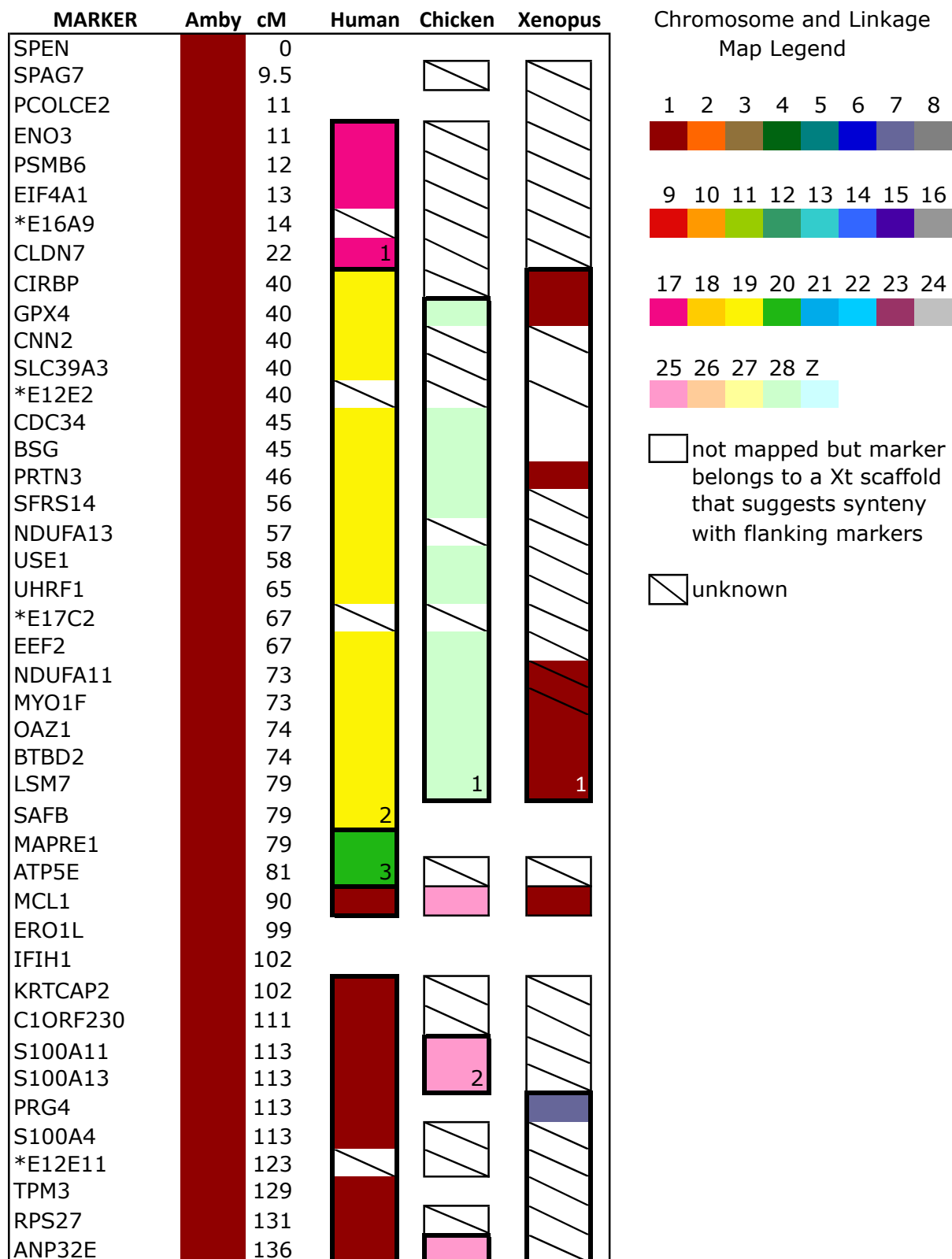
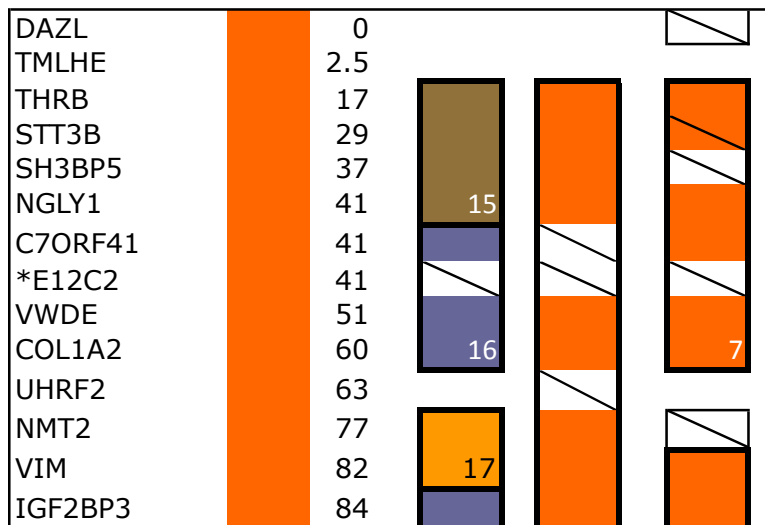
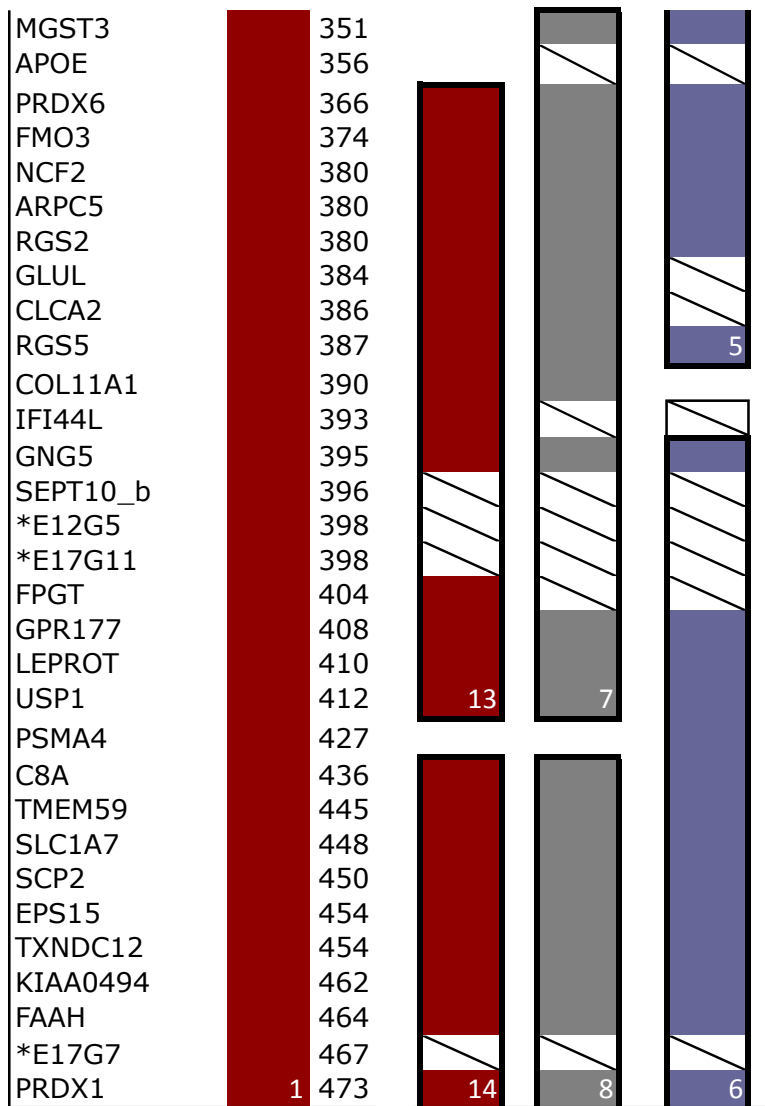
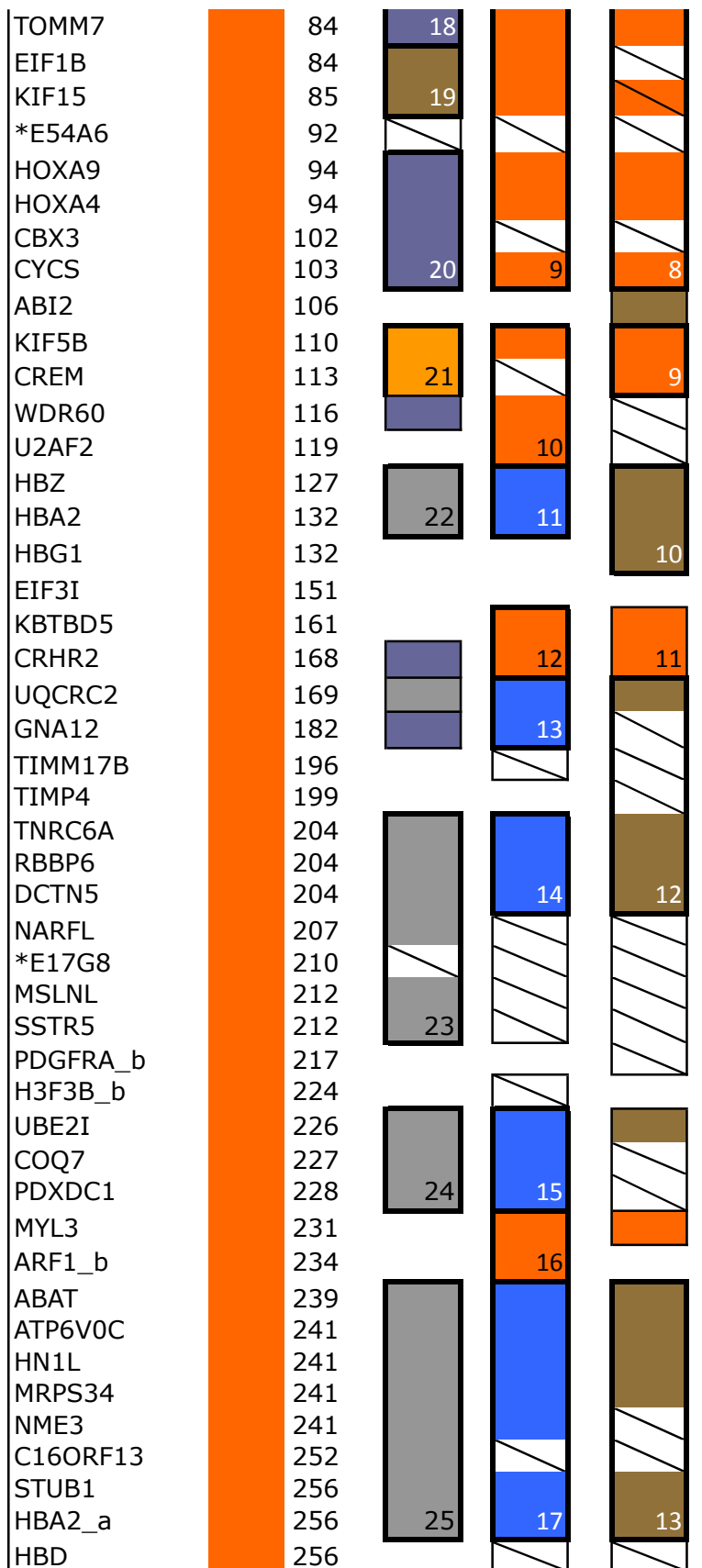


