

HDAC3 (N-19): sc-8138

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.

SOURCE

HDAC3 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus 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-8138 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-8138 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HDAC3 (N-19) is recommended for detection of HDAC3 of human and *Drosophila melanogaster* 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

HDAC3 (N-19) 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 shRNA Plasmid (h): sc-35538-SH and HDAC3 shRNA (h) Lentiviral Particles: sc-35538-V.

HDAC3 (N-19) X TransCruz antibody is recommended for ChIP assays.

Molecular Weight of HDAC3: 49 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, Jurkat nuclear extract: sc-2132 or U-87 MG cell lysate: sc-2411.

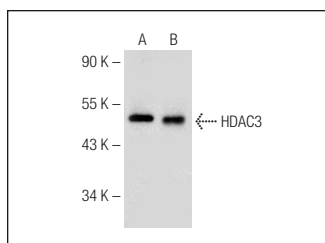
STORAGE

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

RESEARCH USE

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

DATA



HDAC3 (N-19): sc-8138. Western blot analysis of HDAC3 expression in U-87 MG (A) and C6 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- 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.
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- Aarenstrup, L., et al. 2008. HDAC activity is required for p65/RelA-dependent repression of PPARδ-mediated transactivation in human keratinocytes. *J. Invest. Dermatol.* 128: 1095-1106.
- Adenuga, D., et al. 2009. Histone deacetylase 2 is phosphorylated, ubiquitinated, and degraded by cigarette smoke. *Am. J. Respir. Cell Mol. Biol.* 40: 464-473.
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- Fragale, A., et al. 2011. Critical role of IRF-8 in negative regulation of TLR3 expression by Src homology 2 domain-containing protein tyrosine phosphatase-2 activity in human myeloid dendritic cells. *J. Immunol.* 186: 1951-1962.
- Guo, C., et al. 2012. Regulated clearance of histone deacetylase 3 protects independent formation of nuclear receptor corepressor complexes. *J. Biol. Chem.* 287: 12111-12120.



Try **HDAC3 (A-3): sc-376957** or **HDAC3 (3G6): sc-81600**, our highly recommended monoclonal alternatives to HDAC3 (N-19). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **HDAC3 (A-3): sc-376957**.