

HDAC2 (H-54): sc-7899

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: HDAC2 (human) mapping to 6q21; Hdac2 (mouse) mapping to 10 B1.

SOURCE

HDAC2 (H-54) is a rabbit polyclonal antibody raised against amino acids 435-488 of HDAC2 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.

Available as TransCruz reagent for ChIP application, sc-7899 X, 200 µg/0.1 ml.

APPLICATIONS

HDAC2 (H-54) is recommended for detection of HDAC2 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).

HDAC2 (H-54) is also recommended for detection of HDAC2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for HDAC2 siRNA (h): sc-29345, HDAC2 siRNA (m): sc-29346, HDAC2 shRNA Plasmid (h): sc-29345-SH, HDAC2 shRNA Plasmid (m): sc-29346-SH, HDAC2 shRNA (h) Lentiviral Particles: sc-29345-V and HDAC2 shRNA (m) Lentiviral Particles: sc-29346-V.

HDAC2 (H-54) X TransCruz antibody is recommended for ChIP assays.

Molecular Weight of HDAC2: 59 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, Jurkat + PMA nuclear extract: sc-2133 or mouse testis extract: sc-2405.

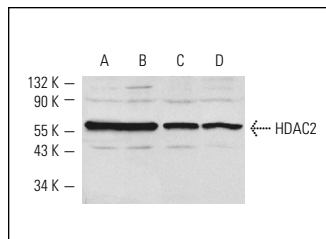
RESEARCH USE

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

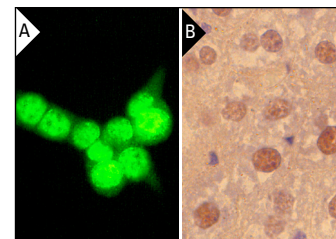
STORAGE

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

DATA



HDAC2 (H-54): sc-7899. Western blot analysis of HDAC2 expression in K-562 (A), phorbol-induced Jurkat (B) and NIH/3T3 (C) nuclear extracts and mouse testis extract (D).



HDAC2 (H-54): sc-7899. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing nuclear staining (A.) Immunoperoxidase staining of formalin-fixed, paraffin-embedded mouse liver tissue showing nuclear localization (B).

SELECT PRODUCT CITATIONS

- Rietveld, L.E., et al. 2002. *In vivo* repression of an erythroid-specific gene by distinct corepressor complexes. *EMBO J.* 21: 1389-1397.
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- Teng, C.F., et al. 2011. Novel feedback inhibition of surface antigen synthesis by mammalian target of rapamycin (mTOR) signal and its implication for hepatitis B virus tumorigenesis and therapy. *Hepatology* 54: 1199-1207.
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- Subramanian, C., et al. 2011. HDAC6 deacetylates Ku70 and regulates Ku70-Bax binding in neuroblastoma. *Neoplasia* 13: 726-734.
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- Zimmerman, M.A., et al. 2012. Butyrate suppresses colonic inflammation through HDAC1-dependent Fas upregulation and Fas-mediated apoptosis of T cells. *Am. J. Physiol. Gastrointest. Liver Physiol.* 302: G1405-G1415.
- 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.