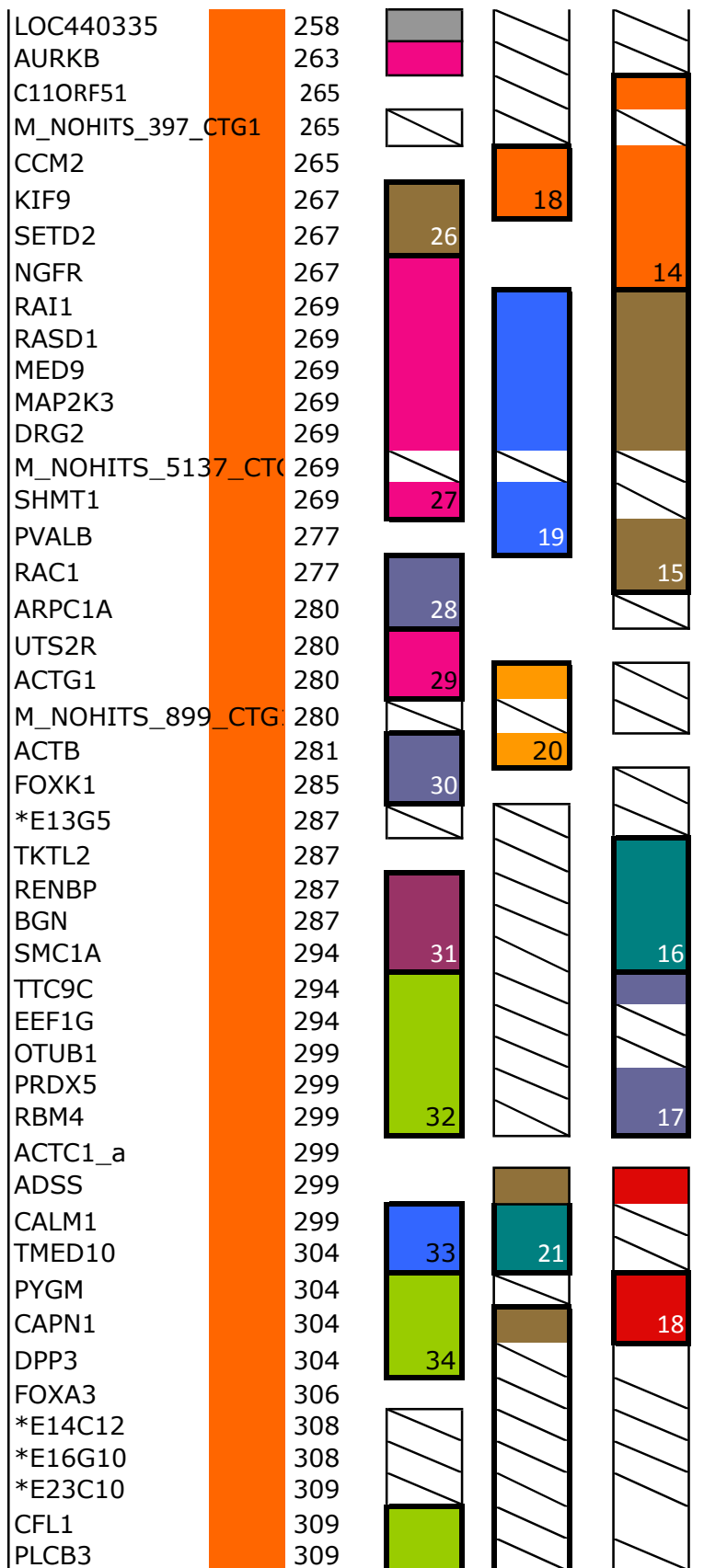
Supplemental Figure 2. Identification of conserved gene orders among human, chicken, *X. tropicalis*, and *Ambystoma* (Amby).

