  | 2.52e-01    | <0.2        | <0.2        | 1       | Flanking    |
| rs114376585 | 32192331 | A     | G     | 0.38 | -0.094 | 3.70e-01  | 2.55e-02    | 1.000       | <0.2        | 0       | PC Risk     |
| rs141507970 | 32206103 | C     | G     | 0.37 | -0.374 | 3.53e-04  | 4.86e-01    | 0.627       | <0.2        | 1       | MaxLD       |
| rs115306967 | 32400939 | C     | G     | 0.28 | -0.589 | 3.42e-07  | 2.18e-01    | <0.2        | 1.000       | 1       | PC Risk     |
| rs114143157 | 32601019 | A     | G     | 0.34 | -0.812 | 2.37e-13  | 8.55e-01    | <0.2        | 0.544       | 1       | MaxLD       |
| rs6927022   | 32612397 | G     | A     | 0.47 | 1.683  | 2.01e-86  | 6.80e-09    | <0.2        | <0.2        | 1       | ReverseBeta |
| rs9273123   | 32612733 | G     | A     | 0.41 | -2.037 | 1.89e-140 | -           | <0.2        | <0.2        | 1       | Peak        |
| rs115660687 | 32938199 | A     | G     | 0.06 | -1.167 | 1.23e-08  | 7.45e-03    | <0.2        | <0.2        | 1       | Flanking    |



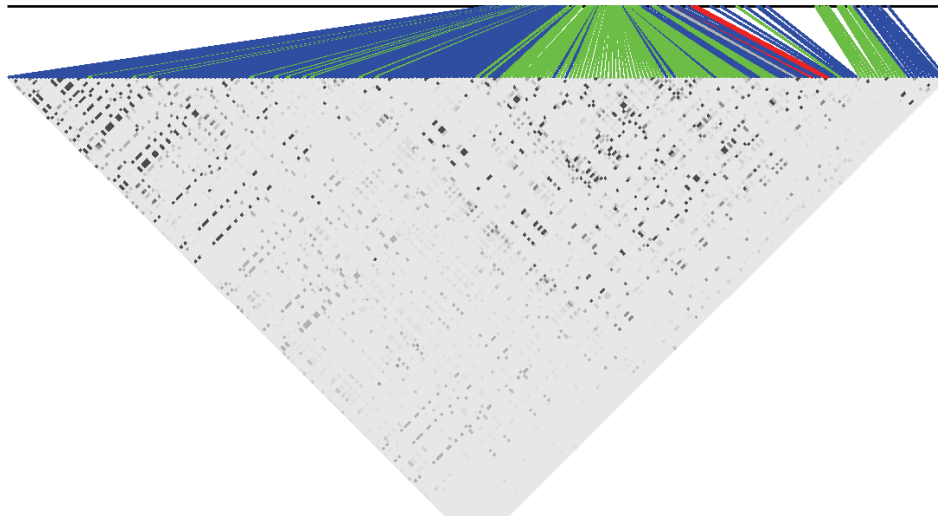
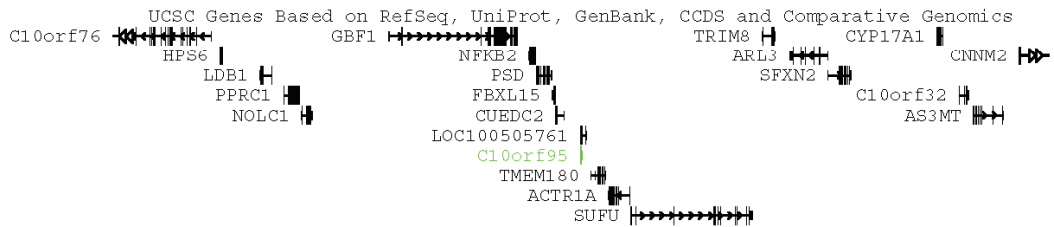
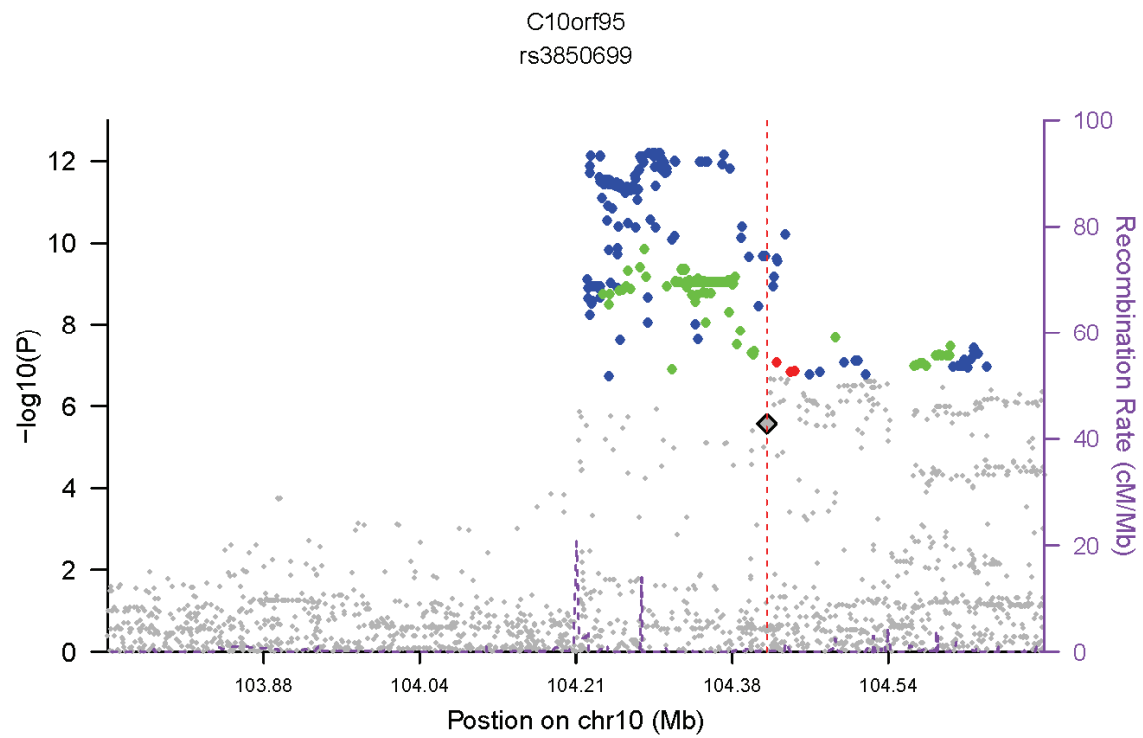
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| rs115521560 | 32019382 | C     | A     | 0.07 | 0.496  | 4.65e-10 | 1.47e-05   | <0.2        | <0.2        | 0       | Flanking    |
| rs114376585 | 32192331 | A     | G     | 0.38 | 0.091  | 3.09e-02 | 8.28e-09   | 1.000       | <0.2        | 0       | PC Risk     |
| rs115306967 | 32400939 | C     | G     | 0.28 | -0.252 | 5.80e-08 | 2.30e-02   | <0.2        | 1.000       | 1       | PC Risk     |
| rs114143157 | 32601019 | A     | G     | 0.34 | -0.283 | 3.60e-10 | 4.60e-03   | <0.2        | 0.544       | 1       | MaxLD       |
| rs17612669  | 32615816 | G     | A     | 0.35 | -0.566 | 2.82e-43 | -          | <0.2        | <0.2        | 1       | Peak        |
| rs154978    | 32899296 | C     | T     | 0.46 | -0.240 | 1.67e-08 | 5.56e-04   | <0.2        | <0.2        | 0       | Flanking    |



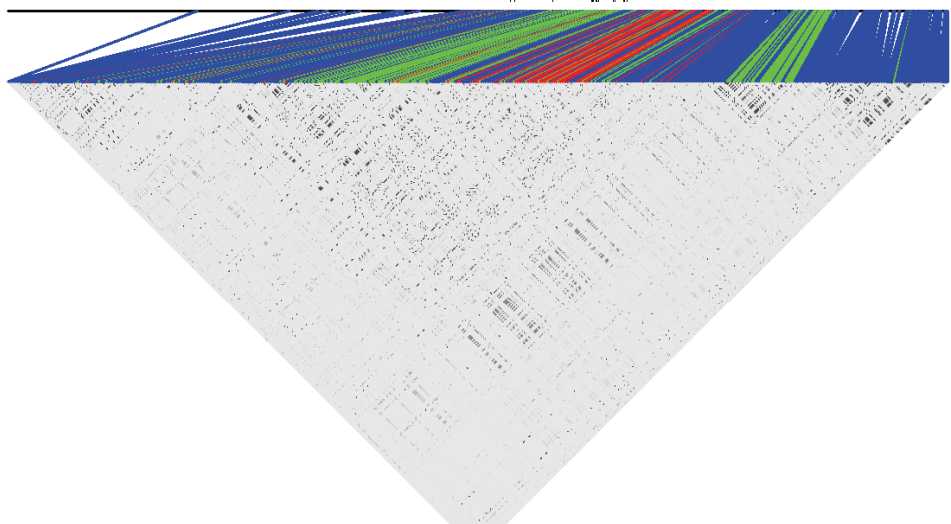
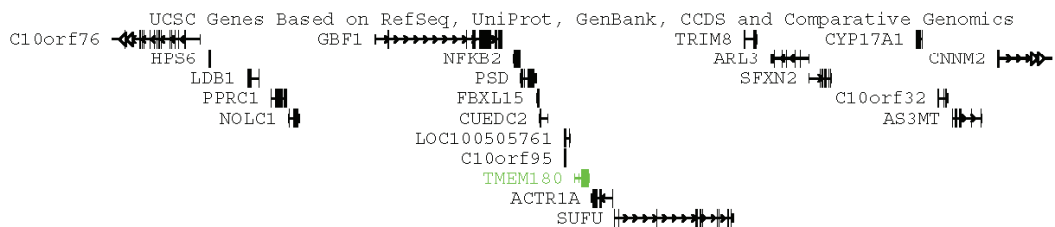
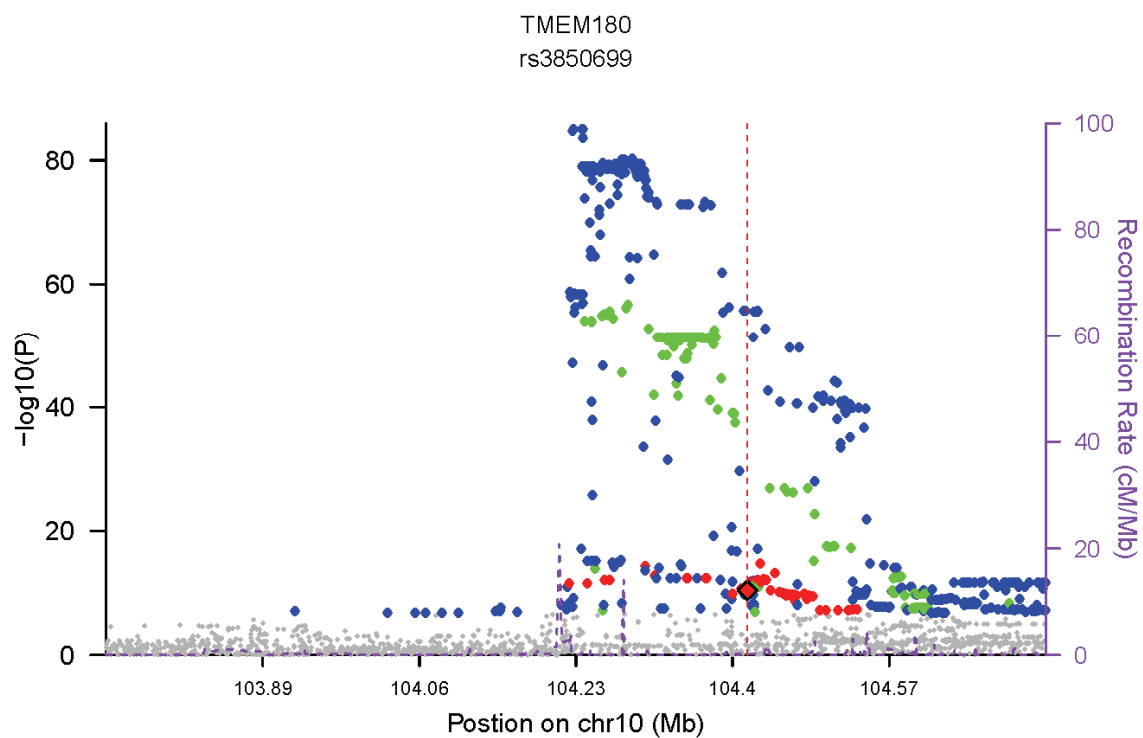
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| rs6461992  | 27220831 | A     | G     | 0.08 | 0.314 | 6.42e-15 | 4.56e-01   | <0.2       | 0       | Flanking    |
| rs3735533  | 27245893 | T     | C     | 0.07 | 0.423 | 7.14e-24 | -          | <0.2       | 1       | Peak        |
| rs10486567 | 27976563 | A     | G     | 0.23 | 0.161 | 6.44e-10 | 5.37e-11   | 1.000      | 0       | PC Risk     |
| rs7808935  | 27977363 | C     | T     | 0.23 | 0.161 | 6.17e-10 | 5.18e-11   | 1.000      | 1       | MaxLD       |
| rs10807843 | 27992390 | C     | T     | 0.21 | 0.150 | 3.09e-08 | 3.02e-10   | 0.910      | 1       | Flanking    |



