



Figure S12: Model predictions averaged over two sets of CTCF binding sites: occupied (red) and unoccupied (green). The solid grey trace represents the experimentally-determined nucleosome occupancy derived from Figure 5B in Cuddapah *et al.* [41] near unbound CTCF binding sites, and the thin grey line with triangles is the nucleosome occupancy curve surrounding bound CTCF sites from Figure 3A in Zhang *et al.* [2]. Without CTCF binding, the sequence-dependent nucleosome-positioning does not result in a strong coherent pattern of flanking nucleosomes, in agreement with the data from Cuddapah *et al.*. In contrast, CTCF binding results in a significantly more coherent pattern of flanking nucleosomes. The difference between the red and the green curves suggests that the set of “unoccupied” CTCF sites includes a number of false-positives which appear to have significantly different flanking sequence characteristics. (The grey curves are not plotted on the same y-axis as the red and green curves and are shown only for reference.)