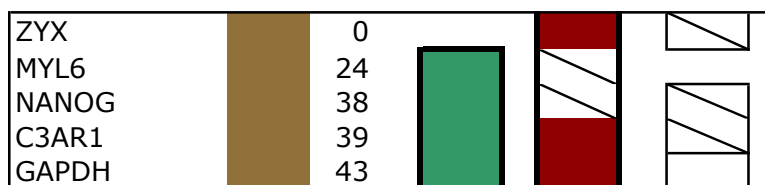
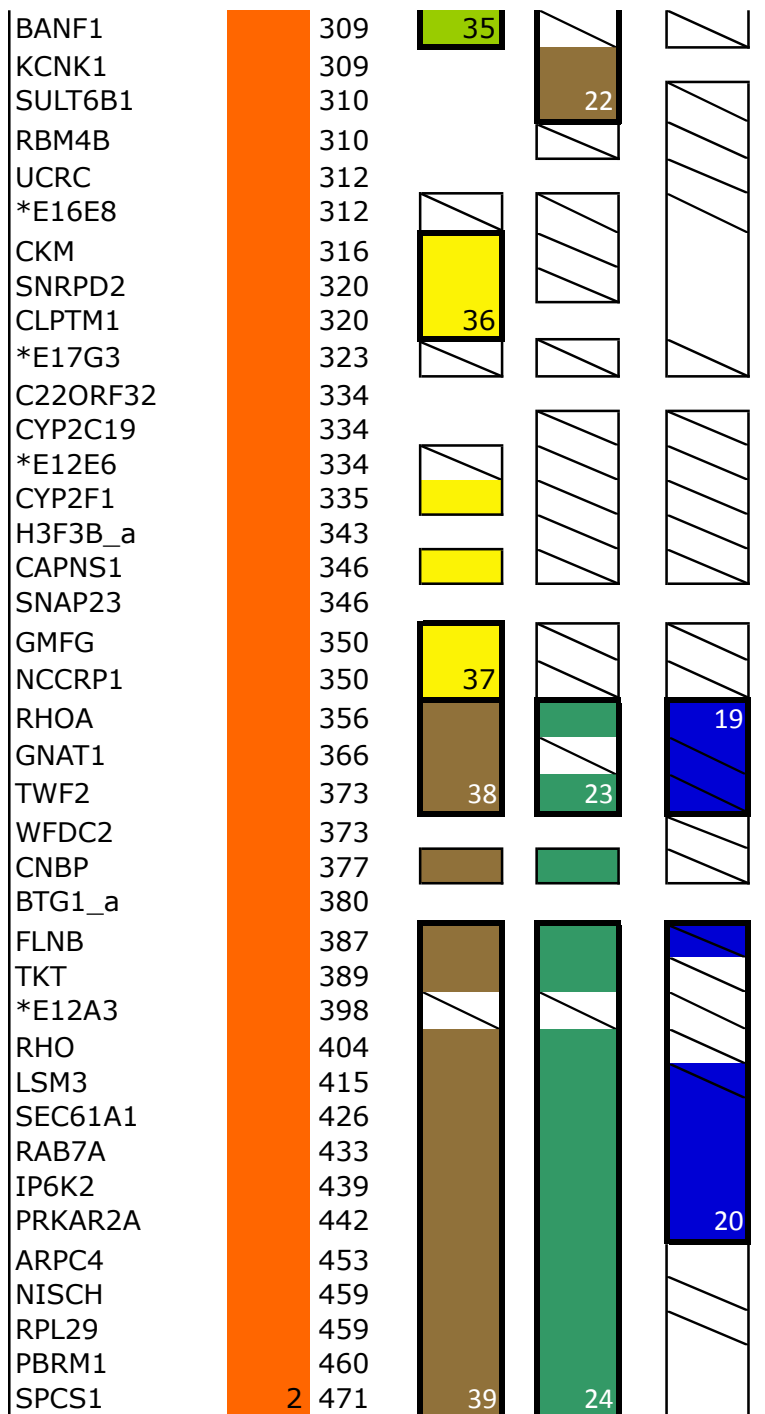


|           |     |    |   |   |
|-----------|-----|----|---|---|
| TXNIP     | 142 |    |   |   |
| SSR2      | 149 | 4  | 3 |   |
| DYNC1LI2  | 156 |    |   |   |
| ATP6V0D1  | 167 |    |   |   |
| TPPP3     | 168 |    |   |   |
| NUTF2     | 170 | 5  | 4 |   |
| HDGF      | 170 |    |   |   |
| UFC1      | 170 | 6  |   |   |
| TMEM188   | 171 |    |   |   |
| PSMD11    | 180 |    |   |   |
| U2AF1_b   | 180 |    |   |   |
| *ETG93    | 180 |    |   |   |
| FXYD3     | 182 |    |   |   |
| *E12C7    | 187 |    |   |   |
| COX6B1    | 188 | 7  |   |   |
| POLR2L    | 190 |    |   | 2 |
| NUCB1     | 194 |    |   |   |
| FTH1_b    | 195 |    |   |   |
| FTL       | 195 |    |   |   |
| LOC733905 | 195 | 8  |   |   |
| KRTAP10-1 | 195 |    |   |   |
| CD163L1   | 205 |    |   |   |
| SACS      | 212 |    |   |   |
| GPI       | 232 |    |   |   |
| ITLN1     | 237 |    |   |   |
| GABARAPL2 | 238 |    |   |   |
| HNRNPK_b  | 238 |    |   |   |
| NQO1      | 241 |    |   |   |
| VPS4A     | 242 |    |   |   |
| APRT      | 247 |    |   |   |
| MAP1LC3B  | 250 | 9  |   |   |
| CA5B      | 250 |    | 5 | 3 |
| TEAD4     | 261 |    |   |   |
| GMDS      | 261 |    |   |   |
| MBOAT7    | 267 |    |   |   |
| *E12A2    | 276 |    |   |   |
| *E13E7    | 276 |    |   |   |
| LIG1      | 277 | 10 |   |   |
| MOCS3     | 286 |    |   |   |
| SFRS7     | 304 |    |   | 4 |
| LOC769550 | 305 |    |   |   |
| MMP2      | 313 |    |   |   |
| NUDT21    | 320 | 11 |   |   |
| SODEFRIN  | 340 |    |   |   |
| ETHE1     | 340 |    |   |   |
| RABAC1    | 345 | 12 |   |   |
| MC1R      | 351 |    | 6 |   |