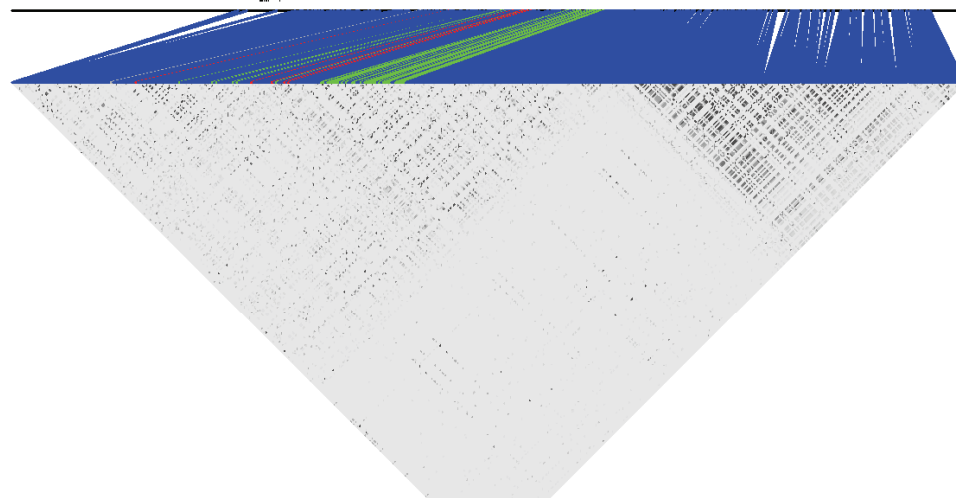
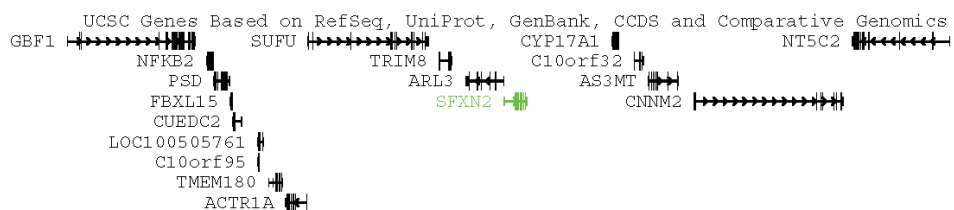
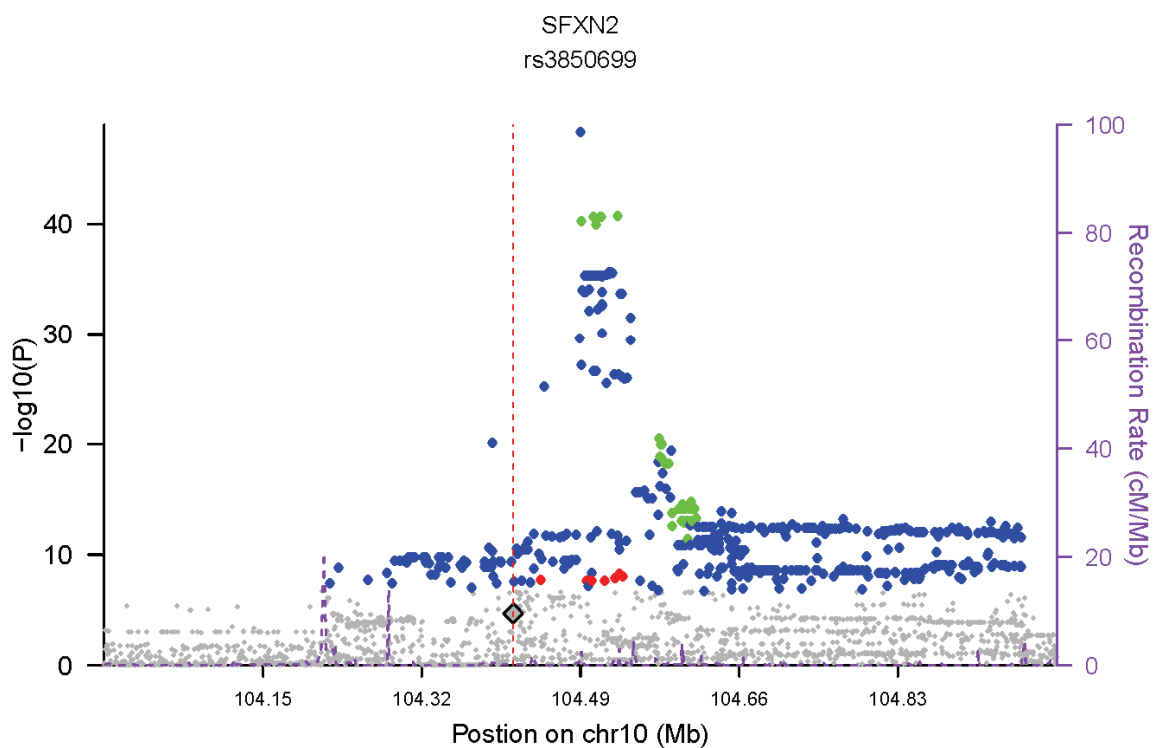
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| rs11191291 | 104213502 | T     | C     | 0.23 | 0.132  | 9.78e-21 | 3.27e-02   | <0.2      | 0       | Flanking    |
| rs1064072  | 104215617 | G     | C     | 0.28 | 0.126  | 1.12e-21 | -          | <0.2      | 1       | Peak        |
| rs3850699  | 104414221 | G     | A     | 0.27 | -0.083 | 3.72e-09 | 4.87e-09   | 1.000     | 0       | PC Risk     |
| rs12773833 | 104418350 | T     | C     | 0.29 | -0.093 | 6.28e-12 | 7.69e-11   | 0.914     | 1       | MaxLD       |
| rs4307650  | 104959852 | A     | C     | 0.38 | -0.080 | 9.19e-11 | 1.28e-06   | <0.2      | 1       | Flanking    |



