SANTA CRUZ BIOTECHNOLOGY, INC.

HDAC10 (E-2): sc-393417

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 (E-2) is a mouse monoclonal antibody raised against amino acids 62-116 mapping near the N-terminus of HDAC10 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HDAC10 (E-2) is available conjugated to agarose (sc-393417 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-393417 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393417 PE), fluorescein (sc-393417 FITC), Alexa Fluor® 488 (sc-393417 AF488), Alexa Fluor® 546 (sc-393417 AF546), Alexa Fluor® 594 (sc-393417 AF594) or Alexa Fluor® 647 (sc-393417 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393417 AF680) or Alexa Fluor® 790 (sc-393417 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

HDAC10 (E-2) 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.

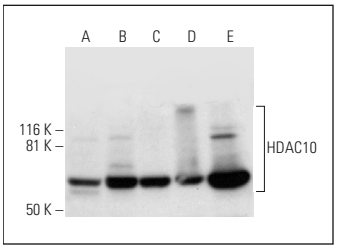
Molecular Weight of HDAC10: 70 kDa.

Positive Controls: c4 whole cell lysate: sc-364186, TK-1 whole cell lysate: sc-364798 or B16-F0 cell lysate: sc-2298.

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



HDAC10 (E-2): sc-393417. Western blot analysis of HDAC10 expression in WEHI-231 (**A**), RAW 264.7 (**B**), c4 (**C**), B16-F0 (**D**) and TK-1 (**E**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Hanigan, T.W., et al. 2017. Divergent JNK phosphorylation of HDAC3 in triple-negative breast cancer cells determines HDAC inhibitor binding and selectivity. Cell Chem. Biol. 24: 1356-1367.
2. Bharathy, N., et al. 2018. The HDAC3-SMARCA4-miR-27a axis promotes expression of the PAX3:FOXO1 fusion oncogene in rhabdomyosarcoma. Sci. Signal. 11: eaau7632.
3. Kang, D.W., et al. 2020. Phospholipase D1 is upregulated by vorinostat and confers resistance to vorinostat in glioblastoma. J. Cell. Physiol. E-published.

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.

PROTOCOLS

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