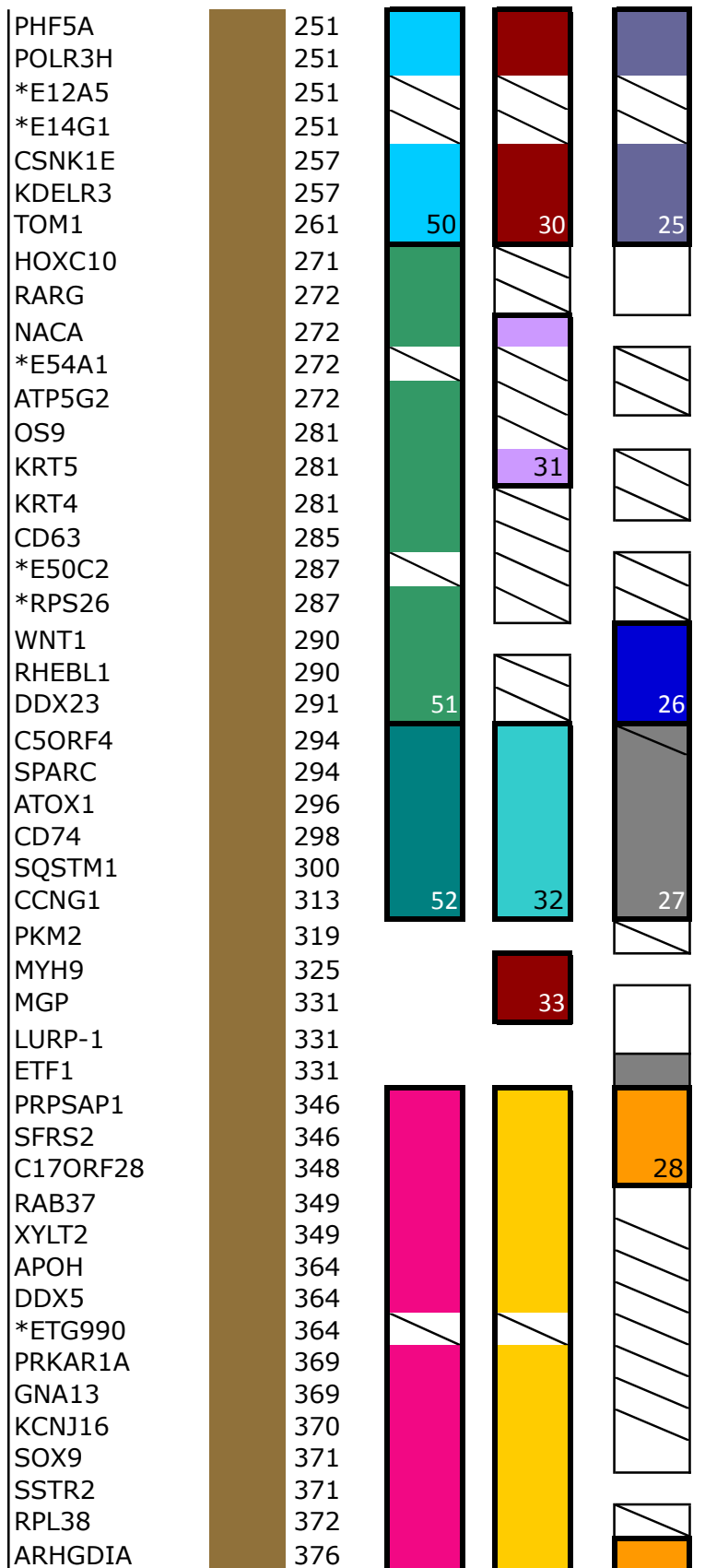




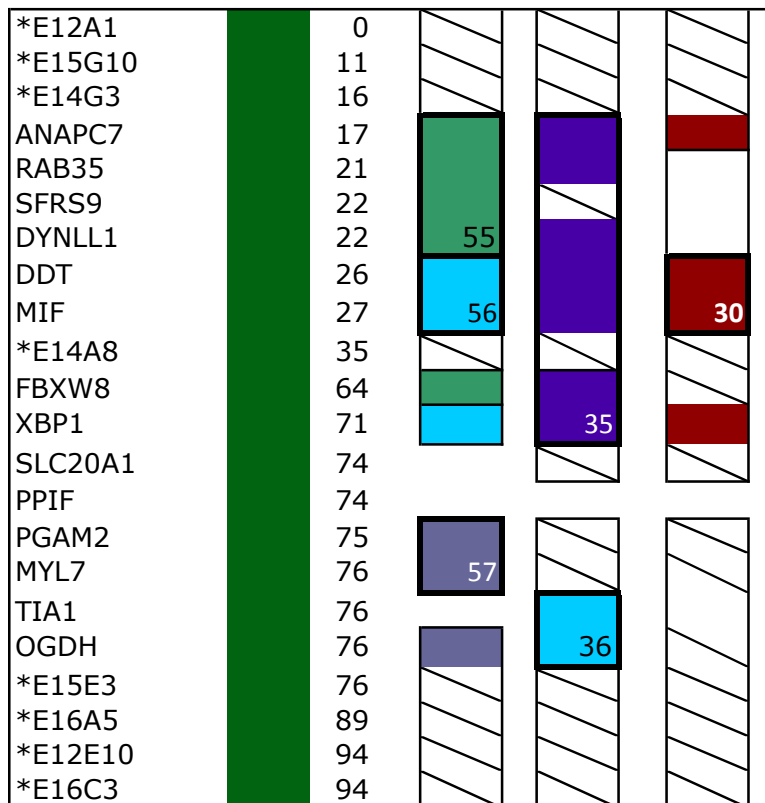
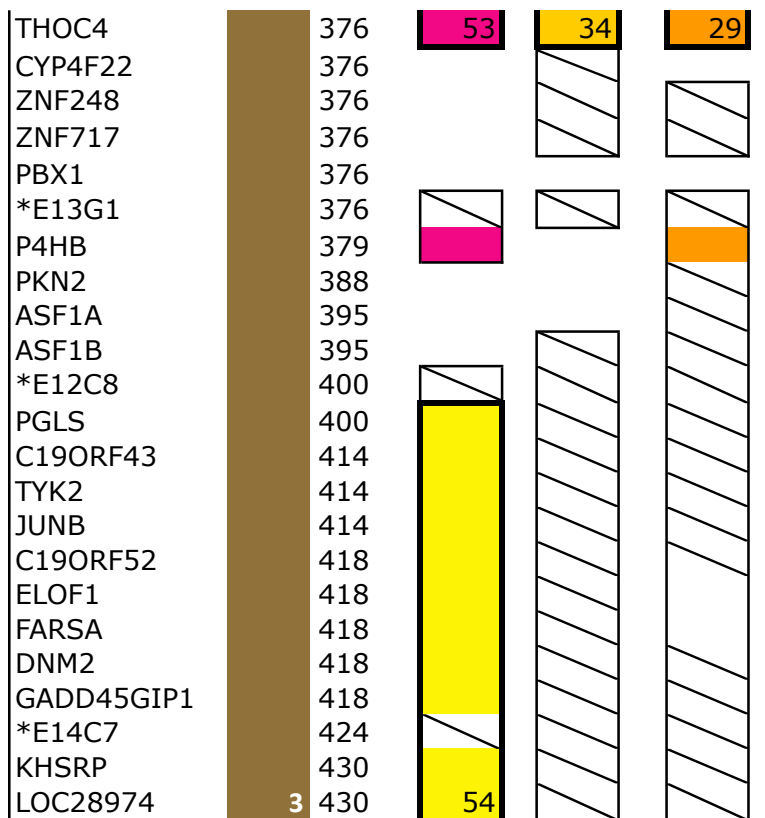




|                 |     |                                                                                     |                                                                                     |                                                                                     |
|-----------------|-----|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| ING4            | 46  |    |    |    |
| FKBP1A          | 67  |    |    |    |
| ASXL1           | 76  |    |    |    |
| *E16A12         | 76  |    |    |    |
| GNAS            | 79  |    |    |    |
| ADNP            | 97  |    |    |    |
| TNNC2           | 101 |    |    |    |
| UBE2V1          | 101 |    |    |    |
| SNAI2           | 101 |    |    |    |
| SULF2           | 109 |    |    |    |
| NCOA5           | 115 |    |    |    |
| MMP2_a          | 118 |    |    |    |
| PDLIM7          | 143 |    |    |    |
| TMED9           | 157 |    |    |    |
| CTBP1           | 158 |    |    |    |
| RPUSD4          | 158 |    |    |    |
| *TIG_NOHITS_253 | 158 |    |    |    |
| PROD1           | 169 |    |    |    |
| VKORC1L1        | 170 |    |    |    |
| TRIM69          | 170 |    |    |    |
| FUS             | 170 |   |   |   |
| MVP             | 176 |  |  |  |
| NME1            | 176 |  |  |  |
| ALDOA           | 184 |  |  |  |
| *E11G12         | 194 |  |  |  |
| YPEL3           | 194 |  |  |  |
| SULT1C4         | 195 |  |  |  |
| BOLA2           | 195 |  |  |  |
| ATP2A1          | 196 |  |  |  |
| *E16E3          | 196 |  |  |  |
| *CONTIG13340    | 196 |  |  |  |
| *E50G8          | 199 |  |  |  |
| NFS1            | 199 |  |  |  |
| MAP1LC3A        | 201 |  |  |  |
| C20ORF4         | 206 |  |  |  |
| MANBAL          | 209 |  |  |  |
| BNIP1           | 218 |  |  |  |
| UQCRQ           | 228 |  |  |  |
| CAMLG           | 236 |  |  |  |
| SKP1            | 236 |  |  |  |
| SMAD5           | 239 |  |  |  |
| SEPT10_a        | 241 |  |  |  |
| HNRNPA0         | 242 |  |  |  |
| HNRNPAB         | 243 |  |  |  |
| *E13E11         | 243 |  |  |  |
| MATR3           | 244 |  |  |  |
| UBE2D2          | 244 |  |  |  |