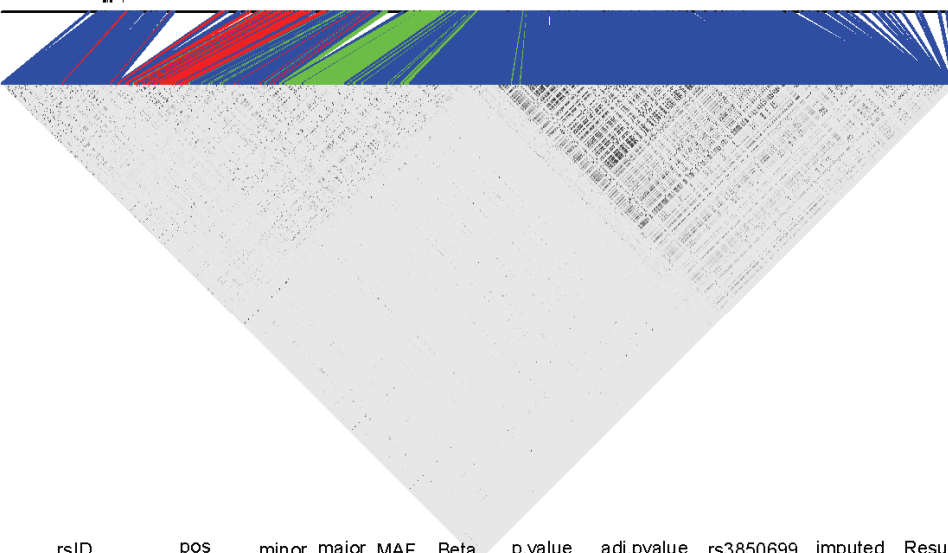
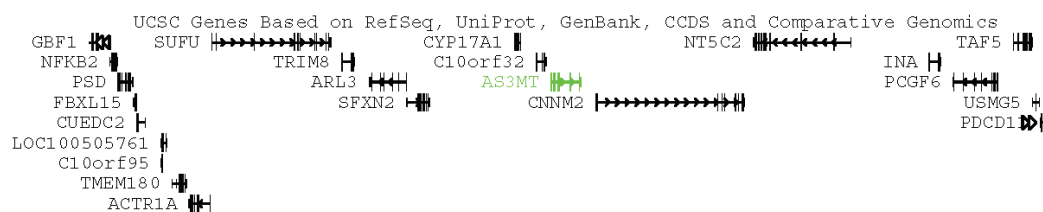
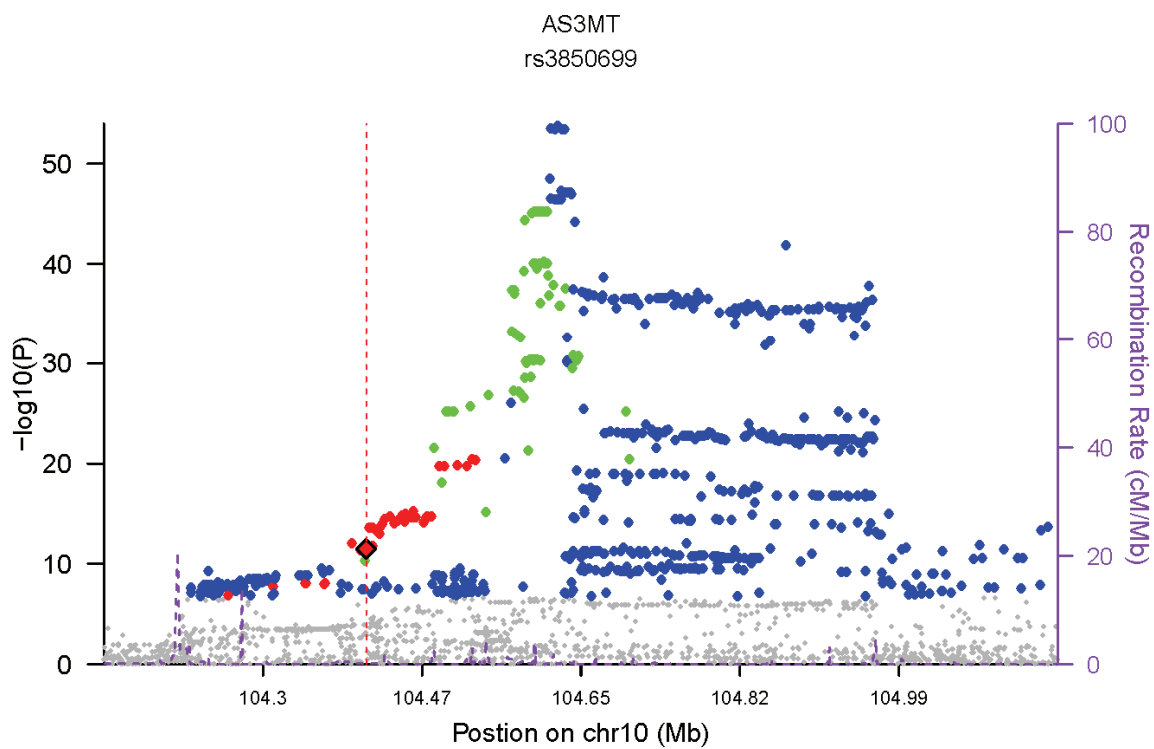
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| rs12570201 | 104222963 | T     | C     | 0.49 | 0.136  | 7.91e-10 | 0.18534    | <0.2      | 1       | Flanking    |
| rs7896841  | 104294665 | T     | C     | 0.36 | 0.164  | 6.43e-13 | -          | <0.2      | 1       | Peak        |
| rs3850699  | 104414221 | G     | A     | 0.27 | -0.116 | 2.70e-06 | 0.02622    | 1.000     | 0       | PC Risk     |
| rs7916092  | 104425471 | C     | T     | 0.30 | -0.128 | 8.62e-08 | 0.00771    | 0.900     | 1       | MaxLD       |
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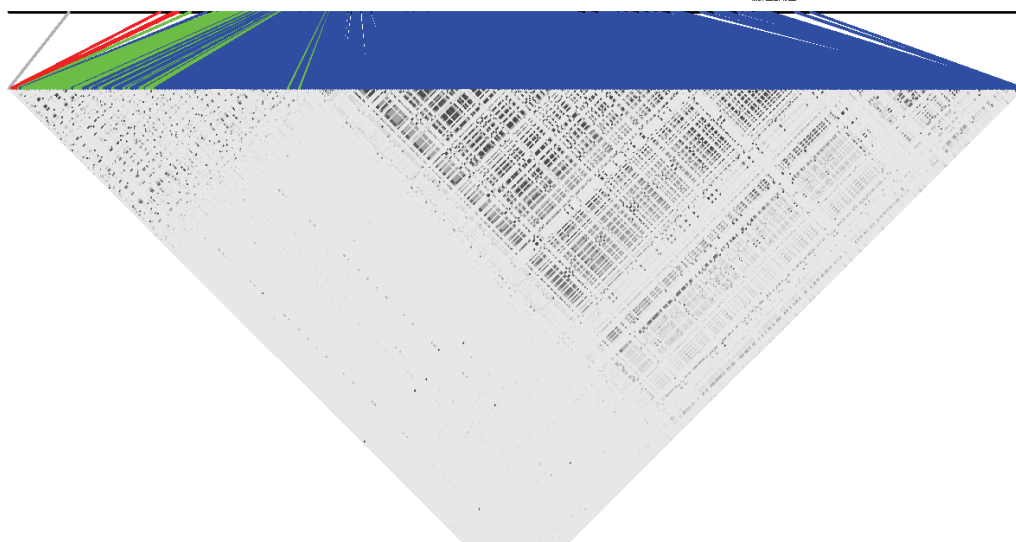
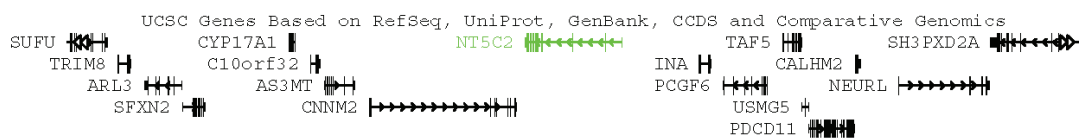
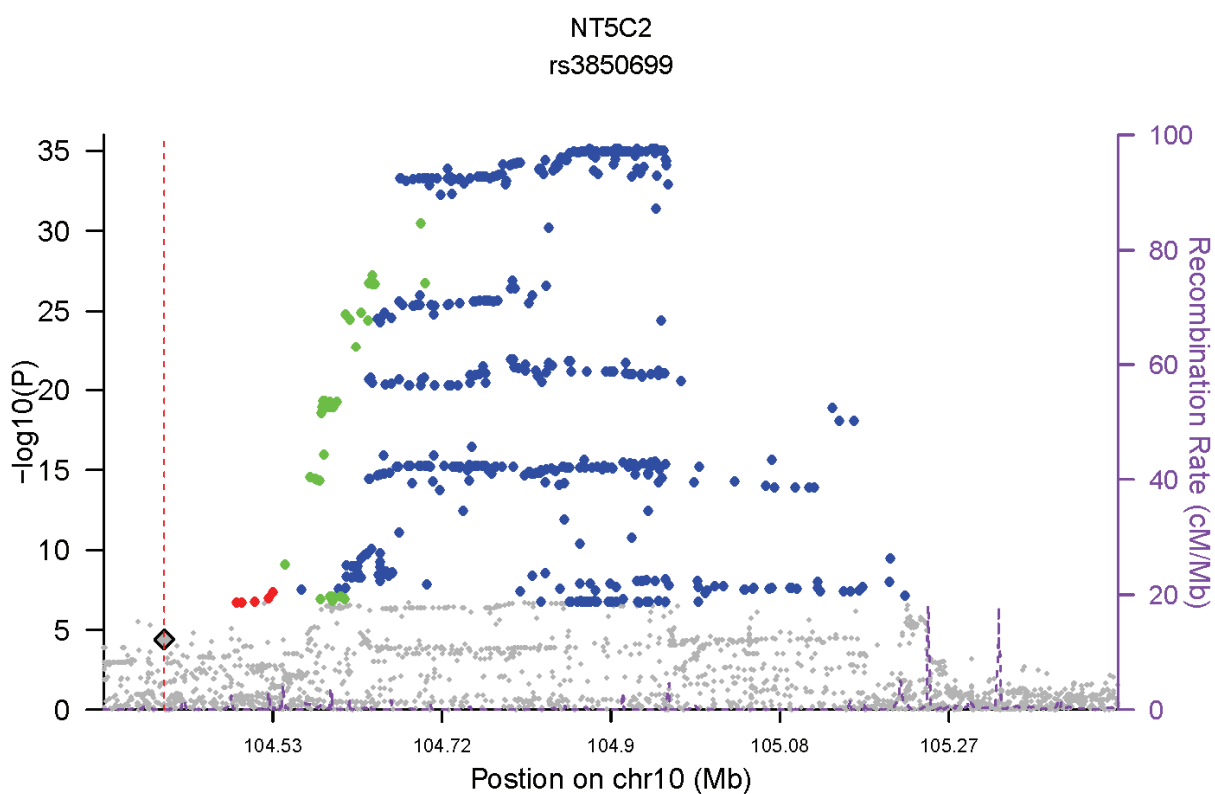


| rsID       | pos       | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs3850699 | imputed | Result Type |
|------------|-----------|-------|-------|------|--------|----------|------------|-----------|---------|-------------|
| rs12360330 | 104148355 | T     | C     | 0.14 | -0.195 | 2.68e-08 | 0.07075    | <0.2      | 1       | Flanking    |
| rs61873704 | 104236929 | C     | T     | 0.37 | 0.413  | 9.37e-86 | -          | <0.2      | 1       | Peak        |
| rs3850699  | 104414221 | G     | A     | 0.27 | -0.179 | 4.00e-11 | 0.21752    | 1.000     | 0       | PC Risk     |
| rs12262998 | 104428716 | T     | C     | 0.30 | -0.207 | 1.63e-15 | 0.08981    | 0.823     | 1       | MaxLD       |
| rs4311992  | 105120649 | A     | G     | 0.23 | 0.155  | 2.45e-08 | 0.00075    | <0.2      | 1       | Flanking    |

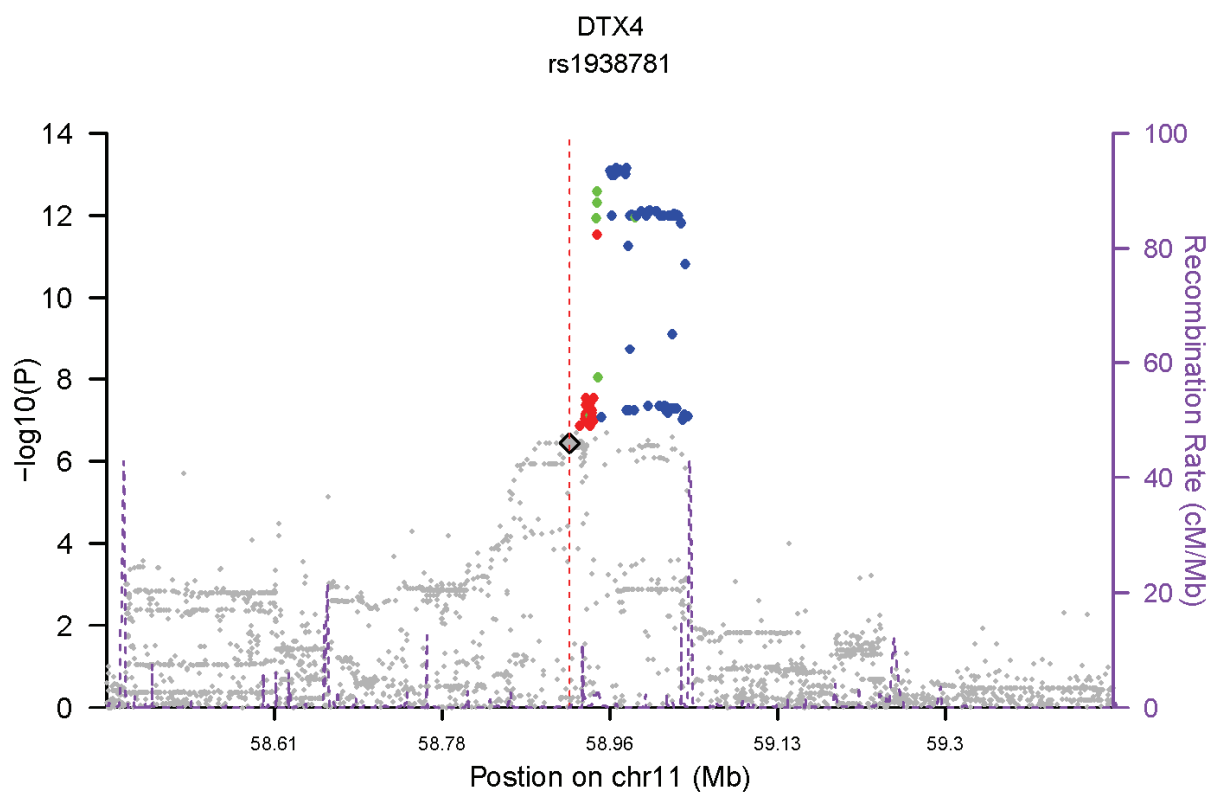


| rsID        | pos       | minor | major | MAF  | Beta   | p.value  | adj.p.value | rs3850699 | imputed | Result Type |
|-------------|-----------|-------|-------|------|--------|----------|-------------|-----------|---------|-------------|
| rs118028082 | 104226834 | A     | G     | 0.07 | -0.184 | 1.54e-09 | 5.64e-01    | <0.2      | 1       | Flanking    |
| rs3850699   | 104414221 | G     | A     | 0.27 | -0.076 | 2.02e-05 | 5.10e-27    | 1.000     | 0       | PC Risk     |
| rs2902548   | 104487382 | T     | C     | 0.17 | -0.273 | 5.22e-49 | -           | <0.2      | 0       | Peak        |
| rs7918080   | 104517826 | C     | G     | 0.22 | 0.221  | 2.56e-36 | 1.20e-35    | <0.2      | 1       | ReverseBeta |
| rs11191394  | 104528509 | C     | A     | 0.28 | -0.098 | 6.04e-09 | 2.89e-41    | 0.607     | 1       | MaxLD       |
| rs113278154 | 104960464 | T     | C     | 0.09 | -0.161 | 1.23e-09 | 3.43e-01    | <0.2      | 1       | Flanking    |

