



Supplemental Fig. 2. Loss of PRC1 Reduces Nuclear Clustering at Sites Lacking RING1B. (A) Violin plots showing the distribution of inter-probe distances determined by 3D FISH of *Ring1b*^{+/+} and *Ring1b*^{-/-} mESCs hybridised with fosmid probes situated at non-RING1B sites on chromosome 7 and 13 (left and right panels respectively; fosmids are located approximately 0.5 Mb from the closest RING1B peak). A significant shift in inter-probe distance, as determined by a Mann Whitney test, is indicated (** $p = 7.79 \times 10^{-5}$, * $p = 1.53 \times 10^{-2}$, ** $p = 6.54 \times 10^{-4}$ and * $p = 1.58 \times 10^{-2}$ from left to right). Genomic locations are given for the mm9 genome build. Each plot shows the result of two independent replicates. Probes separated by less than 0.2 μ m (dashed grey line) are considered to be co-localised. (B) Violin plots depicting the number of discrete fluorescent foci in *Ring1b*^{+/+} and *Ring1b*^{-/-} mESCs hybridised with either the polycomb positive or negative oligonucleotide probes on chromosome 2 (second independent replicate to that shown in Fig. 2C). The significance of a shift in the number of discrete foci between a given pair of samples was tested using a Mann Whitney test, the results of which are indicated (** $p \leq 0.01$). (C) Violin plot showing the log₂ ratio (*Ring1b*^{I53A/I53A} vs. *Ring1b*^{+/+}) of RING1B ChIP-seq signal across all RING1B peaks within the chromosome 2 (42,398-93,905 Mb) and chromosome 5 (42.40-93.91 Mb) regions representing the PcG+ positive and a second proposed PcG+ oligonucleotide probe respectively (± 100 kb). A significantly greater reduction in RING1B levels across the chromosome 5 region was observed (** $p = 0.00114$; Mann Whitney test). (D) Violin plots depicting the number of discrete fluorescent foci in *Ring1b*^{+/+} and *Ring1b*^{-/-} mESCs hybridised with either the polycomb positive or negative oligonucleotide probes on chromosome 5 (second independent replicate to that shown in Fig. 2F). The significance of a shift in the number of discrete foci between a given pair of samples is indicated (* $p \leq 0.05$ and ** $p \leq 0.01$; Mann Whitney test).