

Phospho-EP300(S89) Antibody
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3197a

Specification

Phospho-EP300(S89) Antibody - Product Information

Application	IHC-P, DB,E
Primary Accession	Q09472
Other Accession	B2RWS6
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit Ig
Calculated MW	264161

Phospho-EP300(S89) Antibody - Additional Information

Gene ID 2033

Other Names

Histone acetyltransferase p300, p300 HAT, E1A-associated protein p300, EP300, P300

Target/Specificity

This EP300 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding S89 of human EP300.

Dilution

IHC-P~~1:50~100
DB~~1:500

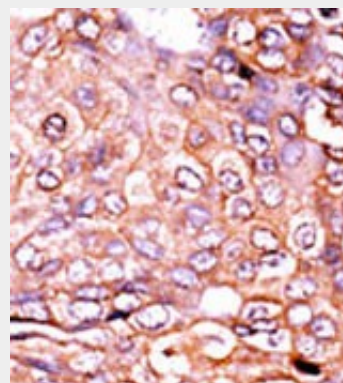
Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

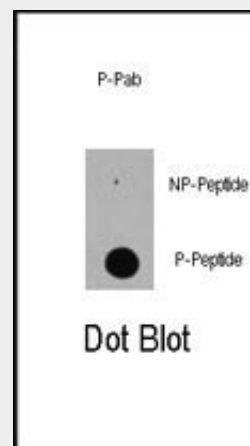
Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



Dot blot analysis of anti-Phospho-EP300-S89 Pab (Cat. #AP3197a) on nitrocellulose membrane. 50ng of Phospho-peptide (BP3197a) or Non Phospho-peptide per dot were adsorbed. Antibodies working concentration was 0.5ug per ml.

Phospho-EP300(S89) Antibody - Background

Phospho-EP300(S89) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Phospho-EP300(S89) Antibody - Protein Information

Name EP300

Synonyms P300

Function

Functions as histone acetyltransferase and regulates transcription via chromatin remodeling (PubMed:23415232, PubMed:23934153, PubMed:8945521). Acetylates all four core histones in nucleosomes. Histone acetylation gives an epigenetic tag for transcriptional activation (PubMed:23415232, PubMed:23934153, PubMed:8945521). Mediates cAMP-gene regulation by binding specifically to phosphorylated CREB protein. Mediates acetylation of histone H3 at 'Lys-122' (H3K122ac), a modification that localizes at the surface of the histone octamer and stimulates transcription, possibly by promoting nucleosome instability. Mediates acetylation of histone H3 at 'Lys-27' (H3K27ac) (PubMed:23911289). Also functions as acetyltransferase for non-histone targets, such as ALX1, HDAC1, PRMT1 or SIRT2 (PubMed:12929931, PubMed:16762839, PubMed:18722353).

EP300 encodes the adenovirus E1A-associated cellular p300 transcriptional co-activator protein. p300 is related by sequence to CPB (CREB-binding protein [CREB: cyclic-AMP responsive element binding protein]), and like CPB can stimulate transcription through activation of CREB. This EP300 activity is specifically inhibited by the adenovirus oncoprotein E1A. EP300 has also been identified as a co-activator of HIF1A (hypoxia-inducible factor 1 alpha), and thus plays a role in the stimulation of hypoxia-induced genes such as VEGF.

Phospho-EP300(S89) Antibody - References

Finlan, L., et al., J. Biol. Chem. 279(47):49395-49405 (2004).
Dornan, D., et al., Mol. Cell. Biol. 24(22):10083-10098 (2004).
Jin, Y.H., et al., J. Biol. Chem. 279(28):29409-29417 (2004).
Kung, A.L., et al., Cancer Cell 6(1):33-43 (2004).
Chen, J., et al., Cell. Mol. Life Sci. 61(13):1675-1683 (2004).

Acetylates 'Lys- 131' of ALX1 and acts as its coactivator (PubMed:12929931).

