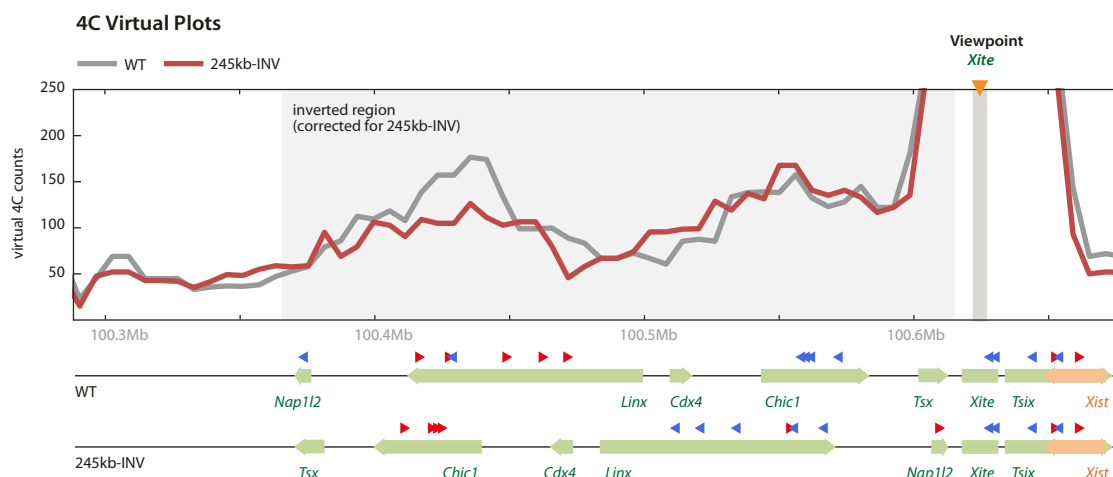
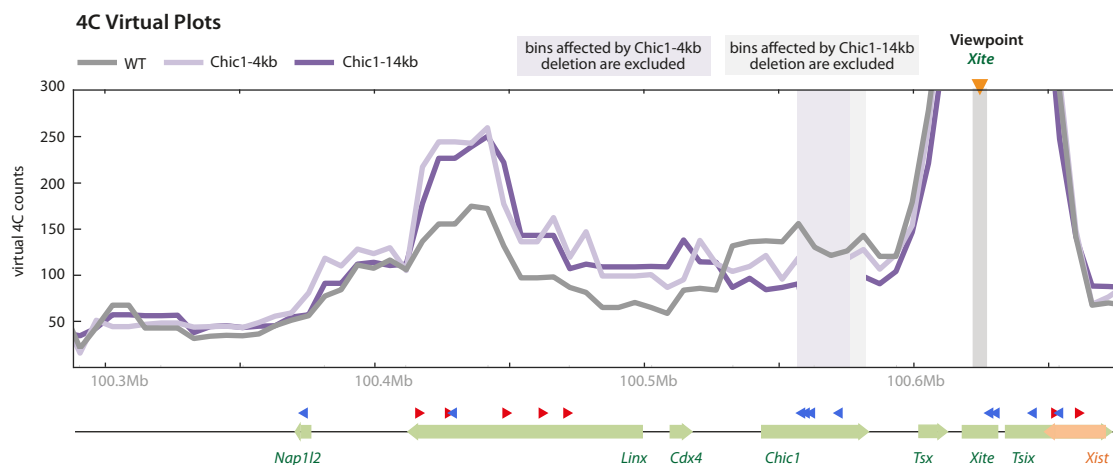


A

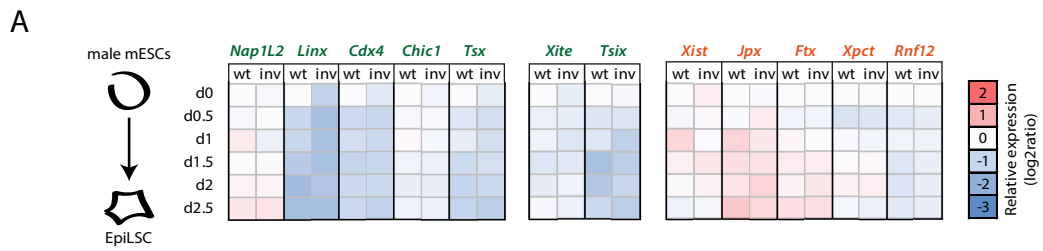


B



**Fig. S1.** (A) Virtual 4C plots for the wild type (WT) and 245kb-INV alleles, for which the anchor is the element *Xite*. The interaction frequency between *Xite-Tsx* is ~5-fold lower in the inverted allele (~50 counts) than in the WT (~250 counts, and within the region where contact frequency is dominated by genomic distance). Inversely, the interaction frequency between *Xite-Nap1l2* in the inverted allele (~250 counts) is ~5-fold higher than in the WT (~50 counts). The changes in interaction frequencies between these elements seem thus to reflect the changes in genomic distances for WT and inverted alleles. (A) Virtual 4C plots for the wild type (WT) and deletion alleles *Chic1-4kbD* and *Chic1-14kbD*. The interaction frequency between *Xite* and *Linx* is increased in the mutant alleles compared to WT.

Figure S2



**Fig. S2.** (A) Heatmap representation of Nanostring nCounter analysis of wild-type (wt) and *Linx*-51kb-INV (*inv*) mESCs during differentiation. Data for each gene is normalised to wt-d0, and represents the average of two biological replicates (wt) or of two independent clones (*inv*).