

| N=38155 | ATAC_1 | ATAC_2 | H3-CUTAC | H3-CUTAC hex | Pol-CUTAC | Pol-CUTAC hex | R |
|---------------|--------|--------|----------|--------------|-----------|---------------|----|
| ATAC_1 | 1 | 0.89 | 0.62 | 0.62 | 0.52 | 0.54 | 0 |
| ATAC_2 | 0.89 | 1 | 0.61 | 0.62 | 0.52 | 0.53 | |
| H3-CUTAC | 0.62 | 0.61 | 1 | 0.9 | 0.66 | 0.65 | 0. |
| H3-CUTAC hex | 0.62 | 0.62 | 0.9 | 1 | 0.58 | 0.58 | |
| Pol-CUTAC | 0.52 | 0.52 | 0.66 | 0.58 | 1 | 0.96 | 1 |
| Pol-CUTAC hex | 0.54 | 0.53 | 0.65 | 0.58 | 0.96 | 1 | |

Additional file 2: Close correspondences between CUTAC and ATAC-seq (a) Heatmaps showing alignments of Pol2S5p-CUTAC ±10% 1,6-hexanediol during tagmentation, H3K4me2-CUTAC and ATAC_{ENCODE} data over peaks called on an ATAC_{ENCODE} replicated dataset. (b) Same as (a) showing the ≤120-bp fragment subset, where arrowheads indicate the row where enrichment of signal over peaks ends: 98-99% for CUTAC and 93% for ATAC_{ENCODE}. (c) Same as (b) showing the >120 bp subset. Fragments were mapped to hg19, and 3.2 million fragments were randomly sampled from each dataset and used to make bedgraph tracks. (d) Tracks comparing Pol2S5p and H3K4me2 CUTAC to ATAC-seq using K562 cell data generated by the ENCODE project. The region around the GART-SON bidirectional promoter is shown at two different scales. (e) Correlation matrix of CUTAC and ATAC-seq datasets used in this analysis. ATAC_1 is the ENCODE dataset used to call peaks and ATAC_2 is a replicate of ATAC_1.