

Dhh (D-4): sc-515757

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.

REFERENCES

1. Echelard, Y., et al. 1993. Sonic hedgehog, a member of a family of putative signaling molecules, is implicated in the regulation of CNS polarity. *Cell* 75: 1417-1430.
2. Li, W., et al. 1995. Function of protein kinase A in hedgehog signal transduction and *Drosophila* imaginal disc development. *Cell* 80: 553-562.
3. Johnson, R.L., et al. 1995. The long and short of hedgehog signaling. *Cell* 81: 313-316.
4. Roelink, H., et al. 1995. Floor plate and motor neuron induction by different concentrations of the amino-terminal cleavage product of sonic hedgehog autoproteolysis. *Cell* 81: 445-455.
5. Fan, C.M., et al. 1995. Long-range sclerotome induction by sonic hedgehog: direct role of the amino-terminal cleavage product and modulation by the cyclic AMP signaling pathway. *Cell* 81: 457-465.
6. Marti, E., et al. 1995. Requirement of 19K form of Sonic hedgehog for induction of distinct ventral cell types in CNS explants. *Nature* 375: 322-325.
7. Ericson, J., et al. 1995. Sonic hedgehog induces the differentiation of ventral forebrain neurons: a common signal for ventral patterning within the neural tube. *Cell* 81: 747-756.

CHROMOSOMAL LOCATION

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

SOURCE

Dhh (D-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 29-51 at the N-terminus of Dhh of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain 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

Dhh (D-4) is recommended for detection of the N-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) 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.

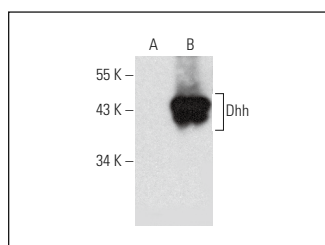
Molecular Weight of Dhh: 42 kDa.

Positive Controls: Dhh (h): 293T Lysate: sc-114457.

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



Dhh (D-4): sc-515757. Western blot analysis of Dhh expression in non-transfected: sc-117752 (A) and human Dhh transfected: sc-114457 (B) 293T whole cell lysates.

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.