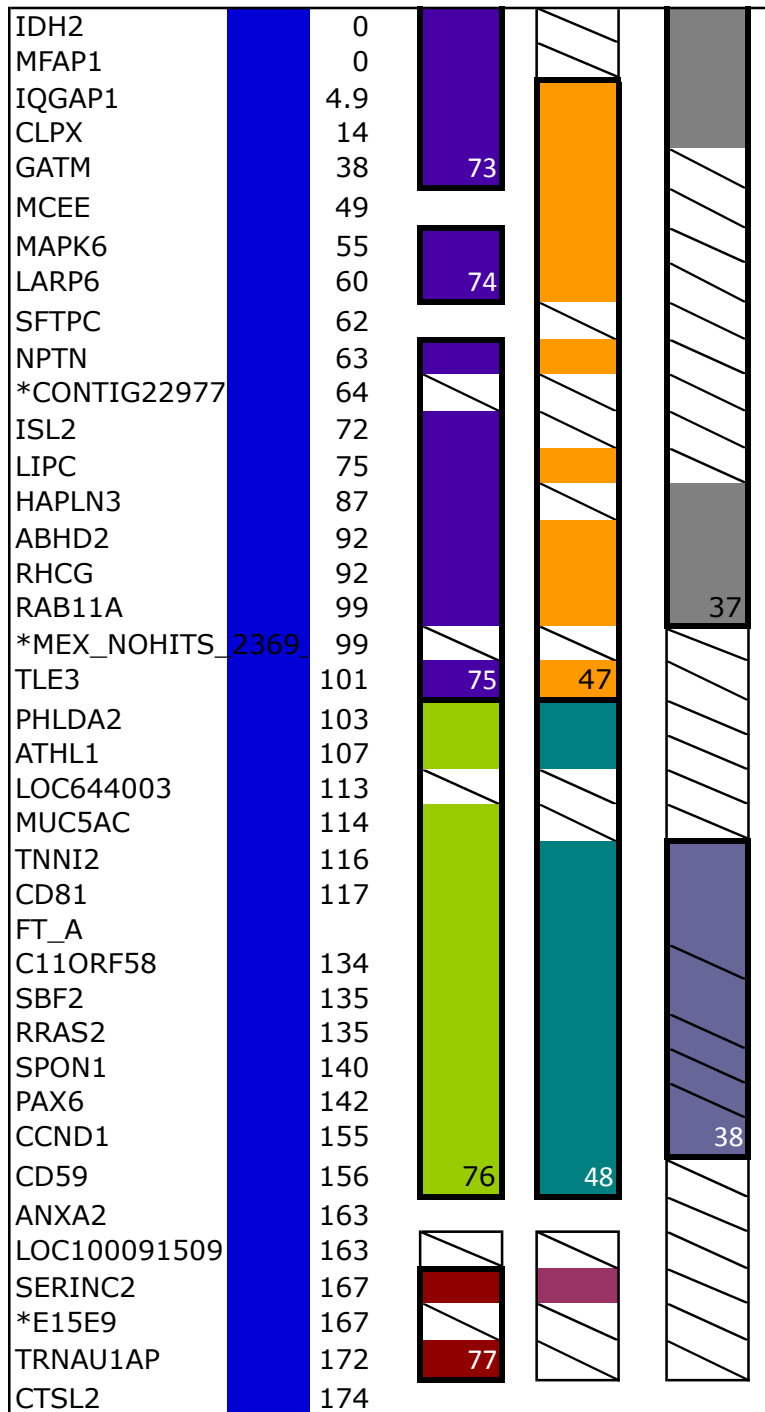
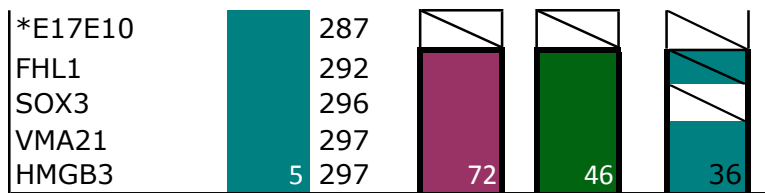


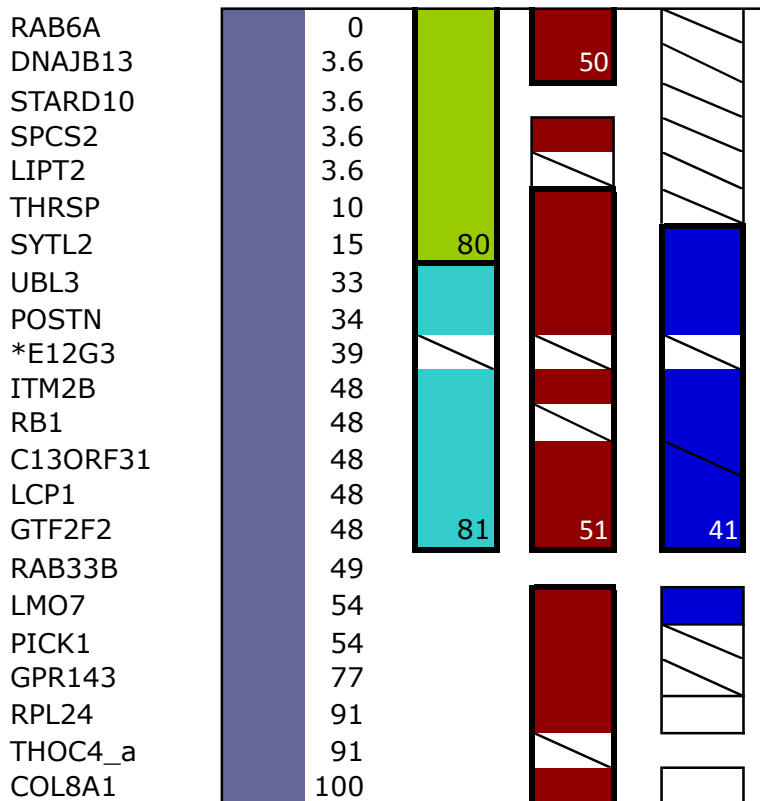
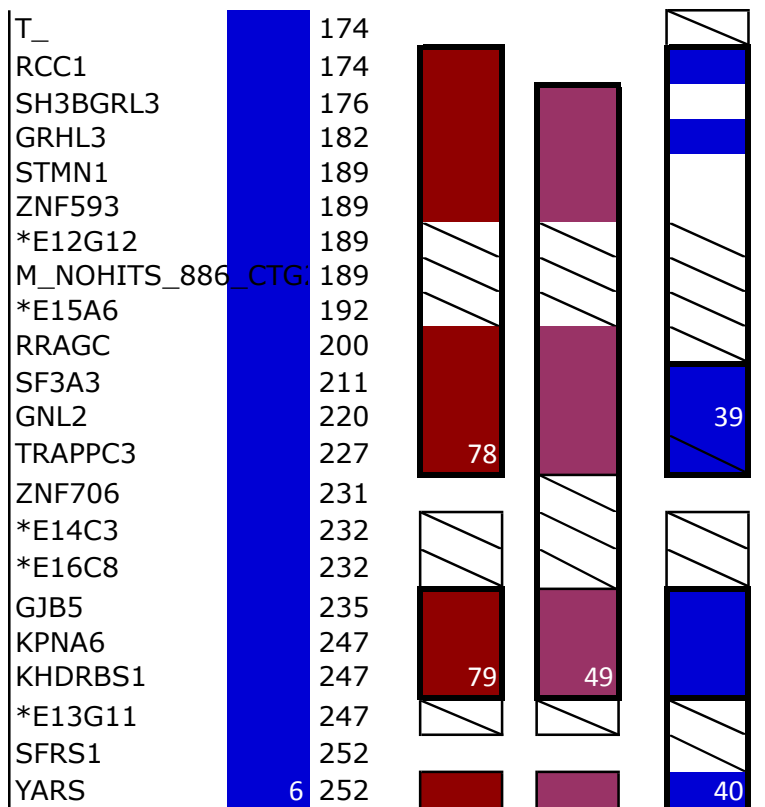