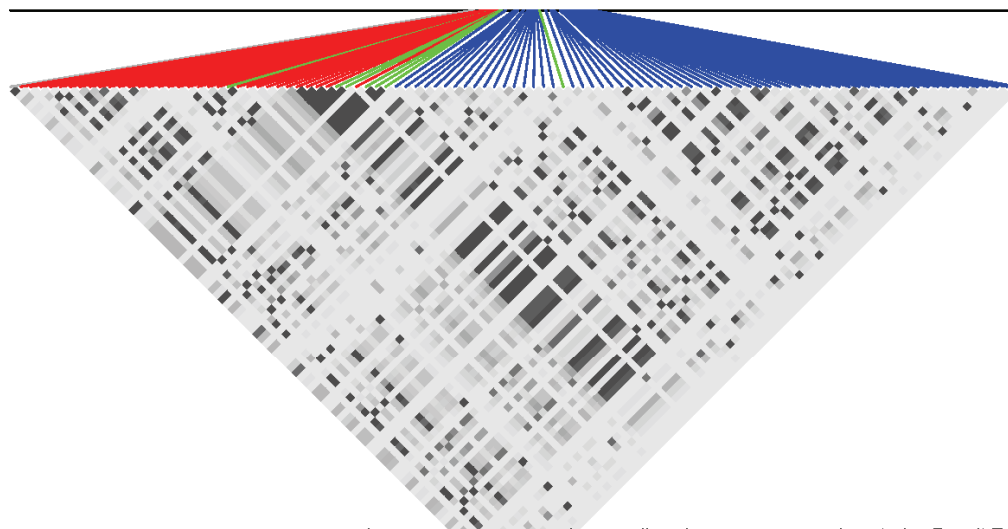




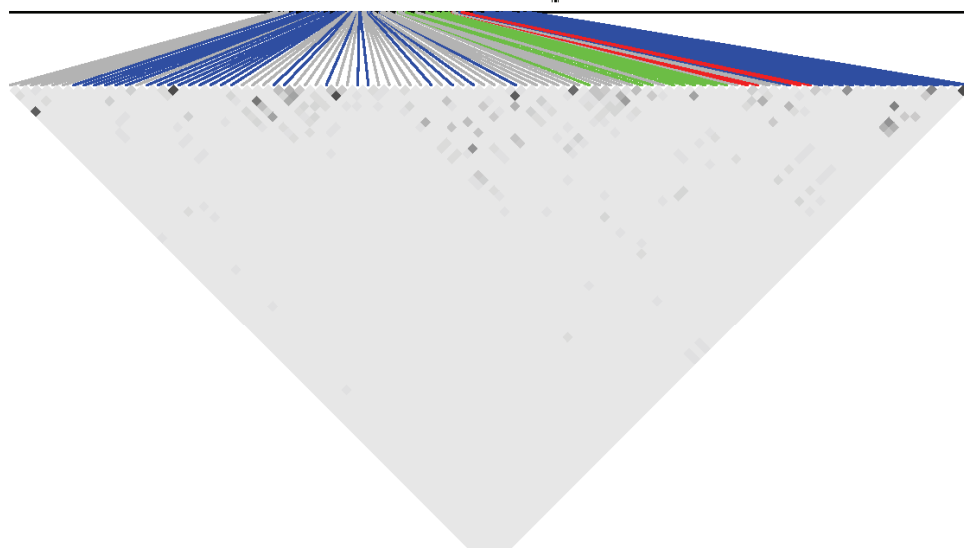
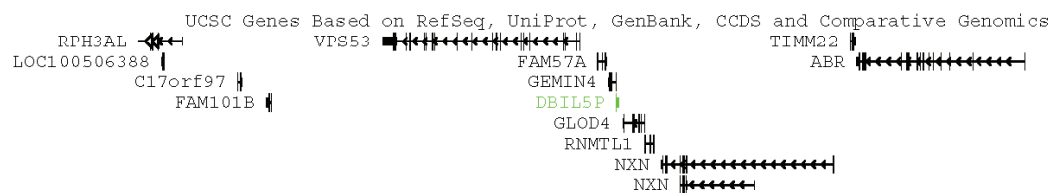
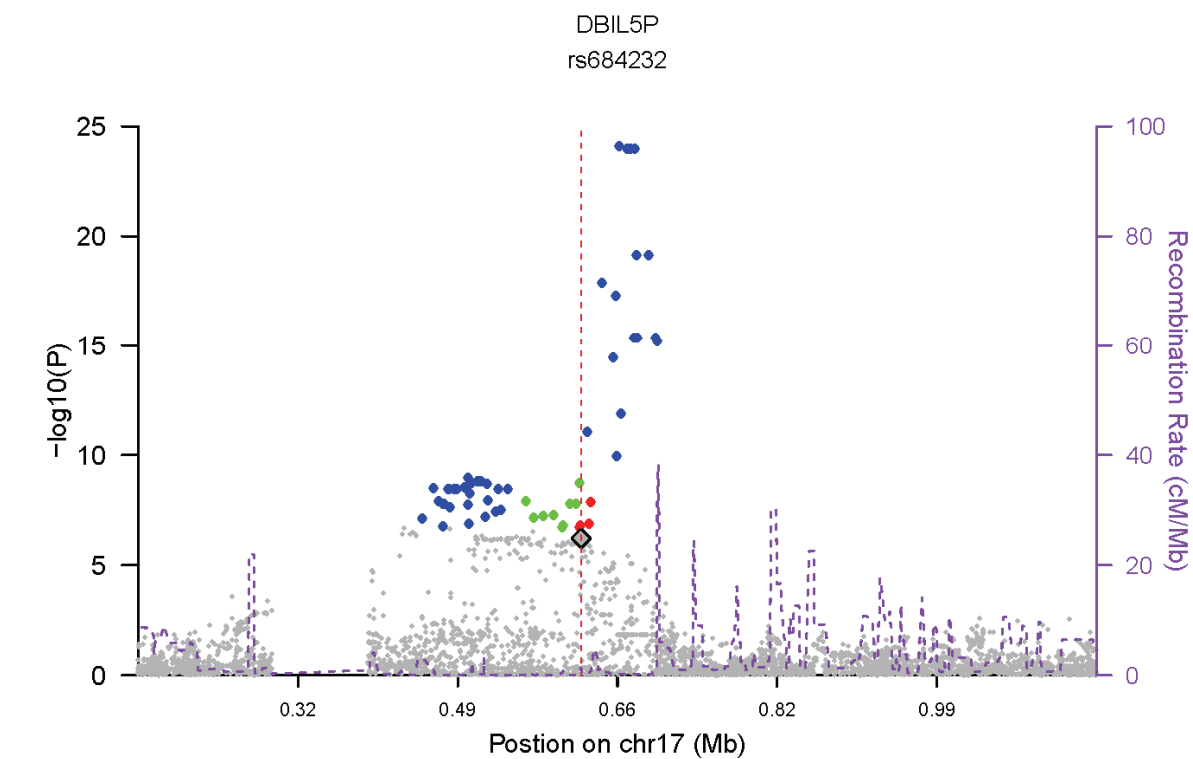
| rsID       | pos       | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs3850699 | imputed | Result Type |
|------------|-----------|-------|-------|------|--------|----------|------------|-----------|---------|-------------|
| rs3850699  | 104414221 | G     | A     | 0.27 | -0.032 | 4.00e-05 | 0.3763     | 1.000     | 0       | PC Risk     |
| rs11191381 | 104493444 | T     | C     | 0.29 | -0.038 | 1.95e-07 | 0.2684     | 0.602     | 0       | Flanking    |
| rs12776506 | 104532828 | G     | A     | 0.29 | -0.040 | 4.71e-08 | 0.3554     | 0.603     | 1       | MaxLD       |
| rs7902218  | 104740210 | A     | G     | 0.47 | 0.048  | 3.83e-13 | 0.8366     | <0.2      | 1       | ReverseBeta |
| rs2066322  | 104909339 | G     | T     | 0.29 | -0.084 | 8.12e-36 | -          | <0.2      | 1       | Peak        |
| rs3740478  | 105205356 | T     | C     | 0.06 | -0.089 | 3.67e-10 | 0.0604     | <0.2      | 0       | Flanking    |



