

**Supplemental\_Figure\_S10. Sequence rearrangements in the HAC may alter interactions with nuclear lamina (NL).**

DamID data along part of the linear HAC in A9 cells and on the corresponding region on chr1 in human fibroblasts (Tig3 Fb), re-plotted according to the inferred sequence order of the linear HAC. Rearrangement segments (see Figure 1) are marked in different colors and labeled at the top of the graph. Estimated copy numbers of each segment are indicated in the middle track. The sharp transitions in the hHOR (Tig3 Fb) track illustrate that segments of LAD and inter-LAD regions have been joined in the HAC as a consequence of the rearrangements. However, in the HAC segment E shows a relatively high DamID signal, smoothly connecting to the neighboring segment N (with tiny connecting segments O and K). This suggests that segment E in the HAC is drawn to the NL by its new neighbor segment N. Note that segment D should be interpreted with caution because it is duplicated elsewhere on the HAC. X-axis scale denotes the distance to the alpha-satellite repeat junction on the HAC.

