

# Hhip (5D11): sc-293265

## 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.

## REFERENCES

1. Stone, D.M., et al. 1996. The tumour-suppressor gene patched encodes a candidate receptor for Sonic hedgehog. *Nature* 384: 129-134.
2. Goodrich, L.V., et al. 1996. Conservation of the hedgehog/patched signaling pathway from flies to mice: induction of a mouse patched gene by hedgehog. *Genes Dev.* 10: 301-312.
3. Marigo, V., et al. 1996. Regulation of patched by Sonic hedgehog in the developing neural tube. *Proc. Natl. Acad. Sci. USA* 93: 9346-9351.

## CHROMOSOMAL LOCATION

Genetic locus: HHIP (human) mapping to 4q31.21; Hhip (mouse) mapping to 8 C2.

## SOURCE

Hhip (5D11) is a mouse monoclonal antibody raised against amino acids 21-120 of Hhip of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Hhip (5D11) is recommended for detection of Hhip 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 Hhip siRNA (h): sc-43835, Hhip siRNA (m): sc-40164, Hhip shRNA Plasmid (h): sc-43835-SH, Hhip shRNA Plasmid (m): sc-40164-SH, Hhip shRNA (h) Lentiviral Particles: sc-43835-V and Hhip shRNA (m) Lentiviral Particles: sc-40164-V.

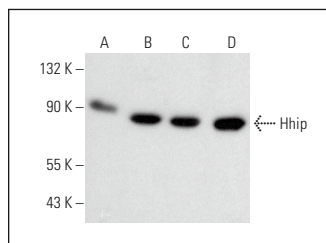
Molecular Weight of Hhip: 68 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, K-562 whole cell lysate: sc-2203 or MDA-MB-435S whole cell lysate: sc-364184.

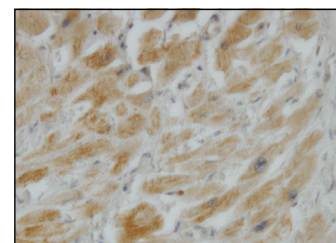
## RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



Hhip (5D11): sc-293265. Western blot analysis of Hhip expression in MCF7 (A), MDA-MB-435S (B), K-562 (C) and C2C12 (D) whole cell lysates.



Hhip (5D11): sc-293265. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart tissue showing cytoplasmic staining.

## SELECT PRODUCT CITATIONS

1. Niu, C., et al. 2019. Metformin alleviates hyperglycemia-induced endothelial impairment by downregulating autophagy via the hedgehog pathway. *Autophagy* 15: 843-870.
2. Wei, H., et al. 2019. Hhip inhibits proliferation and promotes differentiation of adipocytes through suppressing hedgehog signaling pathway. *Biochem. Biophys. Res. Commun.* 514: 148-156.
3. Yao, C.D., et al. 2020. AP-1 and TGFβ cooperativity drives non-canonical Hedgehog signaling in resistant basal cell carcinoma. *Nat. Commun.* 11: 5079.
4. Wang, J., et al. 2022. Wumei Pill ameliorates AOM/DSS-induced colitis-associated colon cancer through inhibition of inflammation and oxidative stress by regulating S-adenosylhomocysteine hydrolase- (AHCY-) mediated hedgehog signaling in mice. *Oxid. Med. Cell. Longev.* 2022: 4061713.
5. Li, S., et al. 2022. An integrated map of fibroblastic populations in human colon mucosa and cancer tissues. *Commun. Biol.* 5: 1326.

## 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.