

## PCAF (E-8): sc-13124



The Power to Question

## BACKGROUND

In the intact cell, DNA closely associates with histones and other nuclear proteins to form chromatin. The remodeling of chromatin is believed to be a critical component of transcriptional regulation and a major source of this remodeling is brought about by the acetylation of nucleosomal histones. Acetylation of lysine residues in the amino-terminal tail domain of histone results in an allosteric change in the nucleosomal conformation and an increased accessibility to transcription factors by DNA. Conversely, the deacetylation of histones is associated with transcriptional silencing. Several mammalian proteins have been identified as nuclear histone acetylases, including GCN5, PCAF (for p300/CBP-associated factor), p300/CBP and the TFIID subunit TAFII p250. Mammalian HDAC1 (also designated HD1) and HDAC2 (also designated mammalian RPD3), both of which are related to the yeast transcriptional regulator Rpd3p, have been identified as histone deacetylases.

## CHROMOSOMAL LOCATION

Genetic locus: KAT2B (human) mapping to 3p24.3; Kat2b (mouse) mapping to 17 C.

## SOURCE

PCAF (E-8) is a mouse monoclonal antibody raised against amino acids 464-832 of p300/ CBP-associated factor (PCAF) of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PCAF (E-8) is available conjugated to agarose (sc-13124 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13124 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13124 PE), fluorescein (sc-13124 FITC), Alexa Fluor® 488 (sc-13124 AF488), Alexa Fluor® 546 (sc-13124 AF546), Alexa Fluor® 594 (sc-13124 AF594) or Alexa Fluor® 647 (sc-13124 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-13124 AF680) or Alexa Fluor® 790 (sc-13124 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

PCAF (E-8) is recommended for detection of PCAF of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with GCN5.

Suitable for use as control antibody for PCAF siRNA (h): sc-36198, PCAF siRNA (m): sc-36199, PCAF shRNA Plasmid (h): sc-36198-SH, PCAF shRNA Plasmid (m): sc-36199-SH, PCAF shRNA (h) Lentiviral Particles: sc-36198-V and PCAF shRNA (m) Lentiviral Particles: sc-36199-V.

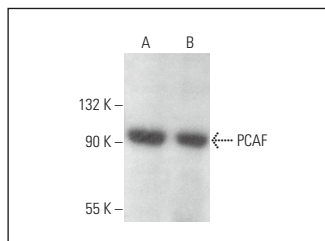
Molecular Weight of PCAF: 89 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-221 or F9 cell lysate: sc-2245.

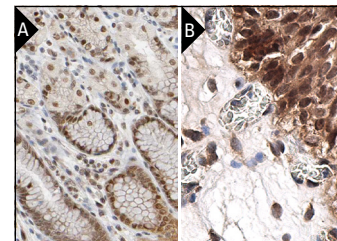
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



PCAF (E-8): sc-13124. Western blot analysis of PCAF expression in NIH/3T3 (A) and F9 (B) whole cell lysates.



PCAF (E-8) sc-13124. Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach tissue showing nuclear and cytoplasmic staining of glandular cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing nuclear and cytoplasmic staining of urothelial cells (B).

## SELECT PRODUCT CITATIONS

- Cappabianca, L., et al. 2003. Reconstitution of TIMP-2 expression in SH-SY5Y neuroblastoma cells by 5-azacytidine is mediated transcriptionally by NF-Y through an inverted CCAAT site. *Exp. Cell Res.* 286: 209-218.
- Gatta, R. and Mantovani, R. 2011. NF-Y affects histone acetylation and H2A.Z deposition in cell cycle promoters. *Epigenetics* 6: 526-534.
- Schlottmann, S., et al. 2012. Acetylation increases EWS-FLI1 DNA binding and transcriptional activity. *Front. Oncol.* 2: 107.
- Shen, M., et al. 2013. The chromatin remodeling factor CSB recruits histone acetyltransferase PCAF to rRNA gene promoters in active state for transcription initiation. *PLoS ONE* 8: e62668.
- Kumar, P., et al. 2014. Histone deacetylase inhibitors modulate the transcriptional regulation of guanylyl cyclase/natriuretic peptide receptor-a gene: interactive roles of modified histones, HATS, p300, and Sp1. *J. Biol. Chem.* 289: 6991-7002.
- Choi, H.K., et al. 2015. PINK1 positively regulates HDAC3 to suppress dopaminergic neuronal cell death. *Hum. Mol. Genet.* 24: 1127-1141.
- Mohibi, S., et al. 2016. Acetylation of mammalian ADA3 is required for its functional roles in histone acetylation and cell proliferation. *Mol. Cell Biol.* 36: 2487-2502.
- Perearnau, A., et al. 2017. p27 Kip1, PCAF and PAX5 cooperate in the transcriptional regulation of specific target genes. *Nucleic Acids Res.* 45: 5086-5099.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

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