SANTA CRUZ BIOTECHNOLOGY, INC.

patched 2 (N-19): sc-9672

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Overexpression of either Wnt-1 or the GLI proteins has 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: PTCH2 (human) mapping to 1p34.1; Ptch2 (mouse) mapping to 4 D1.

SOURCE

patched 2 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of patched 2 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-9672 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

patched 2 (N-19) is recommended for detection of patched 2 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 2 siRNA (h): sc-40159, patched 2 siRNA (m): sc-40160, patched 2 shRNA Plasmid (h): sc-40159-SH, patched 2 shRNA Plasmid (m): sc-40160-SH, patched 2 shRNA (h) Lentiviral Particles: sc-40159-V and patched 2 shRNA (m) Lentiviral Particles: sc-40160-V.

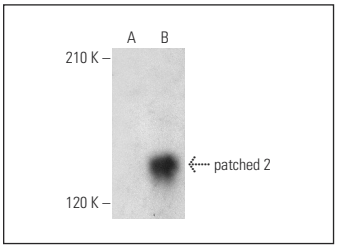
Molecular Weight of patched 2: 140 kDa.

Positive Controls: human liver extract: sc-363766, HeLa whole cell lysate: sc-2200 or patched 2 (m): 293T Lysate: sc-179296.

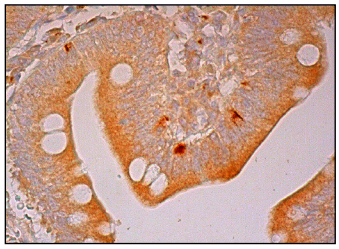
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



patched 2 (N-19): sc-9672. Western blot analysis of patched 2 expression in non-transfected: sc-117752 (**A**) and mouse patched 2 transfected: sc-179296 (**B**) 293T whole cell lysates.



patched 2 (N-19): sc-9672. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Sacedón, R., et al. 2003. Expression of hedgehog proteins in the human thymus. J. Histochem. Cytochem. 51: 1557-1566.
2. Endo, H., et al. 2003. A possible paracrine hedgehog signalling pathway in neurofibromas from patients with neurofibromatosis type 1. Br. J. Dermatol. 148: 337-341.
3. Bajestan, S.N., et al. 2006. Desert hedgehog-patched 2 expression in peripheral nerves during Wallerian degeneration and regeneration. J. Neurobiol. 66: 243-255.

RESEARCH USE

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

PROTOCOLS

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