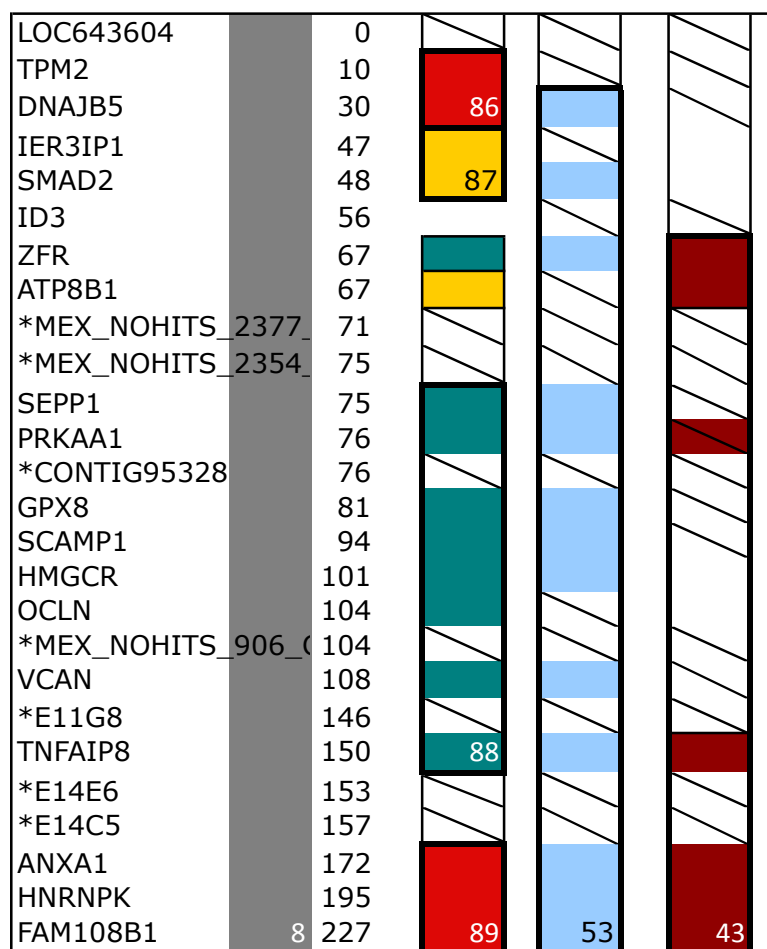
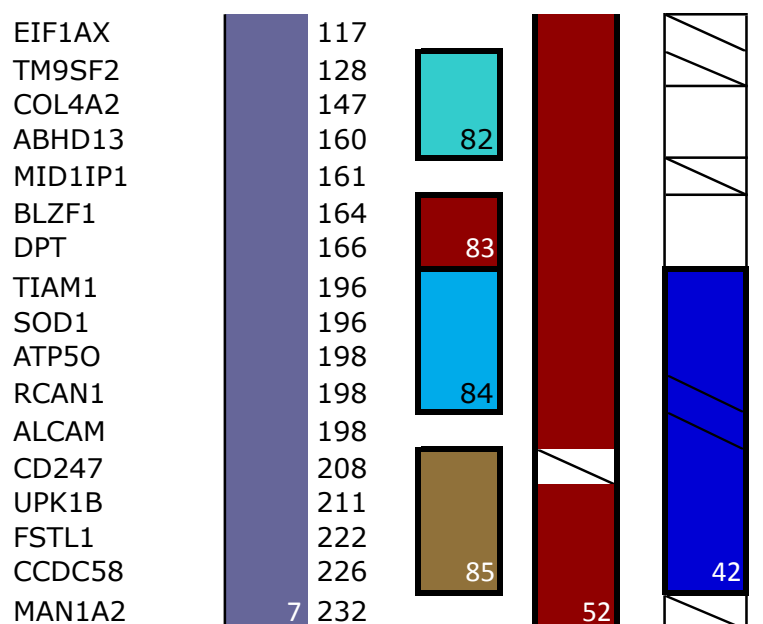
|           |     |    |    |    |
|-----------|-----|----|----|----|
| AP2M1     | 94  |    |    |    |
| EIF4G1    | 94  | 58 |    |    |
| EIF5A     | 98  |    |    |    |
| *E13E8    | 101 |    |    |    |
| LAMP3     | 111 |    | 37 |    |
| LOC563358 | 112 |    |    |    |
| PRPF6     | 115 |    |    |    |
| PDCD10    | 115 |    |    |    |
| KPNA4     | 123 |    |    |    |
| RARRES1   | 128 | 59 | 38 |    |
| VWA5A     | 138 |    |    |    |
| SCLY      | 152 |    |    |    |
| HDLBP     | 155 | 60 | 39 |    |
| *E14C4    | 155 |    |    |    |
| *E14G7    | 155 |    |    |    |
| HSD17B8   | 177 |    |    |    |
| CIRBP_b   | 179 |    |    |    |
| *E54E6    | 186 |    |    |    |
| PDLIM2    | 198 |    |    |    |
| BOLA3     | 198 |    |    |    |
| SFRP1     | 201 |    |    |    |
| ENTPD4    | 201 | 61 | 40 |    |
| *E14E1    | 207 |    |    |    |
| PHB2      | 212 |    |    |    |
| AKAP7     | 276 |    |    |    |
| EGLN1     | 278 |    |    |    |
| MAL       | 284 |    |    |    |
| MALL      | 285 | 62 | 41 |    |
| TCP1      | 285 |    |    |    |
| BTG1_b    | 303 |    |    |    |
| CTGF      | 304 |    |    |    |
| ZUFSP     | 310 |    |    |    |
| FABP7     | 319 |    |    |    |
| KIAA0776  | 330 |    |    | 31 |
| ZNF292    | 331 | 63 |    |    |
| CIRBP_c   | 334 |    |    |    |
| COX7A2    | 345 |    |    |    |
| COL12A1   | 346 |    |    | 32 |
| TMEM14A   | 357 | 64 |    |    |
| PXDN      | 361 |    |    |    |
| PDIA6     | 366 |    |    |    |
| YWHAQ     | 367 |    |    |    |
| PQLC3     | 367 |    |    |    |
| ID2       | 367 |    |    |    |
| SDC1      | 379 |    |    |    |
| RHOB      | 379 | 65 |    |    |
| CTSB      | 391 |    | 42 |    |
| PGAM2_b   | 402 |    |    |    |

