

Shh (N-19): sc-1194

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 1 C3, Shh (mouse) mapping to 5 B1.

SOURCE

Shh (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of mature 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.

Blocking peptide available for competition studies, sc-1194 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Shh (N-19) is recommended for detection of Ihh and Shh of mouse, rat and human 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Shh (N-19) is also recommended for detection of Ihh and Shh in additional species, including equine, canine, bovine, 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.

Positive Controls: H69AR whole cell lysate: sc-364382, LNCaP cell lysate: sc-2231 or IMR-32 cell lysate: sc-2409.

STORAGE

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

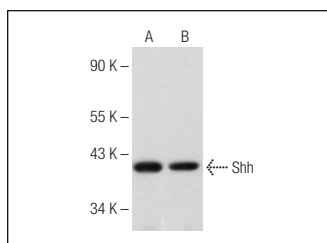
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

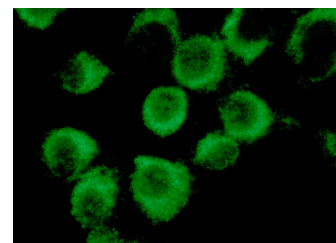
RESEARCH USE

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

DATA



Shh (N-19): sc-1194. Western blot analysis of Shh expression in H69AR (A) and LNCaP (B) whole cell lysates.



Shh (N-19): sc-1194. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Mastronardi, F.G., et al. 2000. Co-localization of patched and activated sonic hedgehog to lysosomes in neurons. *Neuroreport* 11: 581-585.
2. Xu, M., et al. 2012. Prognostic value of hedgehog signaling pathway in patients with colon cancer. *Med. Oncol.* 29: 1010-1016.
3. He, H.C., et al. 2012. Expression of hedgehog pathway components is associated with bladder cancer progression and clinical outcome. *Pathol. Oncol. Res.* 18: 349-355.
4. Capozza, F., et al. 2012. Genetic ablation of Cav1 differentially affects melanoma tumor growth and metastasis in mice: role of Cav1 in Shh heterotypic signaling and transendothelial migration. *Cancer Res.* 72: 2262-2274.
5. Gulino, R. and Gulisano, M. 2012. Involvement of brain-derived neurotrophic factor and sonic hedgehog in the spinal cord plasticity after neurotoxic partial removal of lumbar motoneurons. *Neurosci. Res.* 73: 238-247.
6. El-Zaatari, M., et al. 2013. Gli1 deletion prevents *Helicobacter*-induced gastric metaplasia and expansion of myeloid cell subsets. *PLoS ONE* 8: e58935.
7. Forrest, C.M., et al. 2013. Involvement of the proteasome and caspase activation in hippocampal long-term depression induced by the serine protease subtilisin. *Neuroscience* 231: 233-246.
8. Gulino, R. and Gulisano, M. 2013. Noggin and Sonic hedgehog are involved in compensatory changes within the motoneuron-depleted mouse spinal cord. *J. Neurol. Sci.* 332: 102-109.



Try **Shh (E-1): sc-365112** or **Shh (G-5): sc-373779**, our highly recommended monoclonal alternatives to Shh (N-19). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **Shh (E-1): sc-365112**.