SANTA CRUZ BIOTECHNOLOGY, INC.

patched 2 (H-110): sc-50438

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.

REFERENCES

1. Nusslein-Volhard, C., et al. 1980. Mutations affecting segment number and polarity in *Drosophila*. Nature 287: 795-801.
2. Kinzler, K.W., et al. 1987. Identification of an amplified, highly expressed gene in a human glioma. Science 236: 70-73.
3. Parkin, N.T., et al. 1993. Activity of Wnt-1 as a transmembrane protein. Genes Dev. 7: 2181-2193.
4. Marti, E., et al. 1995. Requirement of 19 kDa form of Sonic hedgehog for induction of distinct ventral cell types in CNS explants. Nature 375: 322-325.
5. Johnson, R.L., et al. 1995. The long and short of hedgehog signaling. Cell 81: 313-316.
6. Roelink, H., et al. 1995. Floor plate and motor neuron induction by different concentrations of the amino-terminal cleavage product of Sonic hedgehog autoproteolysis. Cell 81: 445-455.
7. Pennisi, E. 1996. Gene linked to commonest cancer. Science 272: 1583-1584.
8. Johnson, R.L., et al. 1996. Human homolog of patched, a candidate gene for the basal cell nevus syndrome. Science 272: 1668-1671.

CHROMOSOMAL LOCATION

Genetic locus: PTCH2 (human) mapping to 1p34.1; Ptch2 (mouse) mapping to 4 D1.

SOURCE

patched 2 (H-110) is a rabbit polyclonal antibody raised against amino acids 711-820 mapping within an extracellular domain 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.

RESEARCH USE

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

APPLICATIONS

patched 2 (H-110) is recommended for detection of pateched 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

patched 2 (H-110) is also recommended for detection of pateched 2 in additional species, including equine, canine and bovine.

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.

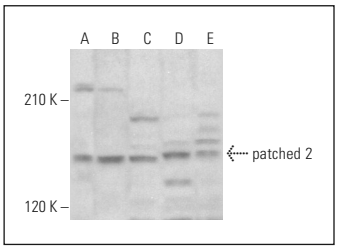
Molecular Weight of patched 2: 140 kDa.

Positive Controls: NCI-H460 whole cell lysate: sc-364235, HUV-EC-C whole cell lysate: sc-364180 or K-562 whole cell lysate: sc-2203.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



patched 2 (H-110): sc-50438. Western blot analysis of patched 2 expression in human brain (**A**) and human fetal brain (**B**) tissue extracts and NCI-H460 (**C**), K-562 (**D**) and HUV-EC-C (**E**) whole cell lysates.

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.