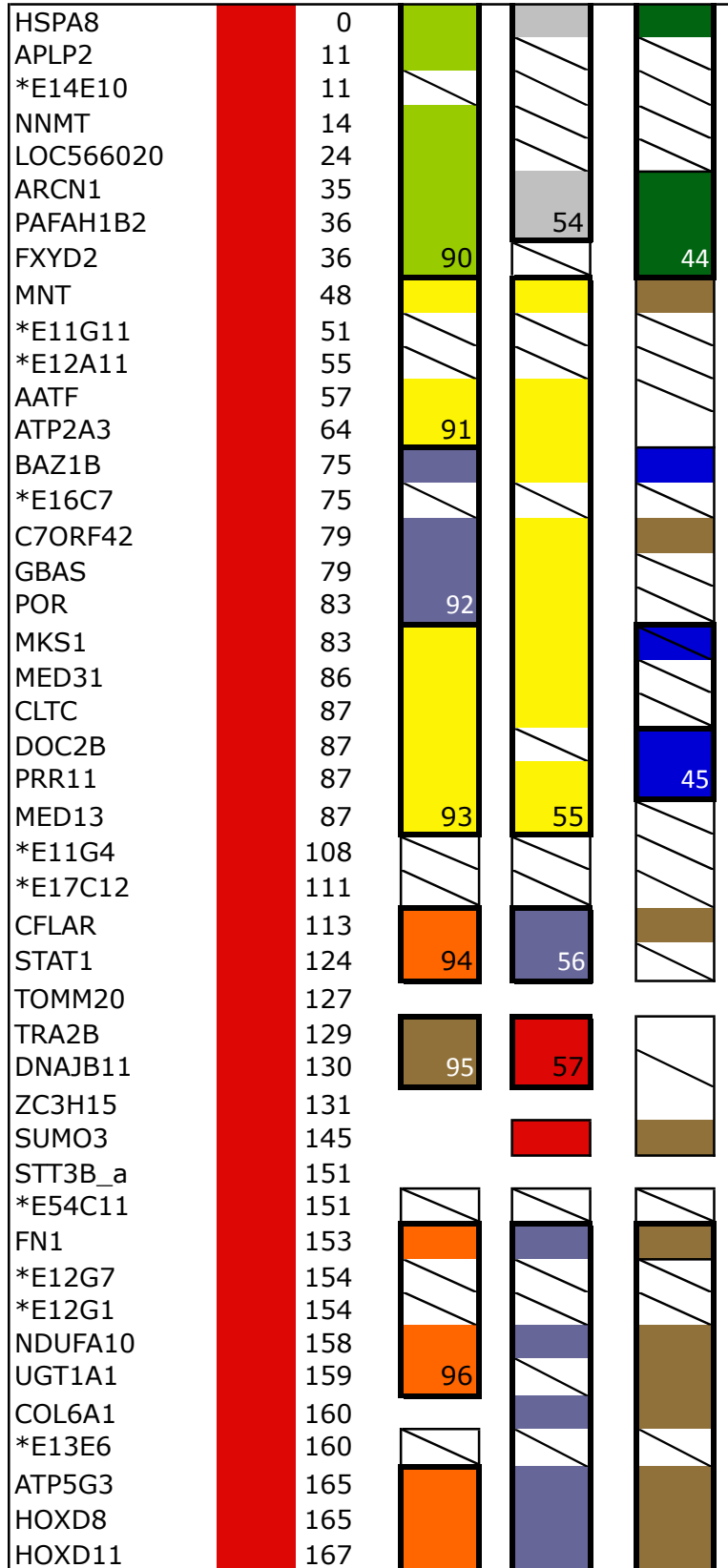
|      |   |     |  |  |
|------|---|-----|--|--|
| IRGC |   | 402 |  |  |
| GPN1 | 4 | 414 |  |  |

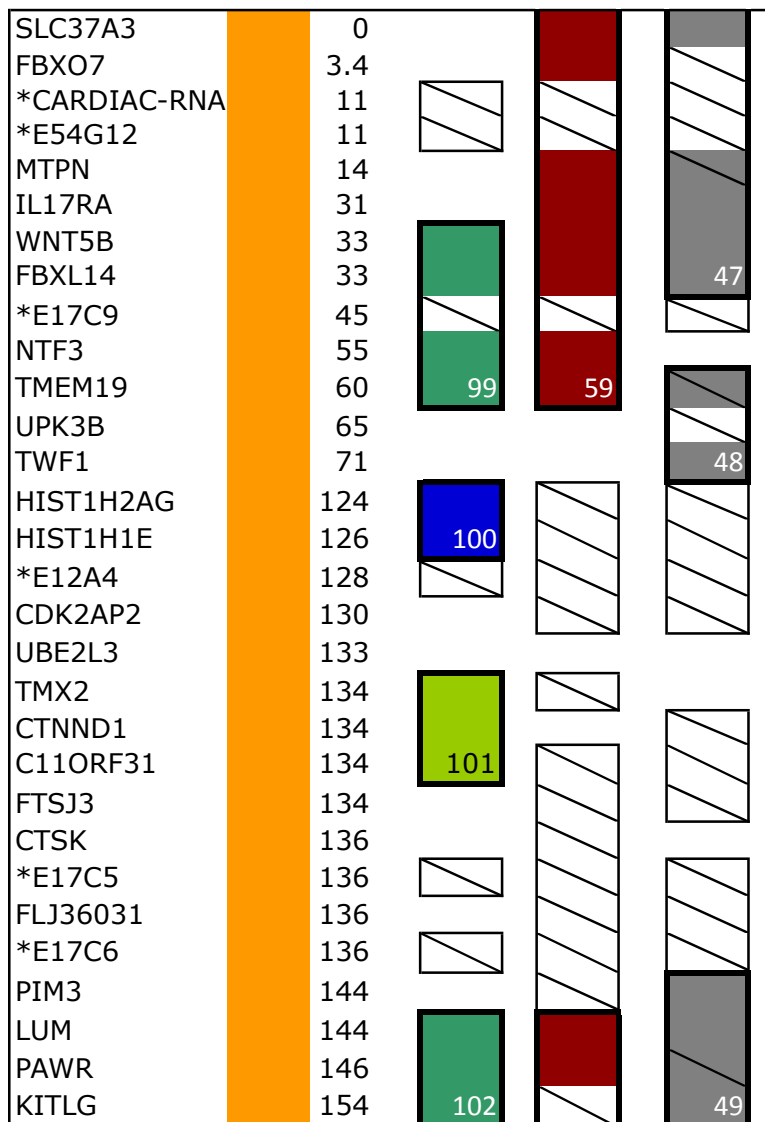
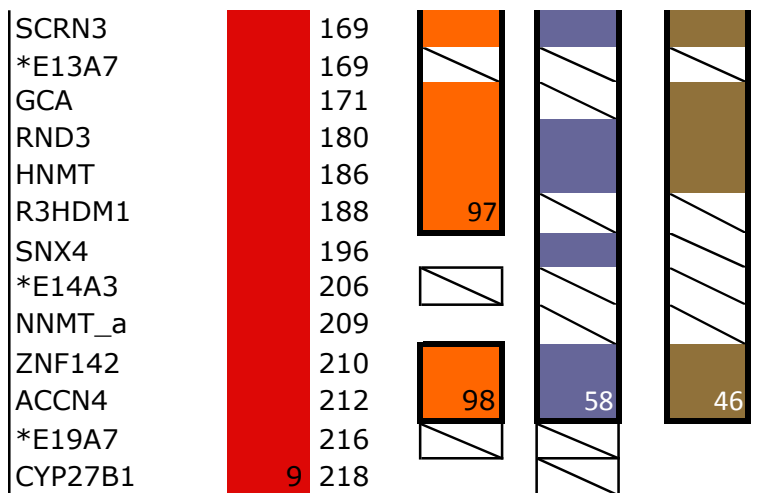
|           |     |    |    |    |
|-----------|-----|----|----|----|
| ZNF649    | 0   |    |    |    |
| LECT2     | 3.8 |    |    |    |
| CYC1      | 8.1 |    |    |    |
| EPPK1     | 9.5 |    |    |    |
| VPS28     | 9.5 |    |    |    |
| PUF60     | 9.5 |    |    |    |
| PSCA      | 9.5 | 66 | 43 |    |
| *E48C10   | 9.5 |    |    |    |
| PRKRIP1   | 21  |    |    |    |
| MYC       | 29  |    |    |    |
| NDUFB9    | 44  |    |    |    |
| RNF19A    | 62  |    |    |    |
| PABPC1    | 70  |    |    | 33 |
| UQCRB     | 76  |    |    |    |
| RBM12B    | 78  |    |    |    |
| CA2       | 82  |    |    | 34 |
| NBN       | 82  |    |    |    |
| MRPS28    | 87  | 67 | 44 |    |
| *E15A2    | 90  |    |    |    |
| NUP37     | 109 |    |    |    |
| YES1      | 132 |    |    |    |
| RIOK3     | 132 |    |    |    |
| MYL12B    | 135 |    |    |    |
| CNDP1     | 161 |    |    |    |
| CYB5A     | 168 | 68 |    |    |
| CHMP5     | 179 |    |    |    |
| MYO10     | 179 |    |    |    |
| BASP1     | 180 |    |    |    |
| DAP       | 183 | 69 |    |    |
| KDSR      | 194 |    |    |    |
| VPS4B     | 194 | 70 |    |    |
| ACOT13    | 203 |    |    |    |
| JARID2    | 225 |    |    |    |
| SERPINB6  | 228 |    |    |    |
| TXNDC5    | 233 |    |    | 35 |
| LYRM4     | 236 | 71 |    |    |
| *E15A11   | 238 |    |    |    |
| KBTBD2    | 272 |    |    |    |
| LOC420992 | 272 |    | 45 |    |
| TMSB15A   | 281 |    |    |    |
| LOC792995 | 283 |    |    |    |
| TAF9      | 287 |    |    |    |
| FAM162A   | 287 |    |    |    |



