# Recombinant p300 (1041-1161) protein

**Catalog No: 31372, 31801**
**Expressed In:** *E. coli*

**Quantity:** 100, 1000 µg
**Concentration:** 5 µg/µl
**Source:** Human

**Buffer Contents:** Recombinant p300 (1041-1161) protein expressed in *E. coli* at a concentration of 5 µg/µl in 25 mM Tris pH 7.4, 150 mM NaCl, 5% Glycerol.

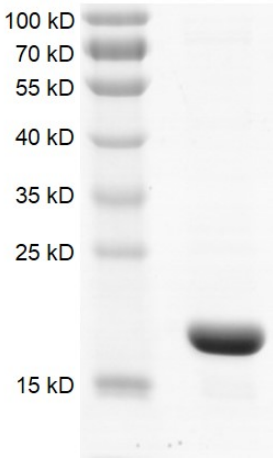
**Background: E1A binding protein p300 (EP300)** or **p300** regulates cellular growth and differentiation and is also important in preventing tumor growth. Its interaction with adenovirus E1A protein is thought to regulate the transforming capacity of E1A. p300 is a transcriptional coactivator with histone acetyl transferase (HAT) activity. It can acetylate all four core histones and regulates transcription via chromatin remodeling. p300 also functions as an acetyltransferase for non-histone targets. Specifically, p300 acetylates 'Lys131' of ALX1 and acts as its coactivator in the presence of CREBBP. p300 is also thought to indirectly increase the transcriptional activity of p53 through acetylation of SIRT2 and subsequent attenuation of its deacetylase function. Additionally, HDAC1 acetylation by p300 leads to HDAC1 inactivation. p300 also acts as a TFAP2A-mediated transcriptional coactivator in the presence of CITED2 and as a coactivator of NEUROD1-dependent transcription of Secretin and p21. Additionally, p300 binds to phosphorylated CREB and mediates cAMP gene regulation. It also regulates terminal differentiation of intestinal epithelial cells. In the case of HIV-1 infection, p300 is recruited by the viral protein TAT and regulates TAT's transactivating activity, and may aid induction of chromatin remodeling of proviral genes. p300 contains a bromodomain that recognizes acetylated histone lysine residues and functions as a ‘reader’ of these epigenetic histone marks to regulate chromatin structure and gene expression by linking associated proteins to the recognized acetylated nucleosomal targets.

**Protein Details:** The peptide corresponding to amino acids 1041 - 1161 that contains the bromodomain sequences of EP300 (accession number NM_001429.3) was expressed in *E. coli* and contains an N-terminal His tag and C-terminal FLAG tag with an observed molecular weight of 19.1 kDa. It shows binding specificity for acetylated H3K36, H3K56, H4K12, H4K20 and H4K44, as well as acetylated MyoD-K99/K102. The recombinant protein is >90% pure by SDS-PAGE.

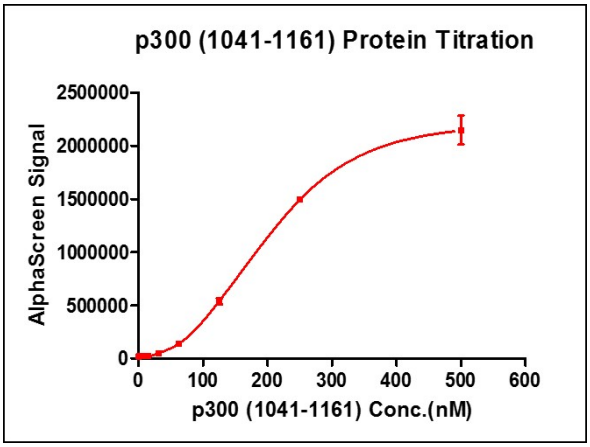
**Application Notes:** Recombinant p300 (1041-1161) is suitable for use in binding assays, inhibitor screening, and selectivity profiling.

**Storage and Guarantee:** Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is guaranteed for 6 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.




**Recombinant p300 (1041-1161) protein gel.**
p300 (1041-1161) protein was run on a 10% SDS-PAGE gel and stained with Coomassie Blue.




**Recombinant p300 (1041-1161) activity using AlphaScreen.**
p300 (1041-1161) titration and inhibition were assessed using an AlphaScreen® assay. Titration curves were generated to show signal response in the presence of modified peptide substrate at increasing protein concentrations. This data was generated and kindly provided courtesy of ChemPartner.