10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

KD-Validated Anti-PCAF Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI2049

Product Information

Application	WB, FC, ICC
Primary Accession	Q92831
Reactivity	Human
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	23GB910
Calculated MW	93013
Gene Name	KAT2B
Aliases	Lysine Acetyltransferase 2B; P/CAF; P300/CBP-Associated Factor; PCAF; Spermidine Acetyltransferase KAT2B; Histone Acetyltransferase KAT2B; K(Lysine) Acetyltransferase 2B; Histone Acetyltransferase PCAF; Histone Acetylase PCAF; EC 2.3.1.48; GCN5L; GCN5; CREBBP-Associated Factor; EC 2.3.1.57; CAF
Immunogen	A synthesized peptide derived from human PCAF

Additional Information

Gene ID	8850
Other Names	Histone acetyltransferase KAT2B, 2.3.1.48, Histone acetyltransferase PCAF, Histone acetylase PCAF, Lysine acetyltransferase 2B, P300/CBP-associated factor, P/CAF, Spermidine acetyltransferase KAT2B, 2.3.1.57, KAT2B {ECO:0000303|PubMed:27796307, ECO:0000312|HGNC:HGNC:8638}

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).

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