SANTA CRUZ BIOTECHNOLOGY, INC.

DOHH (FL-302): sc-134910

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

DOHH (deoxyhypusine hydroxylase/monooxygenase), also known as HLRC1 (HEAT-like (PBS lyase) repeat containing 1), is a metalloenzyme involved in hypusine synthesis. It contains eight tandem HEAT-repeats, four at the N-terminus and four at the C-terminus. DOHH is an important player in mediating the posttranslational modifications of eIF5a to form hypusine. The first step of this reaction is catalyzed by DHS (deoxyhypusine synthase), which is responsible for transferring the aminobutyl moiety of spermidine to a lysine residue of eIF5a to form a deoxyhypusine-containing eIF5a intermediate. DOHH catalyzes the second step, hydroxylating the intermediate to form the hypusine residue thereby activating eIF5a. DHS, DOHH and eIF5a are evolutionarily conserved proteins that are essential for cell proliferation. Inhibition of DOHH can result in cell cycle arrest at the G_1/S boundary. This suggests a potential use of DOHH inhibitors in antitumor therapy.

REFERENCES

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2. Brochier, C., et al. 2004. Horizontal gene transfer and archaeal origin of deoxyhypusine synthase homologous genes in bacteria. Gene 330: 169-176.
3. Sommer, M.N., et al. 2004. Screening assay for the identification of deoxyhypusine synthase inhibitors. J. Biomol. Screen. 9: 434-438.
4. Park, M.H. 2006. The post-translational synthesis of a polyamine-derived amino acid, hypusine, in the eukaryotic translation initiation factor 5A (eIF5A). J. Biochem. 139: 161-169.
5. Park, J.H., et al. 2006. Molecular cloning, expression, and structural prediction of deoxyhypusine hydroxylase: a HEAT-repeat-containing metalloenzyme. Proc. Natl. Acad. Sci. USA 103: 51-56.
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CHROMOSOMAL LOCATION

Genetic locus: DOHH (human) mapping to 19p13.3; Dohh (mouse) mapping to 10 C1.

SOURCE

DOHH (FL-302) is a rabbit polyclonal antibody raised against amino acids 1-302 representing full length DOHH 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.

STORAGE

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

APPLICATIONS

DOHH (FL-302) is recommended for detection of DOHH of mouse, rat and 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).

DOHH (FL-302) is also recommended for detection of DOHH in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for DOHH siRNA (h): sc-62222, DOHH siRNA (m): sc-62223, DOHH shRNA Plasmid (h): sc-62222-SH, DOHH shRNA Plasmid (m): sc-62223-SH, DOHH shRNA (h) Lentiviral Particles: sc-62222-V and DOHH shRNA (m) Lentiviral Particles: sc-62223-V.

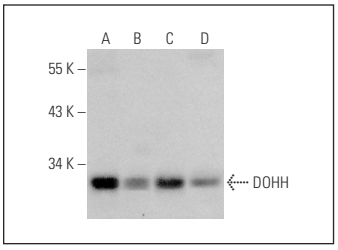
Molecular Weight of DOHH: 33 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237, BE (2)-M17 whole cell lysate: sc-364358 or LNCaP cell lysate: sc-2231.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



DOHH (FL-302): sc-134910. Western blot analysis of DOHH expression in SK-N-MC (**A**), BE (2)-M17 (**B**), LNCaP (**C**) and MIA PaCa-2 (**D**) whole cell lysates.

RESEARCH USE

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