SANTA CRUZ BIOTECHNOLOGY, INC.

HDAC3 (H-99): sc-11417

SANTA CRUZ BIOTECHNOLOGY

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 (p300/CBP-associated factor), p300/CBP and the TFIID subunit TAF II p250. Mammalian HDAC1 (also designated HD1), HDAC2 (also designated RPD3) and HDAC3, all of which are related to the yeast transcriptional factor Rpd3p, have been identified as histone deacetylases.

CHROMOSOMAL LOCATION

Genetic locus: HDAC3 (human) mapping to 5q31.3; Hdac3 (mouse) mapping to 18 B3.

SOURCE

HDAC3 (H-99) is a rabbit polyclonal antibody raised against amino acids 330-428 of HDAC3 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. Also available as TransCruz reagent for ChIP application, sc-11417 X, 200 µg/0.1 ml.

APPLICATIONS

HDAC3 (H-99) is recommended for detection of HDAC3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

HDAC3 (H-99) is also recommended for detection of HDAC3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for HDAC3 siRNA (h): sc-35538, HDAC3 siRNA (m): sc-35539, HDAC3 shRNA Plasmid (h): sc-35538-SH, HDAC3 shRNA Plasmid (m): sc-35539-SH, HDAC3 shRNA (h) Lentiviral Particles: sc-35538-V and HDAC3 shRNA (m) Lentiviral Particles: sc-35539-V.

HDAC3 (H-99) X TransCruz antibody is recommended for ChIP assays.

Molecular Weight of HDAC3: 49 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, C32 nuclear extract: sc-2136 or Jurkat nuclear extract: sc-2132.

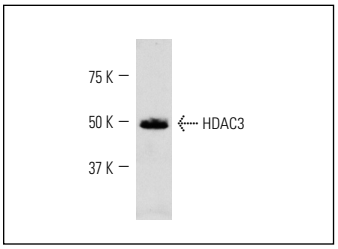
RESEARCH USE

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

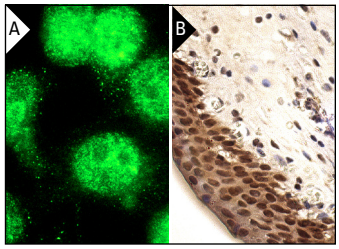
STORAGE

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

DATA



HDAC3 (H-99): sc-11417. Western blot analysis of HDAC3 expression in Jurkat nuclear extract.



HDAC3 (H-99): sc-11417. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing nuclear and cytoplasmic staining of urothelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Baek, S., et al. 2002. Exchange of N-CoR corepressor and TIP60 coactivator complexes links gene expression by NFκB and β-amyloid precursor protein. Cell 110: 55-67.
2. Lemasson, I., et al. 2002. Transcription factor binding and histone modifications on the integrated proviral promoter in human T-cell leukemia virus-I-infected T-cells. J. Biol. Chem. 277: 49459-49465.
3. Sankar, S., et al. 2012. Mechanism and relevance of EWS/FLI-mediated transcriptional repression in Ewing sarcoma. Oncogene 32: 5089-5100.
4. Thakur, V.S., et al. 2012. Green tea polyphenols increase p53 transcriptional activity and acetylation by suppressing class I histone deacetylases. Int. J. Oncol. 41: 353-361.
5. Wan, Y., et al. 2012. All-*trans* retinoic acid induces chromatin remodeling at the promoter of the mouse liver, bone, and kidney alkaline phosphatase gene in C3H10T 1/2 cells. Biochem. Genet. 50: 495-507.
6. de la Vega, L., et al. 2012. A redox-regulated SUMO/acetylation switch of HIPK2 controls the survival threshold to oxidative stress. Mol. Cell 46: 472-483.
7. Gupta, K., et al. 2012. Green tea polyphenols induce p53-dependent and p53-independent apoptosis in prostate cancer cells through two distinct mechanisms. PLoS ONE 7: e52572.