

HDAC9 (H-45): sc-28732

BACKGROUND

In the intact cell, DNA closely associates with histones and other nuclear proteins to form chromatin. The remodeling of chromatin is a critical component of transcriptional regulation and the acetylation of nucleosomal histones is a major source of this remodeling. 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. Several mammalian proteins function as nuclear histone acetylases, including GCN5, PCAF (p300/CBP-associated factor), p300/CBP, HAT1 and the TFIID subunit TAF II p250. Conversely, the deacetylation of histones is associated with transcriptional silencing. The histone deacetylases (HDAC) include HDAC1-9. HDAC9 and HDAC9a are two alternatively spliced isoforms of HDAC9. HDAC9a is 132 amino acids shorter than HDAC9, but both isoforms contain the HDAC catalytic domain, remain capable of deacetylase activity and repress myocyte enhancer-binding factor 2-mediated transcription. HDAC9 and HDAC9a are expressed in brain, skeletal muscle, kidney, placenta and pancreas.

CHROMOSOMAL LOCATION

Genetic locus: HDAC9 (human) mapping to 7p21.1; Hdac9 (mouse) mapping to 12 A3.

SOURCE

HDAC9 (H-45) is a rabbit polyclonal antibody raised against amino acids 1-45 mapping at the N-terminus of HDAC9 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.

RESEARCH USE

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

APPLICATIONS

HDAC9 (H-45) is recommended for detection of HDAC9 isoforms 1-4 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

HDAC9 (H-45) is also recommended for detection of HDAC9 isoforms 1-4 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for HDAC9 siRNA (h): sc-35550, HDAC9 siRNA (m): sc-35551, HDAC9 shRNA Plasmid (h): sc-35550-SH, HDAC9 shRNA Plasmid (m): sc-35551-SH, HDAC9 shRNA (h) Lentiviral Particles: sc-35550-V and HDAC9 shRNA (m) Lentiviral Particles: sc-35551-V.

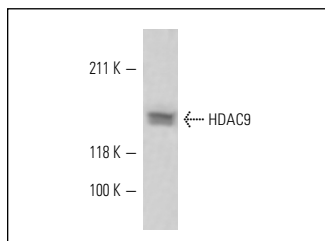
Molecular Weight of HDAC9: 160 kDa.

Positive Controls: WI-38 whole cell lysate: sc-364260, Ramos cell lysate: sc-2216 or Ramos nuclear extract: sc-2153.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



HDAC9 (H-45): sc-28732. Western blot analysis of HDAC9 expression in Ramos nuclear extract.

SELECT PRODUCT CITATIONS

- Li, B., et al. 2007. FOXp3 interactions with histone acetyltransferase and class II histone deacetylases are required for repression. *Proc. Natl. Acad. Sci. USA* 104: 4571-4576.
- Keedy, K.S., et al. 2009. A limited group of class I histone deacetylases acts to repress human immunodeficiency virus type 1 expression. *J. Virol.* 83: 4749-4756.
- Weems, J., et al. 2011. Class II histone deacetylases limit GLUT4 gene expression during adipocyte differentiation. *J. Biol. Chem.* 286: 460-468.
- Venza, I., et al. 2013. Class II-specific histone deacetylase inhibitors MC1568 and MC1575 suppress IL-8 expression in human melanoma cells. *Pigment Cell Melanoma Res.* 26: 193-204.
- Kinnaird, J.H., et al. 2013. A bovine lymphosarcoma cell line infected with *Theileria annulata* exhibits an irreversible reconfiguration of host cell gene expression. *PLoS ONE* 8: e66833.

STORAGE

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


 MONOS
Satisfaction
Guaranteed

Try **HDAC9 (B-1): sc-398003**, our highly recommended monoclonal alternative to HDAC9 (H-45).