

Dhh (F-9): sc-271168

BACKGROUND

The *Drosophila* segment polarity gene hedgehog (hh) encodes a precursor protein which undergoes autocleavage to generate amino- and carboxy-terminal peptides. Both proteins are secreted and appear to function in embryonic and imaginal disc patterning. Several vertebrate homologs of *Drosophila* hh have been identified. These include Sonic hedgehog (Shh) (alternatively designated Vhh-1), Desert hedgehog (Dhh) and Indian hedgehog (Ihh). Each contain amino-terminal signal peptides and apparently function as secreted proteins involved in the mediation of various cell-cell interactions. Shh resembles *Drosophila* hh in that it is processed to generate an amino-terminal secreted peptide that is retained at or near the cell surface and a carboxy-terminal glycosylated more diffusible peptide.

CHROMOSOMAL LOCATION

Genetic locus: DHH (human) mapping to 12q13.12; Dhh (mouse) mapping to 15 F1.

SOURCE

Dhh (F-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 57-83 near the N-terminus of Dhh of human 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.

Dhh (F-9) is available conjugated to agarose (sc-271168 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271168 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271168 PE), fluorescein (sc-271168 FITC), Alexa Fluor[®] 488 (sc-271168 AF488), Alexa Fluor[®] 546 (sc-271168 AF546), Alexa Fluor[®] 594 (sc-271168 AF594) or Alexa Fluor[®] 647 (sc-271168 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-271168 AF680) or Alexa Fluor[®] 790 (sc-271168 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271168 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Dhh (F-9) is recommended for detection of the amino-terminal subunit of Dhh 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), immunohistochemistry (including paraffin-embedded sections) (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 Dhh siRNA (h): sc-37208, Dhh siRNA (m): sc-37209, Dhh shRNA Plasmid (h): sc-37208-SH, Dhh shRNA Plasmid (m): sc-37209-SH, Dhh shRNA (h) Lentiviral Particles: sc-37208-V and Dhh shRNA (m) Lentiviral Particles: sc-37209-V.

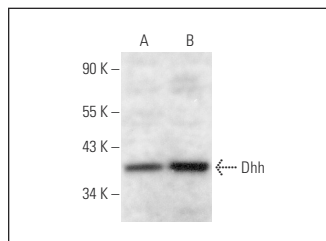
Molecular Weight of Dhh: 42 kDa.

Positive Controls: F9 cell lysate: sc-2245 or NIH/3T3 whole cell lysate: sc-2210.

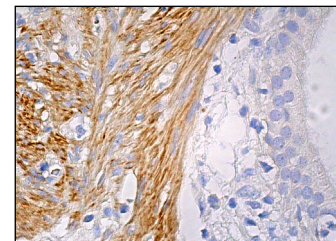
STORAGE

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

DATA



Dhh (F-9): sc-271168. Western blot analysis of Dhh expression in NIH/3T3 (A) and F9 (B) whole cell lysates.



Dhh (F-9): sc-271168. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic staining of smooth muscle cells.

SELECT PRODUCT CITATIONS

- Tang, C., et al. 2015. Hedgehog signaling through GLI1 and GLI2 is required for epithelial-mesenchymal transition in human trophoblasts. *Biochim. Biophys. Acta* 1850: 1438-1448.
- Riaz, S.K., et al. 2018. Involvement of hedgehog pathway in early onset, aggressive molecular subtypes and metastatic potential of breast cancer. *Cell Commun. Signal.* 16: 3.
- Xu, C., et al. 2018. High expression of Sonic hedgehog in allergic airway epithelia contributes to goblet cell metaplasia. *Mucosal Immunol.* 11: 1306-1315.
- Elzaat, M., et al. 2020. Dhh pathogenic variants involved in 46,XY disorders of sex development differentially impact protein self-cleavage and structural conformation. *Hum. Genet.* 139: 1455-1470.
- Chapouly, C., et al. 2020. Desert hedgehog-driven endothelium integrity is enhanced by Gas1 (growth arrest-specific 1) but negatively regulated by Cdon (cell adhesion molecule-related/downregulated by oncogenes). *Arterioscler. Thromb. Vasc. Biol.* 40: e336-e349.
- Hollier, P.L., et al. 2021. Full-length Dhh and N-terminal Shh act as competitive antagonists to regulate angiogenesis and vascular permeability. *Cardiovasc. Res.* 117: 2489-2501.
- Jeminiwa, B.O., et al. 2021. Gonadal sex steroid hormone secretion after exposure of male rats to estrogenic chemicals and their combinations. *Mol. Cell. Endocrinol.* 533: 111332.
- Yigiturk, G., et al. 2022. The neuro-restorative effect of adipose-derived mesenchymal stem cell transplantation on a mouse model of diabetic neuropathy. *Neurol. Res.* 44: 156-164.

RESEARCH USE

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

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