

HDAC6 (S-14): sc-5255

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 TFIIID 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.

REFERENCES

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- Braunstein, M., et al. 1993. Transcriptional silencing in yeast is associated with reduced nucleosome acetylation. *Genes Dev.* 7: 592-604.
- Bauer, W.R., et al. 1994. Nucleosome structural changes due to acetylation. *J. Mol. Biol.* 236: 685-690.
- Brownell, J.E., et al. 1996. Tetrahymena histone acetyltransferase A: a homolog to yeast Gcn5p linking histone acetylation to gene activation. *Cell* 84: 843-851.
- Yang, X.-J., et al. 1996. A p300/CBP-associated factor that competes with the adenoviral oncoprotein E1A. *Nature* 382: 319-324.
- Yang, W.-M., et al. 1996. Transcriptional repression by YY1 is mediated by interaction with a mammalian homolog of the yeast global regulator RPD3. *Proc. Natl. Acad. Sci. USA* 93: 12845-12850.
- Taunton, J., et al. 1996. A mammalian histone deacetylase related to the yeast transcriptional regulator Rpd3p. *Science* 272: 408-411.

CHROMOSOMAL LOCATION

Genetic locus: HDAC6 (human) mapping to Xp11.23.

SOURCE

HDAC6 (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of HDAC6 of human origin.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

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-5255 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

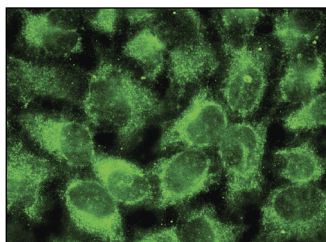
HDAC6 (S-14) is recommended for detection of HDAC6 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (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).

Suitable for use as control antibody for HDAC6 siRNA (h): sc-35544, HDAC6 shRNA Plasmid (h): sc-35544-SH and HDAC6 shRNA (h) Lentiviral Particles: sc-35544-V.

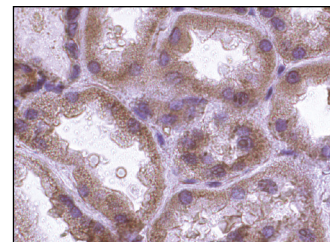
Molecular Weight of HDAC6: 160 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Jurkat nuclear extract: sc-2132 or K-562 nuclear extract: sc-2130.

DATA



HDAC6 (S-14): sc-5255. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.



HDAC6 (S-14): sc-5255. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules.

SELECT PRODUCT CITATIONS

- Gao, L., et al. 2002. Cloning and functional characterization of HDAC11, a novel member of the human histone deacetylase family. *J. Biol. Chem.* 277: 25748-25755.
- Valenzuela-Fernández, A., et al. 2005. Histone deacetylase 6 regulates human immunodeficiency virus type 1 infection. *Mol. Biol. Cell* 16: 5445-5454.
- Kovacs, J.J., et al. 2005. HDAC6 regulates Hsp90 acetylation and chaperone-dependent activation of glucocorticoid receptor. *Mol. Cell.* 18: 601-607.

RESEARCH USE

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