SANTA CRUZ BIOTECHNOLOGY, INC.

patched (G-19): sc-6149

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 the effects of hedgehog. 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 (G-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of patched of mouse 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-6149 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose conjugate for immunoprecipitation, sc-6149 AC, 500 µg/0.25 ml agarose in 1 ml.

Available as HRP conjugate for Western blotting, sc-6149 HRP, 200 µg/1 ml.

APPLICATIONS

patched (G-19) 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), 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).

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.

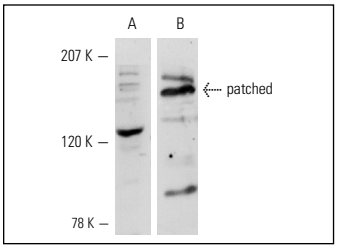
Molecular Weight of patched: 140 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, mouse testis extract: sc-2405 or human liver extract: sc-363766.

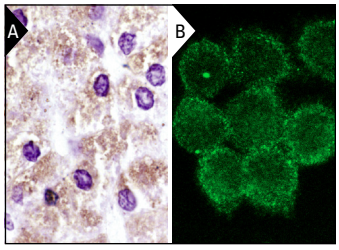
STORAGE

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

DATA



patched (G-19): sc-6149. Western blot analysis of patched expression in HeLa whole cell lysate (**A**) and mouse testis extract (**B**).



patched (G-19): sc-6149. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human liver tissue showing membrane and cytoplasmic staining (**A**). Immunofluorescence staining of methanol-fixed HeLa cells showing membrane staining (**B**).

SELECT PRODUCT CITATIONS

1. Mastronardi, F.G., et al. 2000. Colocalization of patched and activated Sonic hedgehog to lysosomes in neurons. Neuroreport 11: 581-585.
2. Fukaya, M., et al. 2006. Hedgehog signal activation in gastric pit cell and in diffuse-type gastric cancer. Gastroenterology 131: 14-29.
3. Syn, W.K., et al. 2009. Role for hedgehog pathway in regulating growth and function of invariant NKT cells. Eur. J. Immunol. 39: 1879-1892.
4. Hu, Z., et al. 2009. NDST1-dependent heparan sulfate regulates BMP signaling and internalization in lung development. J. Cell Sci. 122: 1145-1154.
5. Yang, Y., et al. 2010. Expression and regulation of hedgehog signaling pathway in pancreatic cancer. Langenbecks Arch. Surg. 395: 515-525.
6. Kim, J.H., et al. 2010. Contrasting activity of Hedgehog and Wnt pathways according to gastric cancer cell differentiation: relevance of crosstalk mechanisms. Cancer Sci. 101: 328-335.
7. Zhu, W., et al. 2011. Correlation of hedgehog signal activation with chemoradiotherapy sensitivity and survival in esophageal squamous cell carcinomas. Jpn. J. Clin. Oncol. 41: 386-393.
8. Bond, C.W., et al. 2011. Peptide amphiphile nanofiber delivery of sonic hedgehog protein to reduce smooth muscle apoptosis in the penis after cavernous nerve resection. J. Sex. Med. 8: 78-89.

RESEARCH USE

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