SANTA CRUZ BIOTECHNOLOGY, INC.

PCAF (C-16): sc-6300

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 TAF II 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: PCAF (human) mapping to 3p24.3.

SOURCE

PCAF (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of PCAF of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6300 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for ChIP application, sc-6300 X, 200 µg/0.1 ml.

APPLICATIONS

PCAF (C-16) is recommended for detection of PCAF of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (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.

PCAF (C-16) is also recommended for detection of PCAF in additional species, including equine, canine, bovine, porcine and avian.

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

PCAF (C-16) X TransCruz antibody is recommended for ChIP assays.

Molecular Weight of PCAF: 89 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, K-562 whole cell lysate: sc-2203 or Y79 cell lysate: sc-2240.

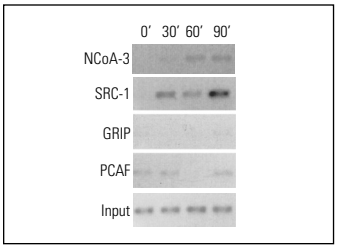
RESEARCH USE

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

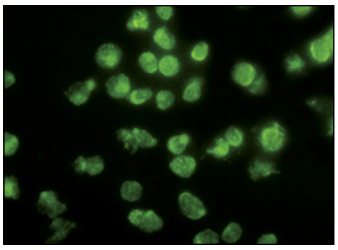
STORAGE

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

DATA



ChIP analysis of cofactor occupancy dynamics on the *IL-8* promoter in 293 cells in response to IL-1β treatment. Antibodies tested include NCoA-3 (F-2): sc-5305, NCoA-3 (M-397): sc-9119, NCoA-3 (N-17): sc-7217, NCoA-3 (C-20): sc-7216, SRC-1 (M-341): sc-8995, SRC-1 (C-20): sc-6096, SRC-1 (M-20): sc-6098, GRIP1 (M-343): sc-8996, PCAF (C-16): sc-6300 and PCAF (H-369): sc-8999. Data kindly provided by M.G. Rosenfeld and reproduced with permission from Baek *et al.*, Cell 2002, 110: 55-67.



PCAF (C-16): sc-6300. Immunofluorescence staining of methanol-fixed Y79 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Chen, C., et al. 2001. Stimulation of CREB binding protein nucleosomal histone acetyltransferase activity by a class of transcriptional activators. Mol. Cell. Biol. 21: 476-487.
2. Gangisetty, O., et al. 2004. The transforming acidic coiled coil proteins interact with nuclear histone acetyltransferases. Oncogene 23: 2559-2563.
3. Wong, K., et al. 2005. HIV-1 Tat interactions with p300 and PCAF transcriptional coactivators inhibit histone acetylation and neurotrophin signaling through CREB. J. Biol. Chem. 280: 9390-9399.
4. Zhao, Y., et al. 2006. Acetylation of p53 at lysine 373/382 by the histone deacetylase inhibitor depsipeptide induces expression of $p21^{Waf1/Cip1}$. Mol. Cell. Biol. 26: 2782-2790.
5. Kajiyama, Y., et al. 2006. Characterization of distant enhancers and promoters in the albumin-α-fetoprotein locus during active and silenced expression. J. Biol. Chem. 281: 30122-30131.
6. Carlisi, D., et al. 2008. Histone deacetylase inhibitors induce in human hepatoma HepG2 cells acetylation of p53 and histones in correlation with apoptotic effects. Int. J. Oncol. 32: 177-184.
7. Yang, Y., et al. 2009. Acetylation of FoxO1 activates Bim expression to induce apoptosis in response to histone deacetylase inhibitor depsipeptide treatment. Neoplasia 11: 313-324.