

patched (H-267): sc-9016

BACKGROUND

Overexpression of either Wnt-1 or the GLI proteins have been shown to result in cancer. These proteins exist in a signal cascade downstream of the mammalian homologs of the *Drosophila* hedgehog (hh) and patched (ptc) proteins. The hedgehog protein mediates embryonic and imaginal disc patterning, and patched expression is precisely regulated during embryonic development. Hedgehog enhances the expression of the WNT family of proteins through a signaling cascade involving the GLI transcription factors, while patched functions as a repressor opposing hedgehog's effects. Mutations in the ptc gene, which result in unregulated hedgehog signaling, correlates with the most common type of cancer, basal cell carcinoma, which affects 750,000 individuals annually in the United States. An additional patched family member, patched 2, has been found to be coexpressed with Sonic hedgehog.

CHROMOSOMAL LOCATION

Genetic locus: PTCH1 (human) mapping to 9q22.32; Ptch1 (mouse) mapping to 13 B3.

SOURCE

patched (H-267) is a rabbit polyclonal antibody raised against amino acids 1181-1447 of patched 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

patched (H-267) is recommended for detection of patched 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).

patched (H-267) is also recommended for detection of patched in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for patched siRNA (h): sc-36192, patched siRNA (m): sc-36191, patched shRNA Plasmid (h): sc-36192-SH, patched shRNA Plasmid (m): sc-36191-SH, patched shRNA (h) Lentiviral Particles: sc-36192-V and patched shRNA (m) Lentiviral Particles: sc-36191-V.

Molecular Weight of patched: 140 kDa.

Positive Controls: mouse embryo extract: sc-24845, HeLa whole cell lysate: sc-2200 or mouse testis extract: sc-2405.

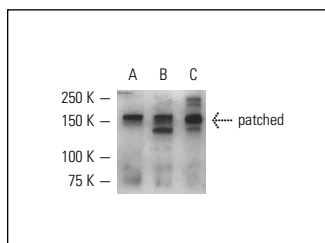
STORAGE

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



patched (H-267): sc-9016. Western blot analysis of patched expression in HeLa whole cell lysate (A), mouse testis (B) and mouse embryo (C) tissue extracts.

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. Kaye, H., et al. 2003. Distribution of Indian hedgehog and its receptors patched and smoothened in human chronic pancreatitis. *J. Endocrinol.* 178: 467-478.
3. Marion, V., et al. 2009. Transient ciliogenesis involving Bardet-Biedl syndrome proteins is a fundamental characteristic of adipogenic differentiation. *Proc. Natl. Acad. Sci. USA* 106: 1820-1825.
4. Liao, X., et al. 2009. Aberrant activation of hedgehog signaling pathway in ovarian cancers: effect on prognosis, cell invasion and differentiation. *Carcinogenesis* 30: 131-140.
5. Cui, D., et al. 2010. Gli1 is a potential target for alleviating multidrug resistance of gliomas. *J. Neurol. Sci.* 288: 156-166.
6. Wang, G., et al. 2010. Activation of the sonic hedgehog signaling controls human pulmonary arterial smooth muscle cell proliferation in response to hypoxia. *Biochim. Biophys. Acta* 1803: 1359-1367.
7. Brunner, M., et al. 2010. Expression of hedgehog signaling molecules in Merkel cell carcinoma. *Head Neck* 32: 333-340.
8. Oue, T., et al. 2010. Increased expression of the hedgehog signaling pathway in pediatric solid malignancies. *J. Pediatr. Surg.* 45: 387-392.
9. Souzaki, R., et al. 2010. Hedgehog signaling pathway in neuroblastoma differentiation. *J. Pediatr. Surg.* 45: 2299-2304.
10. Xu, M., et al. 2012. Prognostic value of hedgehog signaling pathway in patients with colon cancer. *Med. Oncol.* 29: 1010-1016.



Try **patched (3B3): sc-293416**, our highly recommended monoclonal alternative to patched (H-267).