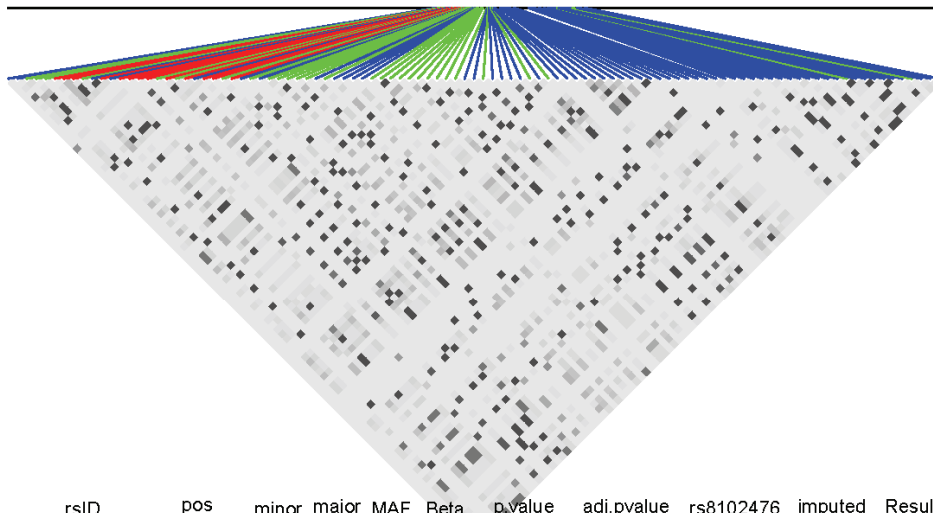
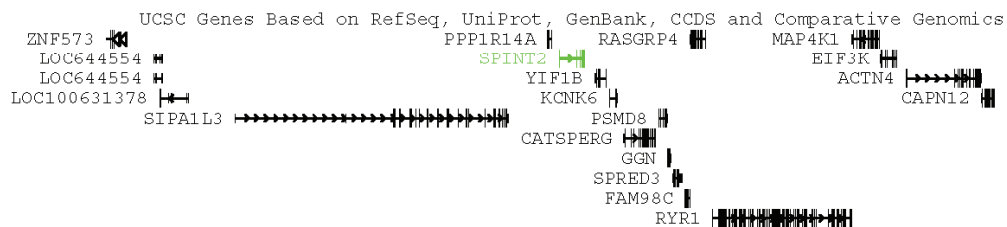
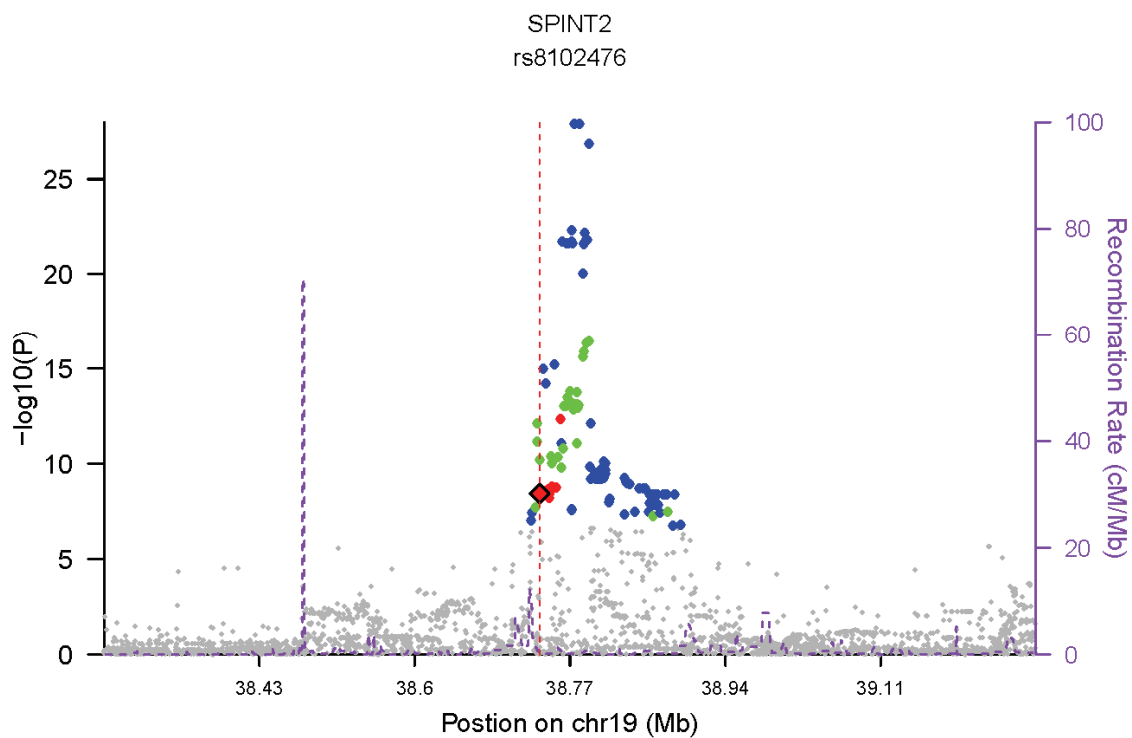
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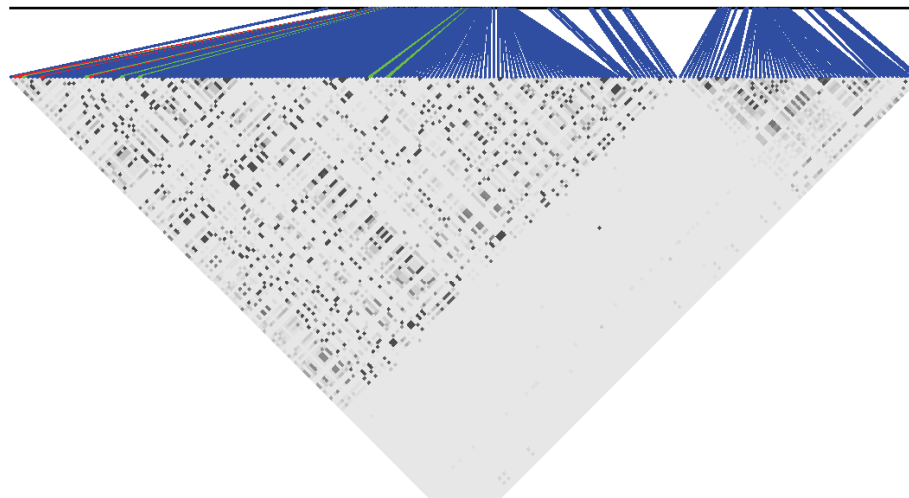
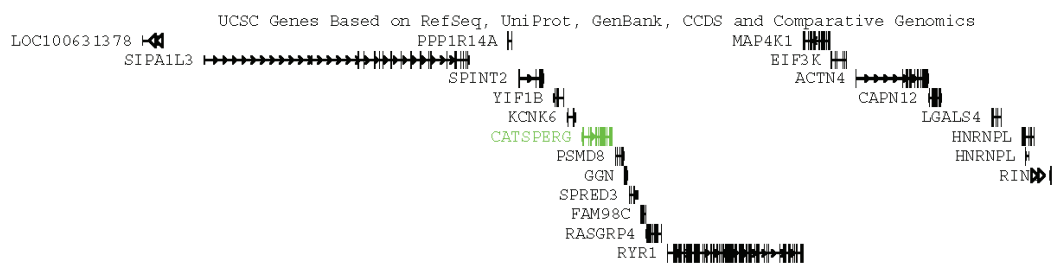
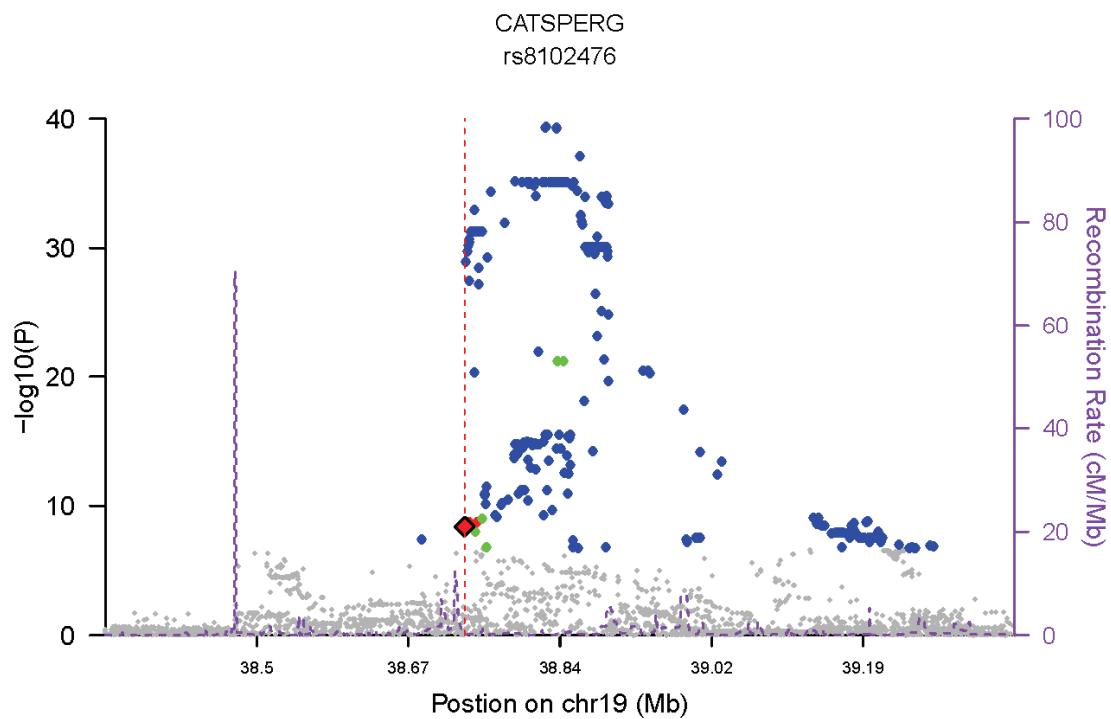
| rsID       | pos      | minor | major | MAF  | Beta   | p.value  | adj.p.value | rs1938781 | imputed | Result Type |
|------------|----------|-------|-------|------|--------|----------|-------------|-----------|---------|-------------|
| rs1938781  | 58915110 | G     | A     | 0.22 | 0.103  | 3.64e-07 | 1.16e-06    | 1.000     | 1       | PC Risk     |
| rs17153415 | 58925860 | G     | A     | 0.21 | 0.107  | 1.42e-07 | 6.06e-07    | 0.947     | 1       | Flanking    |
| rs7934971  | 58943442 | T     | G     | 0.32 | 0.122  | 2.97e-12 | 5.06e-11    | 0.504     | 1       | MaxLD       |
| rs12284698 | 58962967 | C     | T     | 0.02 | 0.493  | 7.14e-14 | -           | <0.2      | 0       | Peak        |
| rs75112843 | 58973623 | G     | A     | 0.02 | 0.493  | 7.14e-14 | 8.92e-01    | <0.2      | 0       | Peak        |
| rs12791481 | 58977372 | G     | T     | 0.47 | -0.105 | 1.89e-09 | 1.53e-07    | <0.2      | 1       | ReverseBeta |
| rs11229905 | 59034323 | G     | A     | 0.01 | 0.500  | 1.56e-11 | 7.00e-01    | <0.2      | 1       | Flanking    |



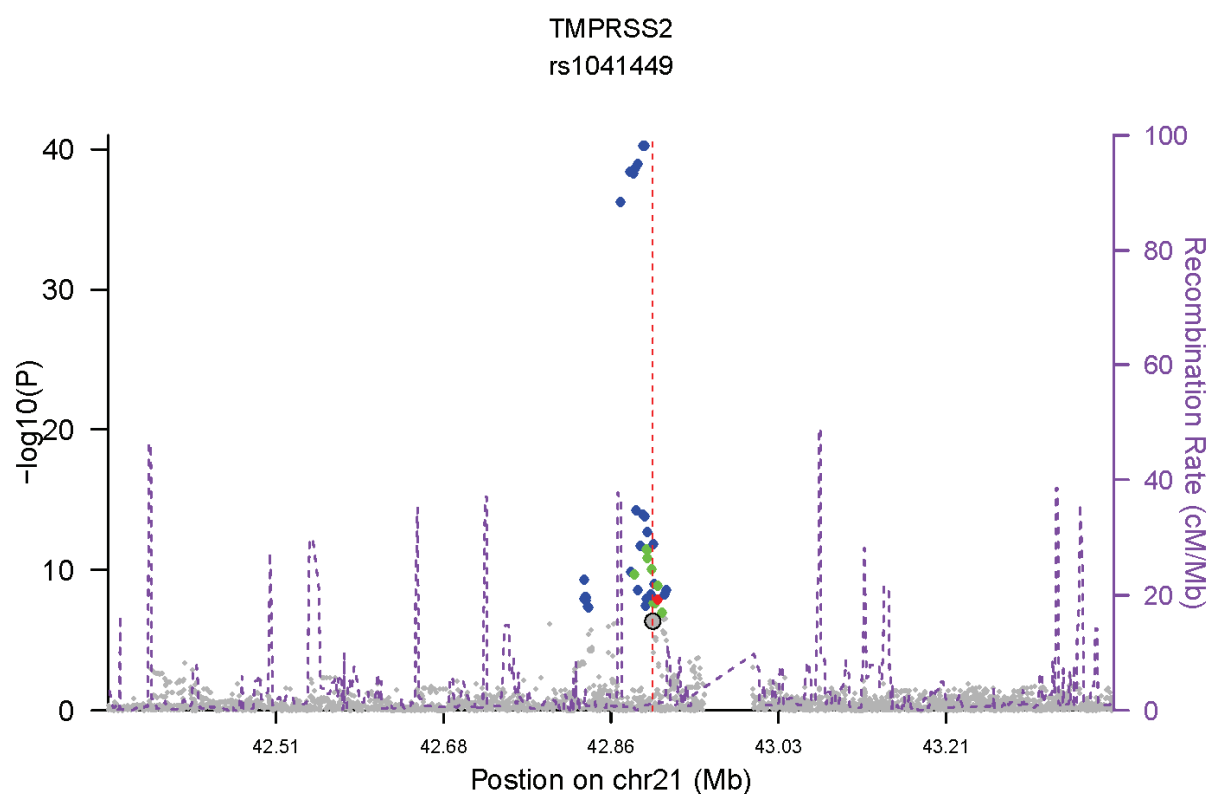
| rsID       | pos    | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs684232 | imputed | Result Type |
|------------|--------|-------|-------|------|--------|----------|------------|----------|---------|-------------|
| rs12948505 | 464962 | T     | C     | 0.18 | 0.205  | 3.35e-09 | 2.69e-09   | <0.2     | 1       | Flanking    |
| rs684232   | 618965 | C     | T     | 0.39 | -0.144 | 5.95e-07 | 1.27e-05   | 1.000    | 0       | PC Risk     |
| rs2740360  | 629309 | T     | C     | 0.46 | 0.167  | 1.34e-08 | 1.00e-04   | 0.518    | 1       | MaxLD       |
| rs2750006  | 659371 | A     | G     | 0.03 | 0.761  | 8.46e-25 | -          | <0.2     | 1       | Peak        |
| rs75504469 | 698635 | T     | C     | 0.02 | 0.833  | 6.65e-16 | 7.76e-01   | <0.2     | 1       | Flanking    |



