

**FIGURE S1.** Determination of steady-state kinetic parameters of p300-mediated acetylation of histone H3/H4 tetramer in the presence of TDG. The data were fit by eq. 2 for p300 acetylation of histone tetramer, with graphs shown for A) H3K9, B) H4K5, C) H4K8, D) H4K12, and E) H4K16. The remaining sites of acetylation for H3 are found in Figure 6. The apparent kinetic parameters are summarized in Table 1.