SANTA CRUZ BIOTECHNOLOGY, INC.

HDAC8 (F-9): sc-374180

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, HAT1 and the TFIID subunit TAF II p250. Mammalian HDAC8, isolated from human kidney, is a histone deacetylase that shares homology to other HDACs but has different tissue distribution. HDAC8 is localized to the nucleus and plays a role in the development of a broad range of tissues and in the etiology of cancer.

CHROMOSOMAL LOCATION

Genetic locus: HDAC8 (human) mapping to Xq13.1; Hdac8 (mouse) mapping to X D.

SOURCE

HDAC8 (F-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-28 at the N-terminus of HDAC8 of human origin.

PRODUCT

Each vial contains 200 µg IgG_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-374180 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

HDAC8 (F-9) is recommended for detection of HDAC8 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for HDAC8 siRNA (h): sc-35548, HDAC8 siRNA (m): sc-35549, HDAC8 shRNA Plasmid (h): sc-35548-SH, HDAC8 shRNA Plasmid (m): sc-35549-SH, HDAC8 shRNA (h) Lentiviral Particles: sc-35548-V and HDAC8 shRNA (m) Lentiviral Particles: sc-35549-V.

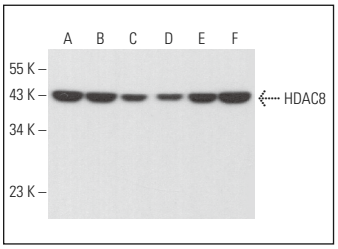
Molecular Weight of HDAC8: 44 kDa.

Positive Controls: PC-3 cell lysate: sc-2220, HeLa whole cell lysate: sc-2200 or Neuro-2A whole cell lysate: sc-364185.

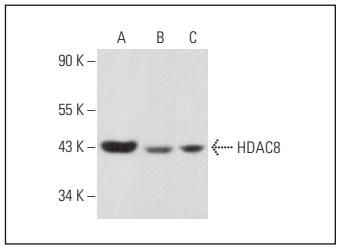
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



HDAC8 (F-9): sc-374180. Western blot analysis of HDAC8 expression in TF-1 (**A**), SUP-T1 (**B**), K-562 (**C**), EOC 20 (**D**) and SH-SY5Y (**E**) whole cell lysates and PC-3 nuclear extract (**F**).



HDAC8 (F-9): sc-374180. Western blot analysis of HDAC8 expression in PC-3 (**A**), HeLa (**B**) and Neuro-2A (**C**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.

SELECT PRODUCT CITATIONS

1. Scholz, C., et al. 2015. Acetylation site specificities of lysine deacetylase inhibitors in human cells. Nat. Biotechnol. 33: 415-423.
2. Yang, K., et al. 2020. A cell-based target engagement assay for the identification of cereblon E3 ubiquitin ligase ligands and their application in HDAC6 degraders. Cell Chem. Biol. 27: 866-876.e8.
3. Ashry, R., et al. 2023. NOXA accentuates apoptosis induction by a novel histone deacetylase inhibitor. Cancers 15: 3650.
4. Zheng, S., et al. 2024. Neutrophil elastase degrades histone deacetylases and sirtuin 1 in primary human monocyte derived macrophages. Int. J. Mol. Sci. 25: 4265.

RESEARCH USE

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

PROTOCOLS

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

CONJUGATES

See **HDAC8 (E-5): sc-17778** for HDAC8 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.