

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.

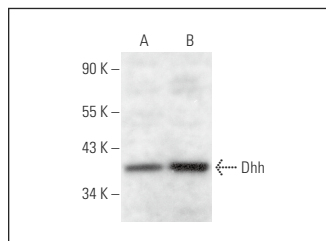
Molecular Weight of Dhh: 42 kDa.

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

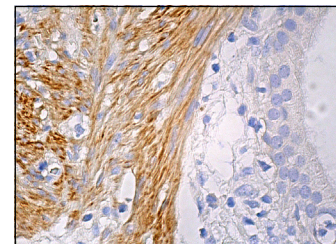
STORAGE

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

1. 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.
2. 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.
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.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA