**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: IHH (human) mapping to 2q35, SHH (human) mapping to 7q36.3; Ihh (mouse) mapping to 1C3, Shh (mouse) mapping to 5B1.

**SOURCE**

Shh (E-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 25-57 near the N-terminus of Shh of human origin.

**PRODUCT**

Each vial contains 200 µg IgG kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Shh (E-1) is available conjugated to agarose (sc-365112 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365112 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365112 PE), fluorescein (sc-365112 FITC), Alexa Fluor® 488 (sc-365112 AF488), Alexa Fluor® 546 (sc-365112 AF546), Alexa Fluor® 594 (sc-365112 AF594) or Alexa Fluor® 647 (sc-365112 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365112 AF680) or Alexa Fluor® 647 (sc-365112 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365112 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

**APPLICATIONS**

Shh (E-1) is recommended for detection of Ihh and Shh of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:10000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:5000), 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).

Shh (E-1) is also recommended for detection of Ihh and Shh in additional species, including equine, canine, porcine and avian.

Molecular Weight of Shh precursor: 45 kDa.

Molecular Weight of Shh amino-terminal peptide: 19 kDa.

Molecular Weight of Shh carboxy-terminal peptide: 27 kDa.

**STORAGE**

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

**DATA**

**SELECT PRODUCT CITATIONS**


**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.

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