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PCAF Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12075b

Product Information

Application	WB, E
Primary Accession	Q92831
Other Accession	Q9JHD1, NP_003875.3
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB14386
Calculated MW	93013
Antigen Region	802-832

Additional Information

Gene ID	8850
Other Names	Histone acetyltransferase KAT2B, Histone acetyltransferase PCAF, Histone acetylase PCAF, Lysine acetyltransferase 2B, P300/CBP-associated factor, P/CAF, KAT2B, PCAF
Target/Specificity	This PCAF antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 802-832 amino acids from the C-terminal region of human PCAF.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. 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	PCAF Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	KAT2B {ECO:0000303|PubMed:27796307, ECO:0000312|HGNC:HGNC:8638}
Function	Functions as a histone acetyltransferase (HAT) to promote transcriptional

	activation (PubMed:8945521). Has significant histone acetyltransferase activity with core histones (H3 and H4), and also with nucleosome core particles (PubMed:8945521). Has a a strong preference for acetylation of H3 at 'Lys-9' (H3K9ac) (PubMed:21131905). Also acetylates non-histone proteins, such as ACLY, MAPRE1/EB1, PLK4, RRP9/U3-55K and TBX5 (PubMed:10675335, PubMed:23001180, PubMed:23932781, PubMed:26867678, PubMed:27796307, PubMed:29174768, PubMed:9707565). Inhibits cell-cycle progression and counteracts the mitogenic activity of the adenoviral oncoprotein E1A (PubMed:8684459). Acts as a circadian transcriptional coactivator which enhances the activity of the circadian transcriptional activators: NPAS2-BMAL1 and CLOCK-BMAL1 heterodimers (PubMed:14645221). Involved in heart and limb development by mediating acetylation of TBX5, acetylation regulating nucleocytoplasmic shuttling of TBX5 (PubMed:29174768). Acts as a negative regulator of centrosome amplification by mediating acetylation of PLK4 (PubMed:27796307). Acetylates RRP9/U3-55K, a core subunit of the U3 snoRNP complex, impairing pre-rRNA processing (PubMed:26867678). Acetylates MAPRE1/EB1, promoting dynamic kinetochore-microtubule interactions in early mitosis (PubMed:23001180). Also acetylates spermidine (PubMed:27389534).
Cellular Location	Nucleus. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm Note=Mainly localizes to the nucleus. Also localizes to centrosomes in late G1 and around the G1/S transition, coinciding with the onset of centriole formation. Subcellular location may vary depending upon cell differentiation state. Cytoplasmic at the very stages of keratinocyte differentiation, becomes nuclear at later differentiation stages Cytoplasmic in basal epithelial cells (undifferentiated cells) and nuclear in parabasal cells (differentiated cells) (PubMed:20940255) Localizes to sites of DNA damage (PubMed:25593309)
Tissue Location	Ubiquitously expressed but most abundant in heart and skeletal muscle. Also expressed in the skin, in keratinocytes (at protein level) (PubMed:20940255).

Background

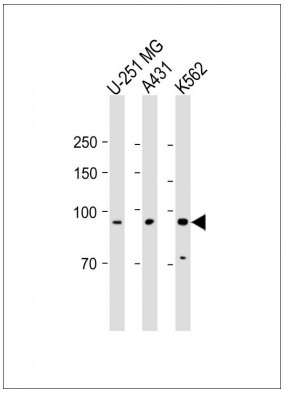
CBP and p300 are large nuclear proteins that bind to many sequence-specific factors involved in cell growth and/or differentiation, including c-jun and the adenoviral oncoprotein E1A. The protein encoded by this gene associates with p300/CBP. It has in vitro and in vivo binding activity with CBP and p300, and competes with E1A for binding sites in p300/CBP. It has histone acetyl transferase activity with core histones and nucleosome core particles, indicating that this protein plays a direct role in transcriptional regulation.

References

Perez, R.E., et al. J. Cell. Physiol. 225(2):394-405(2010)
Mooney, S.M., et al. J. Biol. Chem. 285(40):30443-30452(2010)
Aoyama, T., et al. J. Biol. Chem. 285(39):29842-29850(2010)
Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :
Shimahara, A., et al. J. Biol. Chem. 285(22):16967-16977(2010)

Images

All lanes: Anti-PCAF Antibody (C-term) at 1:1000 dilution Lane 1: U-251 MG whole cell lysate Lane 2: A431 whole cell lysate Lane 3: K562 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution.



Observed band size: 93 KDa Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- Differential coupling of KLF10 to Sin3-HDAC and PCAF regulates the inducibility of the FOXP3 gene.