**Table S3.** List of genes with significant *trans* x environment effects for each tissue.

|  |  |  |
| --- | --- | --- |
| Tissue | Gene | Ensembl Number |
| BAT |  |  |
|  | *arl6ip6* | ENSMUSG00000026960 |
|  | *hsd11b1* | ENSMUSG00000016194 |
|  | *parm1* | ENSMUSG00000034981 |
|  | *wnt11* | ENSMUSG00000015957 |
|  | *gstt1* | ENSMUSG00000001663 |
|  | *cdh13* | ENSMUSG00000031841 |
|  | *tmem45b* | ENSMUSG00000041737 |
|  | *prpf40a* | ENSMUSG00000061136 |
|  | *ccdc3* | ENSMUSG00000026676 |
|  | *xylt1* | ENSMUSG00000030657 |
|  | *amy1* | ENSMUSG00000074264 |
|  | *erbb2* | ENSMUSG00000062312 |
|  | *itih5* | ENSMUSG00000025780 |
|  | *adamts9* | ENSMUSG00000030022 |
|  | *sec1414* | ENSMUSG00000019368 |
|  | *slc1414* | ENSMUSG00000017756 |
|  | *fam111a* | ENSMUSG00000024691 |
|  | *arhgef10* | ENSMUSG00000071176 |
| Liver |  |  |
|  | *hmgcs2* | ENSMUSG00000027875 |