SANTA CRUZ BIOTECHNOLOGY, INC.

HDAC10 (S-17): sc-54215

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 4 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).

REFERENCES

1. Tong, J.J., et al. 2002. Identification of HDAC10, a novel class II human histone deacetylase containing a leucine-rich domain. Nucleic Acids Res. 30: 1114-1123.
2. Guardiola, A.R., et al. 2002. Molecular cloning and characterization of a novel histone deacetylase HDAC10. J. Biol. Chem. 277: 3350-3356.
3. Fischer, D.D., et al. 2002. Isolation and characterization of a novel class II histone deacetylase, HDAC10. J. Biol. Chem. 277: 6656-6666.
4. Matsuyama, A., et al. 2002. *In vivo* destabilization of dynamic microtubules by HDAC6-mediated deacetylation. EMBO J. 21: 6820-6831.
5. Brush, M.H., et al. 2004. Deactylase inhibitors disrupt cellular complexes containing protein phosphatases and deacetylases. J. Biol. Chem. 279: 7685-7691.
6. Acharya, M.R., et al. 2005. Rational development of histone deacetylase inhibitors as anticancer agents: a review. Mol. Pharmacol. 68: 917-932.
7. Hess-Stumpp, H. 2005. Histone deacetylase inhibitors and cancer: from cell biology to the clinic. Eur. J. Cell Biol. 84: 109-121.
8. Moradei, O., et al. 2005. Histone deacetylase inhibitors: latest developments, trends and prospects. Curr. Med. Chem. Anticancer Agents 5: 529-560.

CHROMOSOMAL LOCATION

Genetic locus: HDAC10 (human) mapping to 22q13.33.

SOURCE

HDAC10 (S-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of HDAC10 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.

Blocking peptide available for competition studies, sc-54215 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HDAC10 (S-17) is recommended for detection of HDAC10 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) 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 shRNA Plasmid (h): sc-72307-SH and HDAC10 shRNA (h) Lentiviral Particles: sc-72307-V.

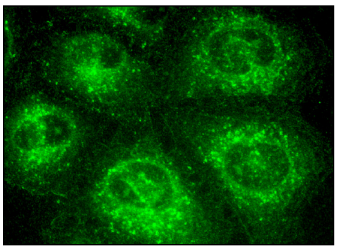
Molecular Weight of HDAC10: 70 kDa.

Positive Controls: A-375 cell lysate: sc-3811.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



HDAC10 (S-17): sc-54215. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

STORAGE

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

RESEARCH USE

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