SANTA CRUZ BIOTECHNOLOGY, INC.

HHIPL1 (H-11): sc-515618

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Hedgehog (Hh) signaling proteins are critical for growth and tissue patterning during development. Patched (Ptc), a putative 12 transmembrane receptor, binds to Sonic hedgehog and is suspected to be a negative regulator of Hh signaling. A family member of patched, designated patched 2, has been found to be co-expressed with Sonic hedgehog. Smoothened (Smo), a seven transmembrane receptor, is complexed with patched in many tissues and is believed to be an essential component in the Hh signaling pathway. Hhip (hedgehog-interacting protein) is able to bind to and may be a transcriptional target of all Hh proteins. Binding of Hhip to Hh proteins attenuates Hedgehog signaling. HHIPL1 (hedgehog-interacting protein-like protein 1), also known as HHIP2, is a 782 amino acid secreted protein that contains a HHIP domain and is expressed in trabecular bone. There are two isoforms of HHIPL1 that are produced as a result of alternative splicing events.

REFERENCES

1. Katoh, Y. and Katoh, M. 2006. Comparative genomics on HHIP family orthologs. Int. J. Mol. Med. 17: 391-395.
2. Choi, S.S., et al. 2009. Hedgehog pathway activation and epithelial-to-mesenchymal transitions during myofibroblastic transformation of rat hepatic cells in culture and cirrhosis. Am. J. Physiol. Gastrointest. Liver Physiol. 297: G1093-G1106.
3. Eichenmuller, M., et al. 2009. Blocking the hedgehog pathway inhibits hepatoblastoma growth. Hepatology 49: 482-490.
4. Bosanac, I., et al. 2009. The structure of SHH in complex with HHIP reveals a recognition role for the Shh pseudo active site in signaling. Nat. Struct. Mol. Biol. 16: 691-697.
5. Bishop, B., et al. 2009. Structural insights into hedgehog ligand sequestration by the human hedgehog-interacting protein HHIP. Nat. Struct. Mol. Biol. 16: 698-703.
6. Beachy, P.A., et al. 2010. Interactions between Hedgehog proteins and their binding partners come into view. Genes Dev. 24: 2001-2012.

CHROMOSOMAL LOCATION

Genetic locus: HHIPL1 (human) mapping to 14q32.2.

SOURCE

HHIPL1 (H-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 549-568 within an internal region of HHIPL1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-515618 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

HHIPL1 (H-11) is recommended for detection of HHIPL1 of human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for HHIPL1 siRNA (h): sc-92168, HHIPL1 shRNA Plasmid (h): sc-92168-SH and HHIPL1 shRNA (h) Lentiviral Particles: sc-92168-V.

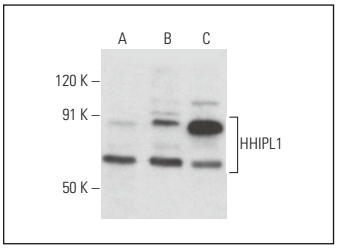
Molecular Weight of HHIPL1 isoforms 1/2: 88/68 kDa.

Positive Controls: MDA-MB-435S whole cell lysate: sc-364184, ARPE-19 whole cell lysate: sc-364357 or FHs 173We cell lysate: sc-2417.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



HHIPL1 (H-11): sc-515618. Western blot analysis of HHIPL1 expression in MDA-MB-435S (**A**), ARPE-19 (**B**) and FHs 173We (**C**) 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.

RESEARCH USE

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

PROTOCOLS

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