



Fig. S4.

LCR22A haplotypes in HapMap cell line GM12878. A-C) LCR22A allele 1 and d-f) LCR22A allele 2. (A, D) Fiber FISH assembly and its decomposition to duplicons. (B, E) Predicted optical maps generated by *in silico* DLS labeling of hg38 duplicon sequences in the order observed by fiber FISH depicted by blue rectangle with red lines (DLS labels) (C, F) Optical map aligned single molecules support the predicted haplotype structure and present no gross discrepancies. Red arrowheads denote mismatches between expected and observed maps.