SANTA CRUZ BIOTECHNOLOGY, INC.

HDHD2 (C-1): sc-514621

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

HDHD2 (haloacid dehalogenase-like hydrolase domain containing 2) is also known as DKFZp564D1378 and is a 259 amino acid protein that is expressed as 2 isoforms produced by alternative splicing. HDHD2 belongs to the HAD-like hydrolase superfamily, which contains a group of hydrolase enzymes that differ from the α/β hydrolase family based on structure. This family of hydrolase enzymes includes L-2-haloacid dehalogenase, epoxide hydrolases and phosphatases. HDHD2 has two active sites, an L-2-haloacid dehalogenase and a carboxylate group. The L-2-haloacid dehalogenase active site catalyzes the hydrolytic dehalogenation of D- and L-2-haloalkanoic acids, producing L- and D-2-hydroxyalkanoic acids. The gene encoding HDHD2 maps to human chromosome 18. Deletions within chromosome 18q21.1 can lead to deafness, blindness or mild facial dysmorphism. In addition, there are a variety of diseases associated with defects in chromosome 18-localized genes, some of which include Trisomy 18 (also known as Edwards syndrome), Niemann-Pick disease, hereditary hemorrhagic telangiectasia, erythropoietic protoporphyria and follicular lymphomas.

REFERENCES

1. Cotter, F., Price, C., Zucca, E. and Young, B.D. 1990. Direct sequence analysis of the $14q^+$ and $18q^-$ chromosome junctions in follicular lymphoma. Blood 76: 131-135.
2. Cotter, F.E., Price, C., Meerabux, J., Zucca, E. and Young, B.D. 1991. Direct sequence analysis of $14q^+$ and $18q^-$ chromosome junctions at the MBR and MCR revealing clustering within the MBR in follicular lymphoma. Ann. Oncol. 2: 93-97.
3. Carstea, E.D., Polymeropoulos, M.H., Parker, C.C., Detera-Wadleigh, S.D., O'Neill, R.R., Patterson, M.C., Goldin, E., Xiao, H., Straub, R.E. and Vanier, M.T. 1993. Linkage of Niemann-Pick disease type C to human chromosome 18. Proc. Natl. Acad. Sci. USA 90: 2002-2004.
4. Grosso, S., Pucci, L., Di Bartolo, R.M., Gobbi, G., Bartalini, G., Anichini, C., Scarinci, R., Balestri, M., Farnetani, M.A., Cioni, M., Morgese, G. and Balestri, P. 2005. Chromosome 18 aberrations and epilepsy: a review. Am. J. Med. Genet. A 134A: 88-94.

CHROMOSOMAL LOCATION

Genetic locus: HDHD2 (human) mapping to 18q21.1; Hdhd2 (mouse) mapping to 18 E3.

SOURCE

HDHD2 (C-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 235-256 at the C-terminus of HDHD2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 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

HDHD2 (C-1) is recommended for detection of HDHD2 of mouse 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 HDHD2 siRNA (h): sc-75234, HDHD2 siRNA (m): sc-145914, HDHD2 shRNA Plasmid (h): sc-75234-SH, HDHD2 shRNA Plasmid (m): sc-145914-SH, HDHD2 shRNA (h) Lentiviral Particles: sc-75234-V and HDHD2 shRNA (m) Lentiviral Particles: sc-145914-V.

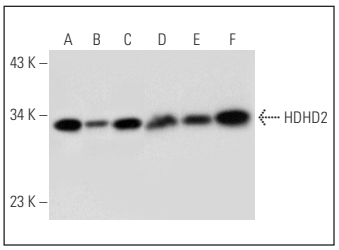
Molecular Weight of HDHD2: 29 kDa.

Positive Controls: LNCaP cell lysate: sc-2231, mouse brain extract: sc-2253 or mouse thymus extract: sc-2406.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



HDHD2 (C-1): sc-514621. Western blot analysis of HDHD2 expression in mouse brain (**A**), mouse thymus (**B**) and human brain (**C**) tissue extracts and Hep G2 (**D**), MCF7 (**E**) and LNCaP (**F**) whole cell lysates.

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 or our catalog for detailed protocols and support products.