



Figure S1. Phylogenetic screen identifies co-occurring CREs with spacing bias. **A)** If CREs are independent then there is uniform probability of any particular distance separating the two CREs. However, there are a greater number of chances to observe shorter distances than longer distances. Therefore, as depicted in the histogram, the expected number of observations decreases linearly as the distance between CREs increases. **B)** If CREs cluster near each other, then this non-random distribution is observed in addition to the random expectation. This results in a deviation from the random expectation at short distances.