**Supplementary Tables**

**Supplementary Table 1: DNA sequences of STARR constructs, gRNAs, and primers.**

**Supplementary Table 2: Sources of publicly available NGS data reanalyzed for this study.**

**Supplementary Table 3: Genotypes of genomic enhancer deletion mESC clones.**

**Supplementary Table 4: JASPAR 2018 clustered vertebrate motifs.**