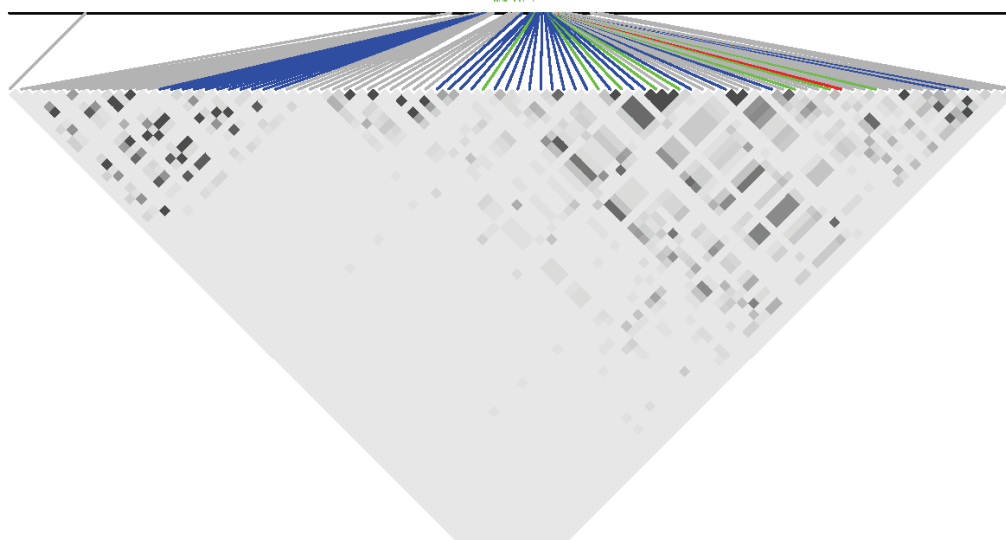
| rsID       | pos      | minor | major | MAF  | Beta  | p.value  | adj.p.value | rs8102476 | imputed | Result Type |
|------------|----------|-------|-------|------|-------|----------|-------------|-----------|---------|-------------|
| rs7246060  | 38731662 | A     | G     | 0.33 | 0.059 | 2.04e-08 | 0.020337    | 0.231     | 1       | Flanking    |
| rs8102476  | 38735613 | T     | C     | 0.43 | 0.058 | 3.56e-09 | 0.040741    | 1.000     | 0       | PC Risk     |
| rs3786877  | 38759180 | C     | T     | 0.41 | 0.072 | 4.68e-13 | 0.000645    | 0.563     | 0       | MaxLD       |
| rs2060244  | 38774622 | T     | C     | 0.10 | 0.165 | 1.31e-28 | -           | <0.2      | 1       | Peak        |
| rs3745949  | 38779912 | G     | A     | 0.10 | 0.165 | 1.31e-28 | 0.744940    | <0.2      | 1       | Peak        |
| rs79210197 | 38884909 | T     | A     | 0.04 | 0.157 | 4.12e-09 | 0.535215    | <0.2      | 0       | Flanking    |



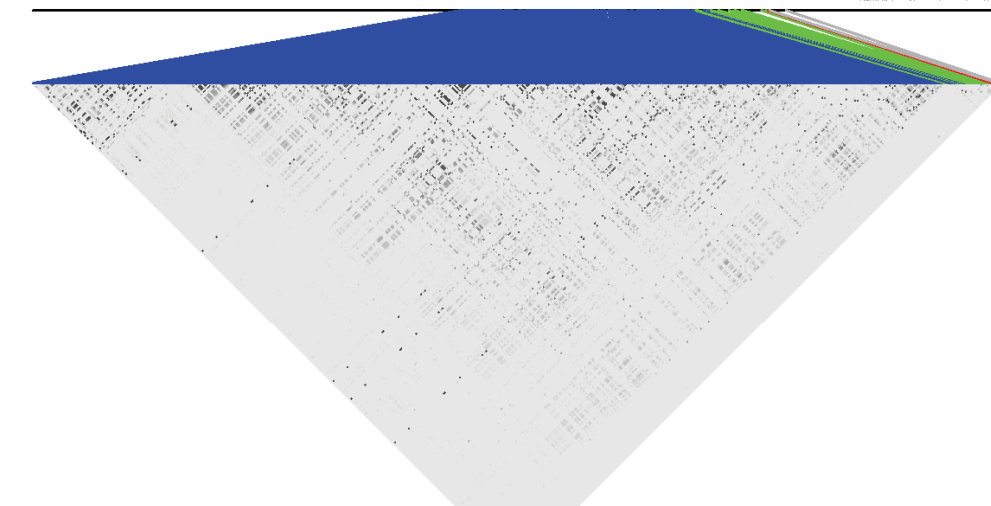
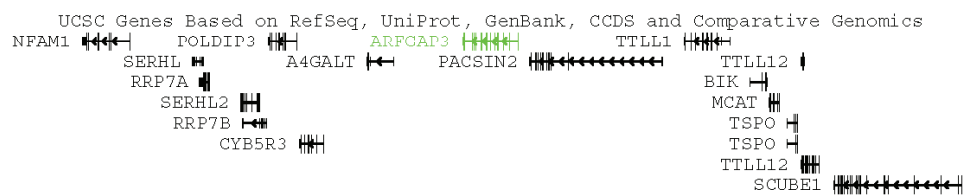
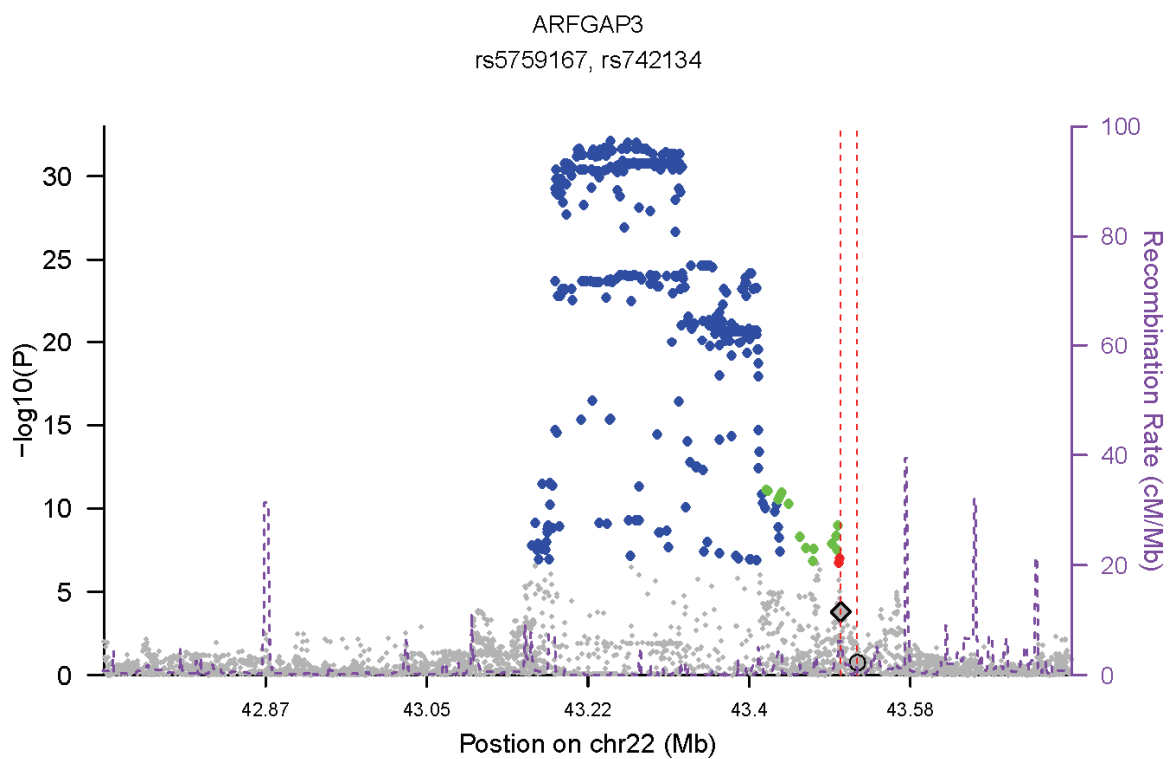
| rsID        | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs8102476 | imputed | Result Type |
|-------------|----------|-------|-------|------|--------|----------|------------|-----------|---------|-------------|
| rs8102454   | 38735480 | A     | G     | 0.43 | -0.106 | 2.02e-09 | 2.35e-06   | 0.993     | 1       | Flanking    |
| rs8102476   | 38735613 | T     | C     | 0.43 | -0.105 | 4.01e-09 | 2.01e-06   | 1.000     | 0       | PC Risk     |
| rs12981216  | 38740925 | T     | C     | 0.43 | -0.106 | 1.99e-09 | 2.39e-06   | 0.987     | 1       | MaxLD       |
| rs113370094 | 38828509 | C     | A     | 0.03 | 0.614  | 4.56e-40 | -          | <0.2      | 1       | Peak        |
| rs62119116  | 39210673 | T     | C     | 0.06 | 0.200  | 2.98e-08 | 2.52e-02   | <0.2      | 1       | Flanking    |



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| rsID       | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs1041449 | imputed | Result Type |
|------------|----------|-------|-------|------|--------|----------|------------|-----------|---------|-------------|
| rs1557370  | 42830690 | G     | A     | 0.07 | -0.260 | 5.40e-10 | 0.000341   | <0.2      | 0       | Flanking    |
| rs6517673  | 42892056 | A     | G     | 0.08 | -0.490 | 5.59e-41 | -          | <0.2      | 0       | Peak        |
| rs8134657  | 42893908 | A     | G     | 0.08 | -0.490 | 5.59e-41 | 0.961031   | <0.2      | 0       | Peak        |
| rs1041449  | 42901421 | G     | A     | 0.47 | 0.106  | 4.08e-07 | 0.075963   | 1.000     | 0       | PC Risk     |
| rs9979125  | 42907168 | T     | C     | 0.48 | 0.120  | 1.32e-08 | 0.025171   | 0.897     | 1       | MaxLD       |
| rs78831106 | 42915890 | A     | C     | 0.02 | -0.553 | 2.99e-09 | 0.949788   | <0.2      | 1       | Flanking    |

