

Shh (H-160): sc-9024

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.

SOURCE

Shh (H-160) is a rabbit polyclonal antibody raised against amino acids 41-200 of Shh of human origin.

PRODUCT

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

APPLICATIONS

Shh (H-160) is recommended for detection of a broad range of hedgehog family proteins of mouse, rat, human, *Xenopus laevis* and zebrafish origin by Western Blotting (starting dilution 1:200, 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).

Shh (H-160) is also recommended for detection of a broad range of hedgehog family proteins in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for Shh siRNA (h): sc-29477, Shh siRNA (m): sc-37205, Shh siRNA (r): sc-77337, Shh shRNA Plasmid (h): sc-29477-SH, Shh shRNA Plasmid (m): sc-37205-SH, Shh shRNA Plasmid (r): sc-77337-SH, Shh shRNA (h) Lentiviral Particles: sc-29477-V, Shh shRNA (m) Lentiviral Particles: sc-37205-V and Shh shRNA (r) Lentiviral Particles: sc-77337-V.

Molecular Weight of Shh precursor: 45 kDa.

Molecular Weight of Shh amino/carboxy terminal peptides: 19/27 kDa.

Positive Controls: Shh (m): 293T Lysate: sc-123543, IMR-32 cell lysate: sc-2409 or F9 cell lysate: sc-2245.

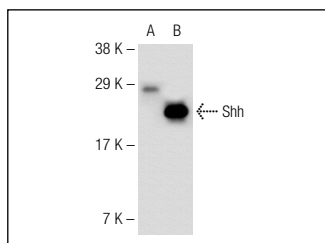
STORAGE

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

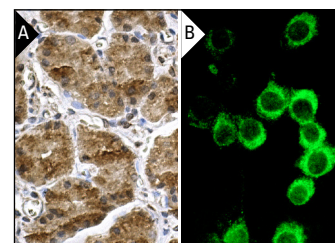
RESEARCH USE

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

DATA



Shh (H-160): sc-9024. Western blot analysis of Shh expression in non-transfected: sc-117752 (A) and mouse Shh transfected: sc-123543 (B) 293T whole cell lysates.



Shh (H-160): sc-9024. Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach tissue showing cytoplasmic staining of glandular cells (A). Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization (B).

SELECT PRODUCT CITATIONS

1. Thayer, S.P., et al. 2003. Hedgehog is an early and late mediator of pancreatic cancer tumorigenesis. *Nature* 425: 851-856.
2. Niemann, C., et al. 2003. Indian hedgehog and β -catenin signaling: role in the sebaceous lineage of normal and neoplastic mammalian epidermis. *Proc. Natl. Acad. Sci. USA* 100: 11873-11880.
3. Lee, K.M., et al. 2010. Late reactivation of sonic hedgehog by *Helicobacter pylori* results in population of gastric epithelial cells that are resistant to apoptosis: implication for gastric carcinogenesis. *Cancer Lett.* 287: 44-53.
4. Mimeault, M., et al. 2010. Cytotoxic effects induced by docetaxel, gefitinib, and cyclopamine on side population and nonside population cell fractions from human invasive prostate cancer cells. *Mol. Cancer Ther.* 9: 617-630.
5. Mavromatakis, Y.E., et al. 2011. Foxa1 and Foxa2 positively and negatively regulate Shh signalling to specify ventral midbrain progenitor identity. *Mech. Dev.* 128: 90-103.
6. O'Toole, S.A., et al. 2011. Hedgehog overexpression is associated with stromal interactions and predicts for poor outcome in breast cancer. *Cancer Res.* 71: 4002-4014.
7. Bhatia, B., et al. 2011. Differences between the neurogenic and proliferative abilities of Müller glia with stem cell characteristics and the ciliary epithelium from the adult human eye. *Exp. Eye Res.* 93: 852-861.
8. Song, L., et al. 2012. Shh signaling guides spatial pathfinding of raphespinal tract axons by multidirectional repulsion. *Cell Res.* 22: 697-716.



Try **Shh (E-1): sc-365112** or **Shh (G-5): sc-373779**, our highly recommended monoclonal alternatives to Shh (H-160). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Shh (E-1): sc-365112**.