



Figure 3. Histone substrate binding by HAT proteins. Close-up electrostatic view of HAT domain structures with histone peptide substrates or CoA-peptide bisubstrate inhibitors. Protein surfaces are colored according to electrostatic potential with the degree of red, blue, and white coloring correlating with electronegative, electropositive, and neutral charge, respectively. (A) Structure of tGcn5 bound to CoA (CPK coloring with carbon atoms shown in yellow) and a 19-residue histone H3 peptide (CPK coloring with carbon atoms shown in purple) centered around K14. (B) Structure of hHAT1 bound to AcCoA (CPK coloring with carbon atoms shown in yellow) and a 20-residue histone H4 peptide (CPK coloring with carbon atoms shown in purple) centered around K12. (C) Structure of the hp300/LysCoA complex. The LysCoA bisubstrate inhibitor is shown in CPK coloring with carbon atoms in yellow. (D) Structure of the yEsa1/H4K16CoA complex (only the lysine side chain of the H4K16 peptide component of the bisubstrate inhibitor is ordered in the crystal structure and shown in CPK coloring with carbon atoms in yellow).