# SANTA CRUZ BIOTECHNOLOGY, INC.

# Dhh (F-8): sc-137101



## 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

- 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.
- 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.
- Li, W., et al. 1995. Function of protein kinase A in hedgehog signal transduction and *Drosophila* imaginal disc development. Cell 80: 553-562.
- 4. Johnson, R.L., et al. 1995. The long and short of hedgehog signaling. Cell 81: 313-316.
- 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.
- 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.
- Fricson, 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 (F-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 54-97 near the N-terminus of Dhh of human origin.

#### PRODUCT

Each vial contains 200  $\mu g\, lg G_1$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-137101 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

#### **APPLICATIONS**

Dhh (F-8) 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) 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, F9 cell lysate: sc-2245 or rat brain extract: sc-2392.

## **RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG KBP-HRP: sc-516102 or m-IgG KBP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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-IgG KBP-FITC: sc-516140 or m-IgG KBP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

# DATA



expression in non-transfected: sc-117752 (A) and human Dhh transfected: sc-114457 (B) 293T 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.

#### **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.