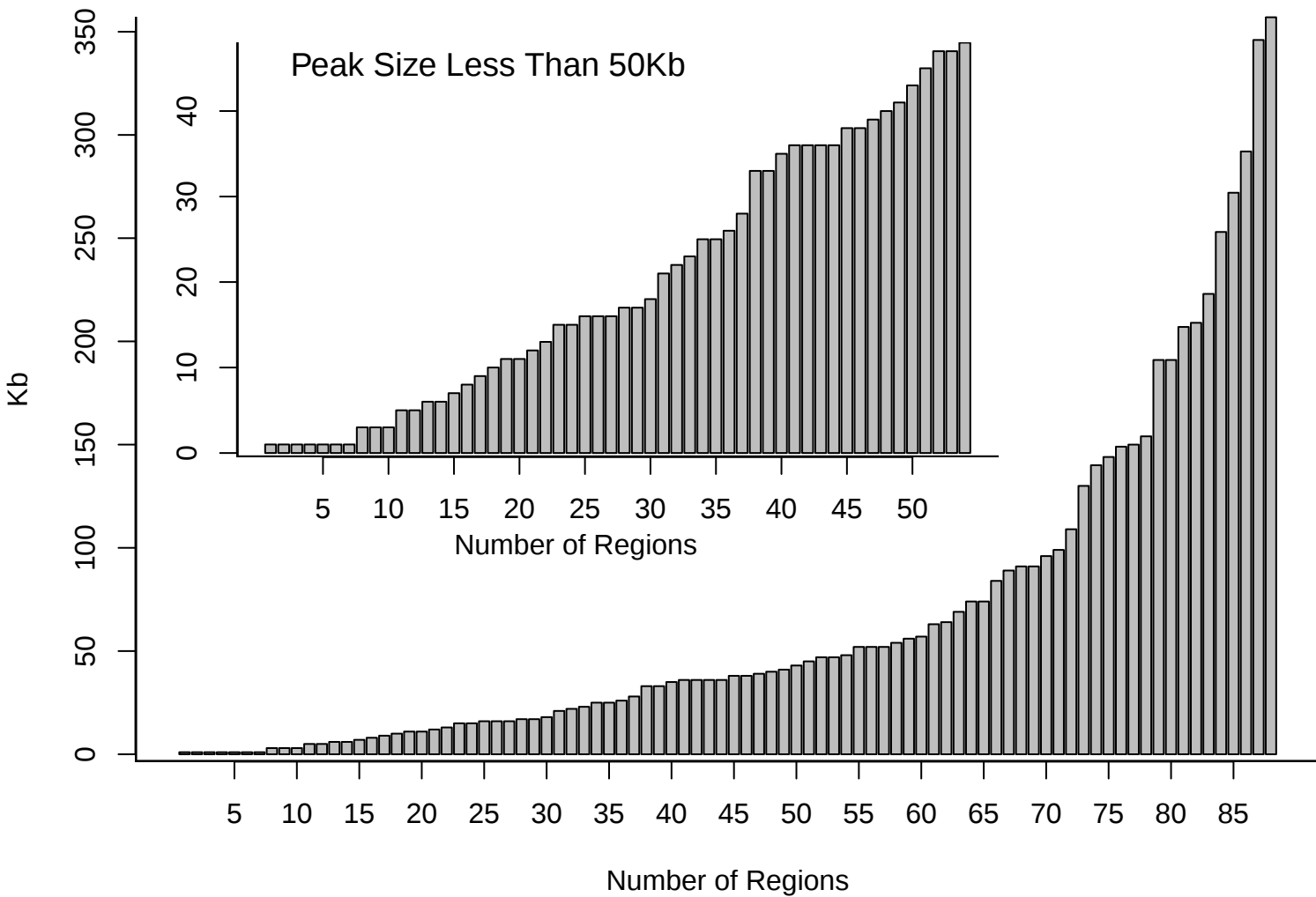


| rsID       | pos      | minor | major | MAF  | Beta   | p.value  | adj.pvalue | rs5759167 | rs742134 | imputed | Result Type |
|------------|----------|-------|-------|------|--------|----------|------------|-----------|----------|---------|-------------|
| rs13058545 | 43162106 | C     | G     | 0.41 | -0.060 | 1.64e-08 | 0.276      | <0.2      | <0.2     | 1       | Flanking    |
| rs2899364  | 43248411 | G     | T     | 0.43 | 0.120  | 7.87e-33 | -          | <0.2      | <0.2     | 1       | Peak        |
| rs9612008  | 43499144 | A     | G     | 0.45 | -0.054 | 1.02e-07 | 0.101      | 0.665     | <0.2     | 1       | MaxLD       |
| rs5759167  | 43500212 | T     | G     | 0.49 | -0.038 | 1.61e-04 | 0.187      | 1.000     | <0.2     | 0       | PC Risk     |
| rs742134   | 43518275 | A     | G     | 0.11 | 0.024  | 1.66e-01 | 0.939      | <0.2      | 1.000    | 1       | PC Risk     |
| rs5759182  | 43539651 | G     | A     | 0.11 | 0.029  | 8.61e-02 | 0.774      | <0.2      | 0.950    | 0       | MaxLD       |

### **Supplementary Figure 5 - Distributions of the minimal size of eQTL peak**

For each of the 88 significant target genes, the minimal size of the eQTL peak was determined by taking the distance between the endpoints of the highest cluster of significant SNPs. The distribution is plotted with Kb of the peak on the y-axis and sorted by size. The inset plot displays all regions with size < 50Kb.

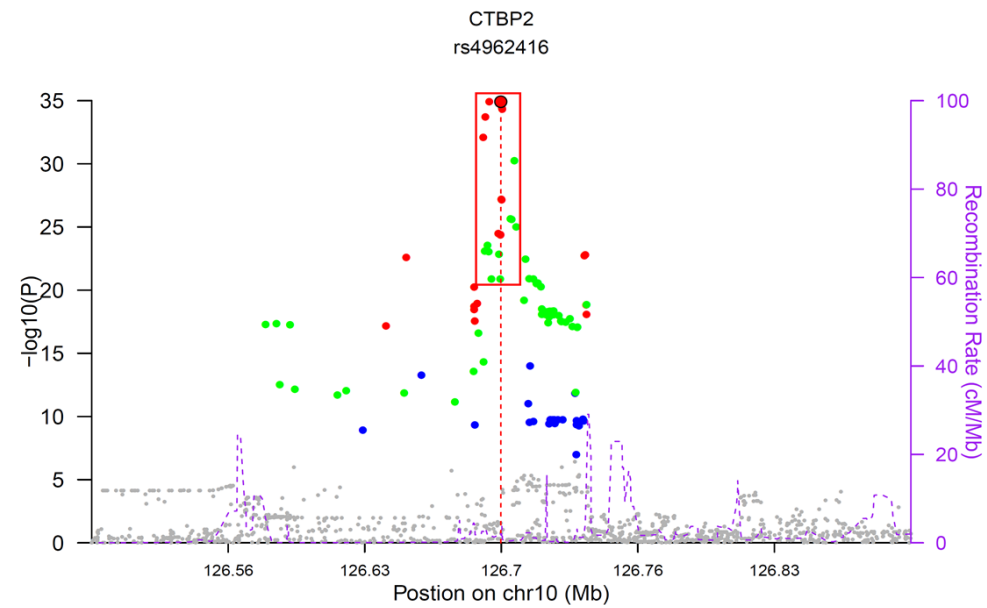
## Peak Size



### **Supplementary Figure 6 - Mapping of candidate regulatory domains and candidate causative SNPS responsible for *CTBP2* gene dysregulation**

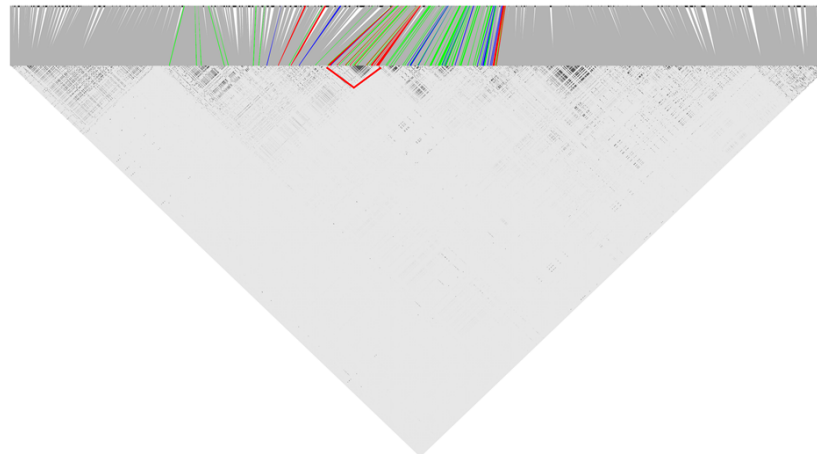
Panel A shows the regional association plot for *CTBP2* over a 400Kb region. The peak eQTL region explored further (results shown in panels A and C) is approximately 15 kb and is outlined by a red box. The characteristics of the plot are described in figure 1.

Panel B shows the UCSC genome browser for the 15Kb peak eQTL region (as outlined in panel B), providing a number of tracks used to map elements important for gene regulatory domains as described in Hazelett et. al.<sup>1</sup> The 24 peak eQTL SNPs are shown in the first track as reference points (see table for identification).



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FAM175B ZRANB1 CTBP2



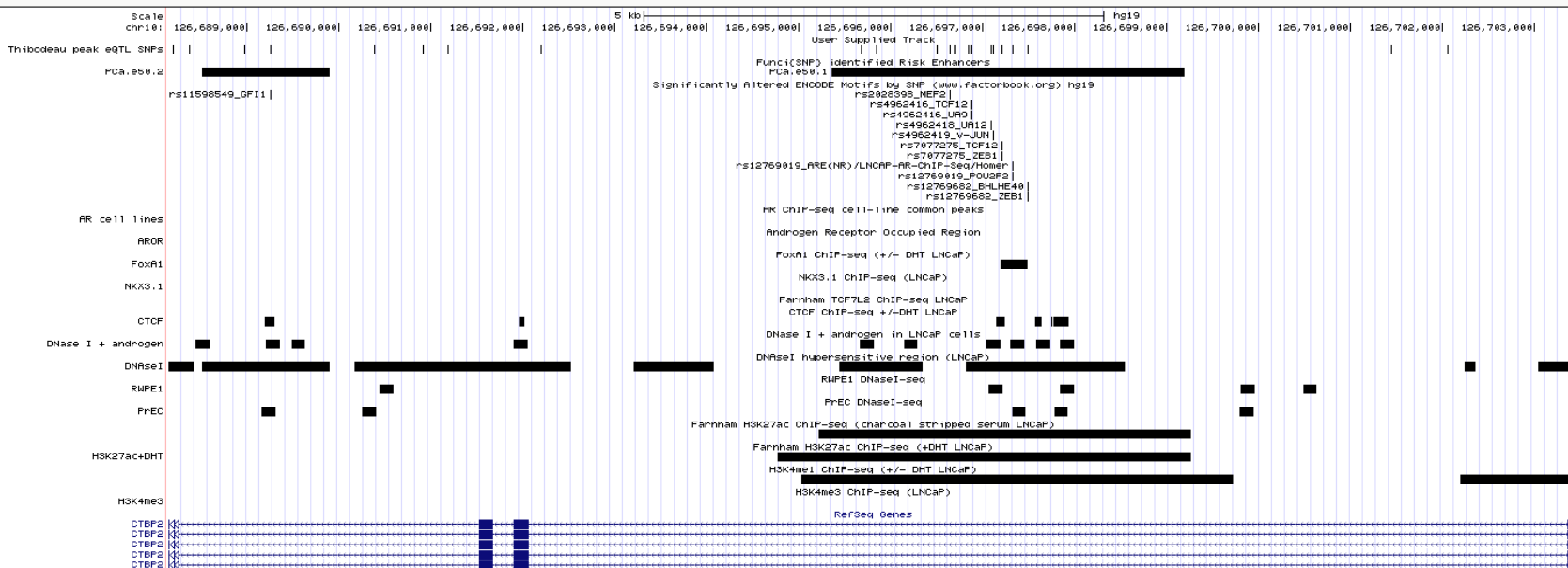
# UCSC Genome Browser on Human Feb. 2009 (GRCh37/hg19) Assembly

move <<< << < > >> >>> zoom in 1.5x 3x 10x base zoom out 1.5x 3x 10x 100x

chr10:126,688,150-126,703,477 15,328 bp. enter position, gene symbol or search terms

go

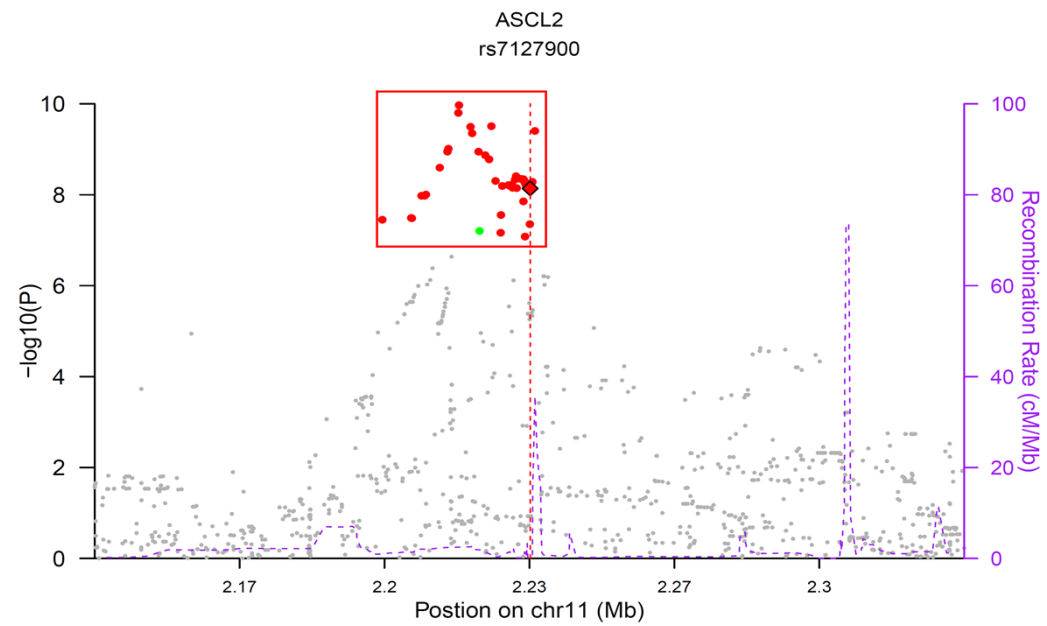
chr10 (q26.13) 15.3 10p14 10p13 12.31 p12.1 11.21 11.22 10q21.1 21.2 10q21.3 q22.1 q22.3 10q23.1 10q25.1 25.2 q25.3 q26.1 26.2 q26.3



