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KD-Validated Anti-PCAF Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI2049

Specification

KD-Validated Anti-PCAF Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	Q92831
Reactivity	**Human**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 93 kDa, observed, 93 kDa KDa**
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**

KD-Validated Anti-PCAF Rabbit Monoclonal Antibody - 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}

KD-Validated Anti-PCAF Rabbit Monoclonal Antibody - 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:<a

href="http://www.uniprot.org/citations/23001180" target="_blank">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).

KD-Validated Anti-PCAF Rabbit Monoclonal 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 Cytomety
- Cell Culture

KD-Validated Anti-PCAF Rabbit Monoclonal Antibody - Images

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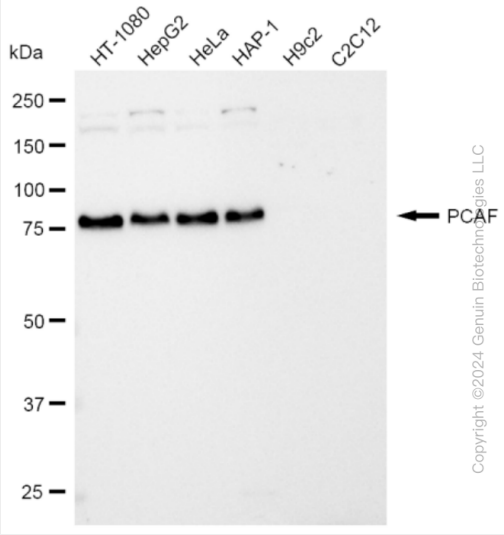
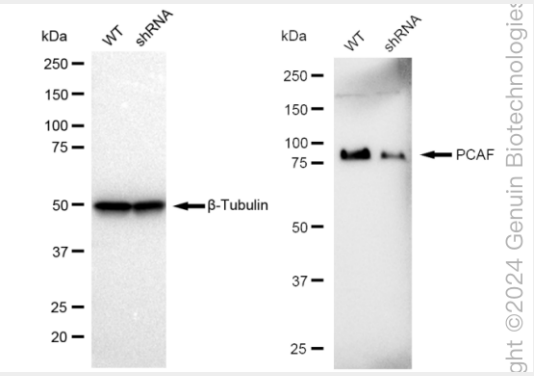
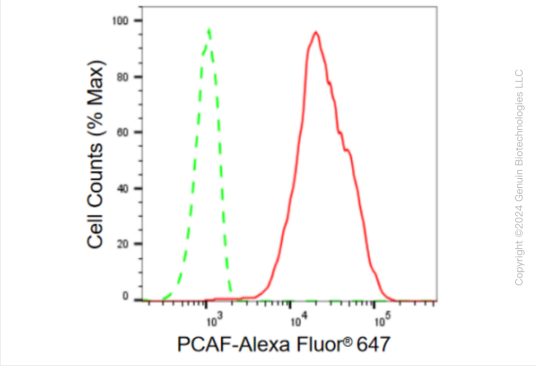


Western blotting analysis using anti-PCAF antibody (Cat#AGI2049). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-PCAF antibody (Cat#AGI2049, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-PCAF antibody (Cat#AGI2049).PCAF expression in wild type (WT) and PCAF shRNA knockdown (KD) HT-1080 cells with 30 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-PCAF antibody (Cat#AGI2049, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of PCAF expression in HT-1080 cells using PCAF antibody (Cat#AGI2049, 1:2,000). Green, isotype control; red, PCAF.

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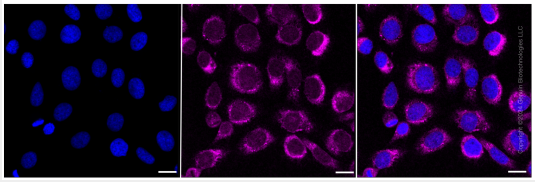

Immunocytochemical staining of HT-1080 cells with PCAF antibody (Cat#AGI2049, 1:1,000). Nuclei were stained blue with DAPI; PCAF was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.