SANTA CRUZ BIOTECHNOLOGY, INC.

HDAC10 (D-9): sc-365270

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Histone deacetylases (HDACs) play an important role in the modification of chromatin structure and thus in the suppression and activation of transcription and cellular differentiation. There are 11 members in the HDAC family that are divided into four classes. Class I HDACs represent homologs of the yeast histone deacetylase Rpd3, class II HDACs share strong homology with the yeast histone deacetylase Hda1, class III HDACs are closely related to the yeast Sir2 protein and class IV HDACs comprise histone deacetylase 11 (HDAC11)-related enzymes. HDAC10, also known as HD10, is a member of the class II HDACs. It contains an N-terminal Hda1p-related catalytic domain and a unique C-terminal leucine-rich domain. HDAC10 is ubiquitously expressed and can shuttle between the cytoplasm and nucleus in response to celllular signals. It is able to repress transcription and, like other class II HDAC members, its enzymatic activity is inhibited by Trichostatin A (TSA).

CHROMOSOMAL LOCATION

Genetic locus: HDAC10 (human) mapping to 22q13.33; Hdac10 (mouse) mapping to 15 E3.

SOURCE

HDAC10 (D-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 57-85 within an internal region of HDAC10 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-365270 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

HDAC10 (D-9) is recommended for detection of HDAC10 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 HDAC10 siRNA (h): sc-72307, HDAC10 siRNA (m): sc-72308, HDAC10 shRNA Plasmid (h): sc-72307-SH, HDAC10 shRNA Plasmid (m): sc-72308-SH, HDAC10 shRNA (h) Lentiviral Particles: sc-72307-V and HDAC10 shRNA (m) Lentiviral Particles: sc-72308-V.

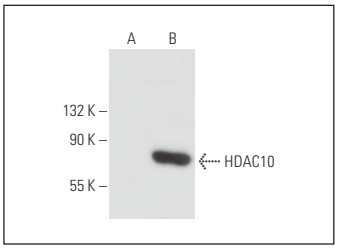
Molecular Weight of HDAC10: 70 kDa.

Positive Controls: A-375 cell lysate: sc-3811 or HDAC10 (m): 293T Lysate: sc-120725.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-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-IgGλ BP-FITC: sc-516185 or m-IgGλ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



HDAC10 (D-9): sc-365270. Western blot analysis of HDAC10 expression in non-transfected: sc-117752 (**A**) and mouse HDAC10 transfected: sc-120725 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Niegisch, G., et al. 2013. Changes in histone deacetylase (HDAC) expression patterns and activity of HDAC inhibitors in urothelial cancers. Urol. Oncol. 31: 1770-1779.
2. Rosik, L., et al. 2014. Limited efficacy of specific HDAC6 inhibition in urothelial cancer cells. Cancer Biol. Ther. 15: 742-757.
3. Pinkerneil, M., et al. 2018. Epigenetic treatment options in urothelial carcinoma. Methods Mol. Biol. 1655: 289-317.
4. Zhu, J. and Han, S. 2021. Histone deacetylase 10 exerts antitumor effects on cervical cancer via a novel microRNA-223/TXNIP/Wnt/β-catenin pathway. IUBMB Life 73: 690-704.

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 for detailed protocols and support products.