

## **Description of Additional Supplementary Files**

File Name: Supplementary Data 1

Description: PRDM10 CHIP-seq peaks

File Name: Supplementary Data 2

Description: Differential gene expression for KO vs. WT mESCs at Day 2 post-deletion

File Name: Supplementary Data 3

Description: Differential gene expression for KO vs. WT mESCs at Day 4 post-deletion

File Name: Supplementary Data 4

Description: GO enrichment analysis of genes differentially expressed (KO vs. WT,  $p_{adj} < 0.05$ ) at Day 4

File name: Supplementary Data 5

Description: Gene expression in 8-cell stage embryos (MUT vs. CTL)

File name: Supplementary Data 6

Description: Genes associated with PRDM10 binding sites

File name: Supplementary Data 7

Description: Genes bound by PRDM10 and differentially expressed in Prdm10-null mESCs/embryos ( $p_{adj} < 0.05$ , fold-change  $> 2$ )

File name: Supplementary Data 8

Description: Oligonucleotide sequences