### **Supplementary Figure 7 - Mapping of candidate regulatory domains and candidate causative SNPS responsible for *ASCL2A* gene dysregulation**

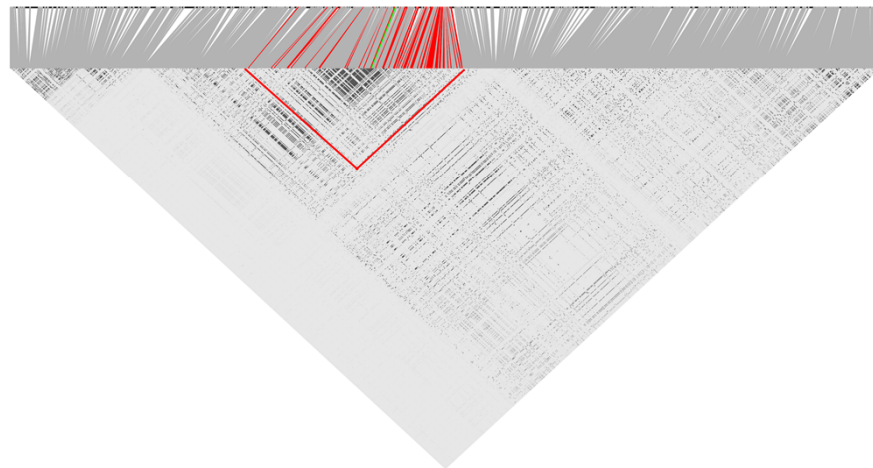
Panel A shows the regional association plot for *ASCL2* over a 180Kb region. The peak eQTL region explored further (panels A and C) is approximately 35 kb and is outlined by a red box. The characteristics of the plot are described in figure 1.

Panel B shows the UCSC genome browser for the 35Kb peak eQTL region (as outlined in panel B), providing a number of tracks used to map elements important for gene regulatory domains as described in Hazelett et. al.<sup>1</sup> The 54 peak eQTL SNPs are shown in the first track as reference points (see table for identification).



UCSC Genes Based on RefSeq, UniProt, GenBank, CCDS and Comparative Genomics

IGF2 ■■■■ ASCL2 ■ C11orf21 ■■ TSPAN32 ■■■■



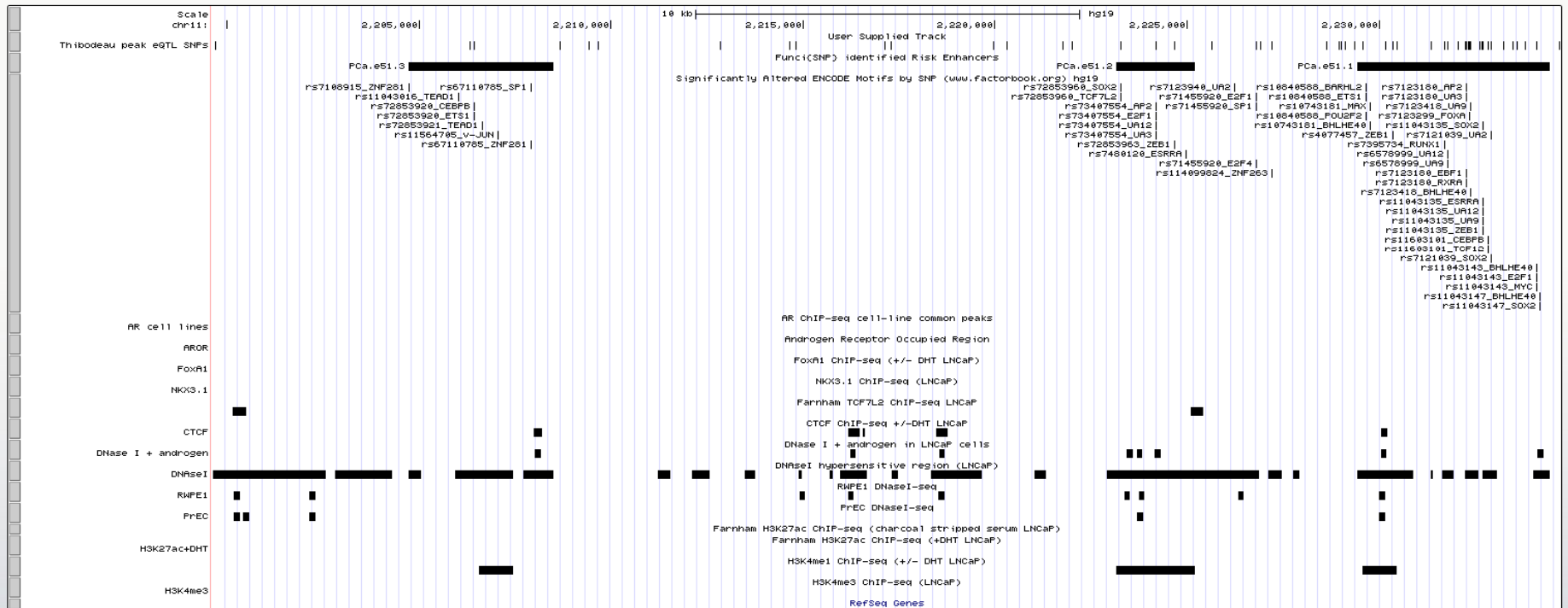
# UCSC Genome Browser on Human Feb. 2009 (GRCh37/hg19) Assembly

move <<< << < > >> >>> zoom in 1.5x 3x 10x base zoom out 1.5x 3x 10x 100x

chr11:2,199,636-2,234,740 35,105 bp. enter position, gene symbol or search terms

go

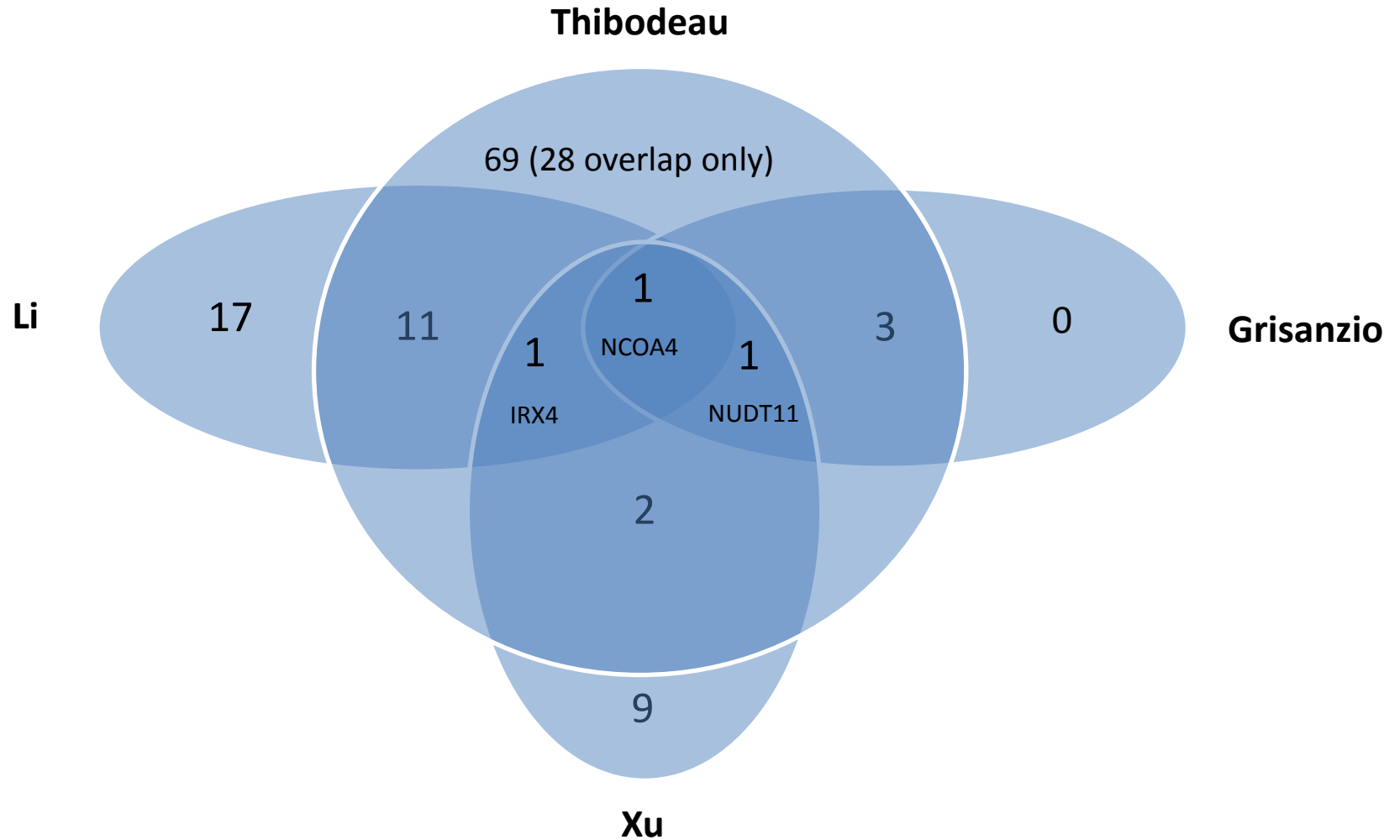
chr11 (p15.5) 11p15.4 15q21 11p15.1 p14.3 p14.1 11p13 11p12 11p11.2 q12.1 q13.4 11q14.1 q14.3 11q21 q22.1 11q22.3 11q23.3 q24.2 q24.3 11q25



### **Supplementary Figure 8 - Summary of published eQTL studies used for comparison**

Venn diagram depicting the overlap of the positive associations found in each study. The most common genes (found in 3 or more studies) are listed.

|                              | Expression platform | Genotyping Platform | # samples | Tissue         | # QWAS SNPs | Genes tested |
|------------------------------|---------------------|---------------------|-----------|----------------|-------------|--------------|
| <b>Mayo</b>                  | Rnaseq              | Illumina 2.5 M      | 471       | normal         | 147         | (+/- 1 Mb)   |
| <b>Xu<sup>4</sup></b>        | RNAseq              | Aff 6.0             | 50        | tumor          | 51          | (+/- 1 Mb)   |
| <b>Grisanzio<sup>2</sup></b> | NanoString nCounter | Sequenom            | 407 / 255 | normal / tumor | 12          | (+/- 0.5 Mb) |
| <b>Li<sup>3</sup></b>        | RNAseq              | Affy 6.0            | 145       | tumor          | 69          | (+/- 0.5 Mb) |



## Supplementary References

1. Hazelett, D.J. *et al.* Comprehensive functional annotation of 77 prostate cancer risk loci. *PLoS genetics*. **10**, e1004102 (2014).
2. Grisanzio, C. *et al.* Genetic and functional analyses implicate the NUDT11, HNF1B, and SLC22A3 genes in prostate cancer pathogenesis. *Proc. Natl. Acad. Sci. U. S. A.* **109**, 11252-7 (2012).
3. Li, Q. *et al.* Expression QTL-based analyses reveal candidate causal genes and loci across five tumor types. *Hum. Mol. Genet.* **23**, 5294-302 (2014).
4. Xu, X. *et al.* Variants at IRX4 as prostate cancer expression quantitative trait loci. *Eur. J. Hum. Genet.* **22**, 558-63 (2014).