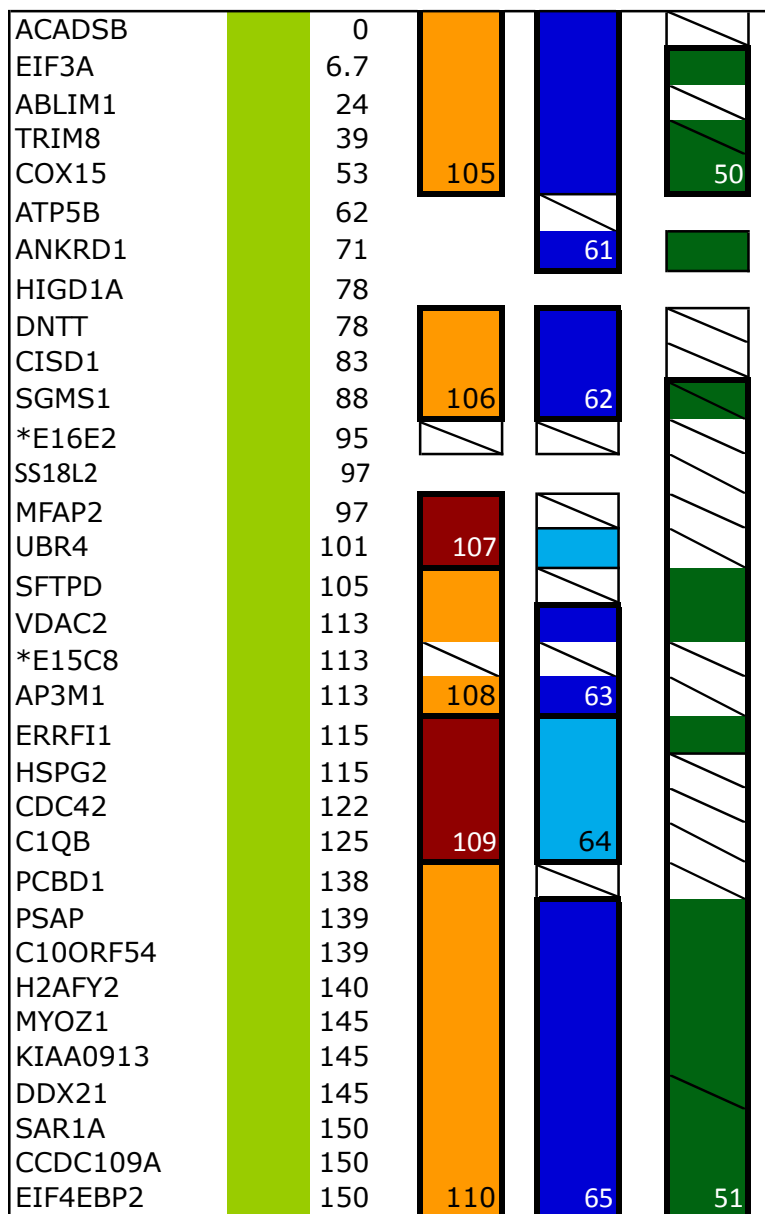
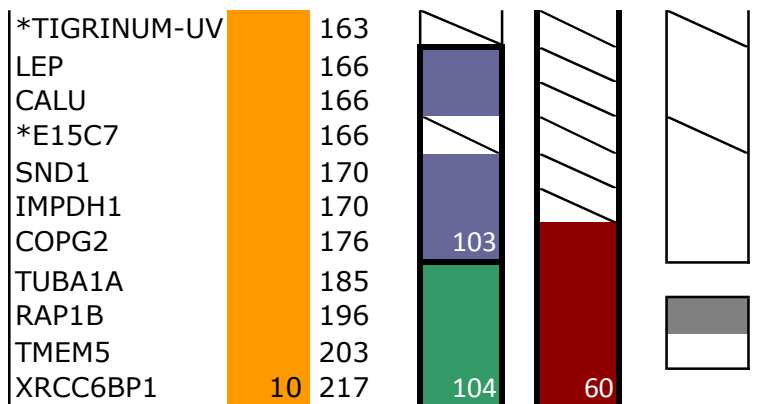












|        |    |     |  |  |  |
|--------|----|-----|--|--|--|
| RPL37A |    | 160 |  |  |  |
| CAMTA1 |    | 160 |  |  |  |
| CALM2  | 11 | 192 |  |  |  |

|                  |    |     |     |    |    |
|------------------|----|-----|-----|----|----|
| SLC4A5           |    | 0   |     |    |    |
| DCTN6            |    | 2.3 |     |    |    |
| PTPN9            |    | 11  |     |    |    |
| SFRS2            |    | 11  |     |    |    |
| C9ORF156         |    | 12  |     |    |    |
| CLTA             |    | 17  | 111 |    |    |
| KLHL8            |    | 17  |     |    |    |
| ENO3_a           |    | 25  |     |    |    |
| MMRN1            |    | 30  |     |    |    |
| C4ORF16          |    | 40  | 112 | 66 |    |
| HSDL2            |    | 40  |     |    |    |
| H2AFZ            |    | 41  |     |    |    |
| RAD23B           |    | 49  |     |    |    |
| KLF4             |    | 49  | 113 |    |    |
| SCOC             |    | 58  |     |    |    |
| LARP7            |    | 62  |     |    |    |
| TBCKL            |    | 63  |     |    |    |
| NDUFC1           |    | 77  |     |    |    |
| ARFIP1           |    | 87  |     |    |    |
| PDGFC            |    | 91  | 114 | 67 |    |
| CHDH             |    | 111 |     |    |    |
| TMEM165          |    | 117 |     |    |    |
| KIT              |    | 119 |     |    | 52 |
| PDGFRA           |    | 119 |     |    |    |
| CNGA1            |    | 124 |     |    |    |
| WDR1             |    | 145 |     |    |    |
| SLC2A9           |    | 145 | 115 | 68 |    |
| CDC25A           |    | 161 |     |    |    |
| C20ORF27         |    | 161 |     |    |    |
| *E15C10          |    | 161 |     |    |    |
| KAZALD1          |    | 174 |     |    |    |
| *MEX_NOHITS_2379 |    | 182 |     |    |    |
| MGC97528         | 12 | 187 |     |    |    |

|         |  |    |     |    |    |
|---------|--|----|-----|----|----|
| KCTD3   |  | 0  |     |    |    |
| PYGO2   |  | 11 |     |    |    |
| EPHX1   |  | 12 | 116 |    | 53 |
| GTPBP2  |  | 33 |     |    |    |
| TMEM63B |  | 34 |     | 69 |    |