Acetylates SIRT2 and is proposed to indirectly increase the transcriptional activity of TP53 through acetylation and subsequent attenuation of SIRT2 deacetylase function (PubMed:18722353).

Acetylates HDAC1 leading to its inactivation and modulation of transcription (PubMed:16762839).

Acetylates 'Lys-247' of EGR2 (By similarity). Acts as a TFAP2A-mediated transcriptional coactivator in presence of CITED2 (PubMed:12586840). Plays a role as a coactivator of NEUROD1-dependent transcription of the secretin and p21 genes and controls terminal differentiation of cells in the intestinal epithelium. Promotes cardiac myocyte enlargement. Can also mediate transcriptional repression. Acetylates FOXO1 and enhances its transcriptional activity (PubMed:15890677).

Acetylates BCL6 which disrupts its ability to recruit histone deacetylases and hinders its transcriptional repressor activity (PubMed:12402037).

Participates in CLOCK or NPAS2-regulated rhythmic gene transcription; exhibits a circadian association with CLOCK or NPAS2, correlating with increase in PER1/2 mRNA and histone H3 acetylation on the PER1/2 promoter (PubMed:14645221).

Acetylates MTA1 at 'Lys-626' which is essential for its transcriptional coactivator activity (PubMed:16617102).

Acetylates XBP1 isoform 2; acetylation increases protein stability of XBP1 isoform 2 and enhances its transcriptional activity (PubMed:20955178).

Acetylates PCNA; acetylation promotes removal of chromatin-bound PCNA and its degradation during nucleotide excision repair (NER) (PubMed:24939902).

Acetylates MEF2D (PubMed:21030595).

Acetylates and stabilizes ZBTB7B protein by antagonizing ubiquitin conjugation and degradation, this mechanism may be involved in CD4/CD8 lineage differentiation (PubMed:20810990).

Acetylates GABPB1, impairing GABPB1 heterotetramerization and activity (By similarity). In addition to protein acetyltransferase, can use different acyl-CoA substrates, such as (2E)-butenoyl-CoA (crotonyl-CoA), butanoyl-CoA (butyryl-CoA), 2-hydroxyisobutanoyl-CoA (2-hydroxyisobutyryl-CoA), lactoyl-CoA or propanoyl-CoA (propionyl-CoA), and is able to mediate protein crotonylation, butyrylation, 2-hydroxyisobutyrylation, lactylation or propionylation, respectively (PubMed:17267393, PubMed:25818647, PubMed:29775581, PubMed:31645732). Acts as a histone crotonyltransferase; crotonylation marks active promoters and enhancers and confers resistance to transcriptional repressors (PubMed:25818647). Histone crotonyltransferase activity is dependent on the concentration of (2E)-butenoyl-CoA (crotonyl-CoA) substrate and such activity is weak when (2E)-butenoyl-CoA (crotonyl-CoA) concentration is low (PubMed:25818647). Also acts as a histone butyryltransferase; butyrylation marks active promoters

(PubMed:17267393). Catalyzes histone lactylation in macrophages by using lactoyl-CoA directly derived from endogenous or exogenous lactate, leading to stimulates gene transcription (PubMed:31645732). Acts as a protein-lysine 2-hydroxyisobutyryltransferase; regulates glycolysis by mediating 2-hydroxyisobutyrylation of glycolytic enzymes (PubMed:29775581). Functions as a transcriptional coactivator for SMAD4 in the TGF-beta signaling pathway (PubMed:25514493). Acetylates PCK1 and promotes PCK1 anaplerotic activity (PubMed:30193097). Acetylates RXRA and RXRG (PubMed:17761950).

Cellular Location

Cytoplasm. Nucleus. Chromosome.
Note=Localizes to active chromatin: Colocalizes with histone H3 acetylated and/or crotonylated at 'Lys-18' (H3K18ac and H3K18cr, respectively) (PubMed:25818647). In the presence of ALX1 relocates from the cytoplasm to the nucleus. Colocalizes with ROCK2 in the nucleus (PubMed:12929931).

Phospho-EP300(S89) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)