

Ihh (H-12): sc-271101

BACKGROUND

The *Drosophila* segment polarity gene hedgehog (hh) encodes a precursor protein which undergoes autocleavage to generate amino- and carboxy-terminal peptides. Both proteins are secreted and appear to function in embryonic and imaginal disc patterning. Several vertebrate homologs of *Drosophila* hh have been identified. These include Sonic hedgehog (Shh), alternatively designated Vhh-1, Desert hedgehog (Dhh) and Indian hedgehog (Ihh). Each contain amino-terminal signal peptides and apparently function as secreted proteins involved in the mediation of various cell-cell interactions. Shh resembles *Drosophila* hh in that it is processed to generate an amino-terminal secreted peptide that is retained at or near the cell surface and a carboxy-terminal glycosylated more diffusible peptide.

CHROMOSOMAL LOCATION

Genetic locus: IHH (human) mapping to 2q35; Ihh (mouse) mapping to 1 C3.

SOURCE

Ihh (H-12) is a mouse monoclonal antibody raised against amino acids 228-315 of Ihh of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Ihh (H-12) is available conjugated to agarose (sc-271101 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271101 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271101 PE), fluorescein (sc-271101 FITC), Alexa Fluor[®] 488 (sc-271101 AF488), Alexa Fluor[®] 546 (sc-271101 AF546), Alexa Fluor[®] 594 (sc-271101 AF594) or Alexa Fluor[®] 647 (sc-271101 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-271101 AF680) or Alexa Fluor[®] 790 (sc-271101 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Ihh (H-12) is recommended for detection of Ihh of mouse, rat and 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), 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 Ihh siRNA (h): sc-37206, Ihh siRNA (m): sc-37207, Ihh shRNA Plasmid (h): sc-37206-SH, Ihh shRNA Plasmid (m): sc-37207-SH, Ihh shRNA (h) Lentiviral Particles: sc-37206-V and Ihh shRNA (m) Lentiviral Particles: sc-37207-V.

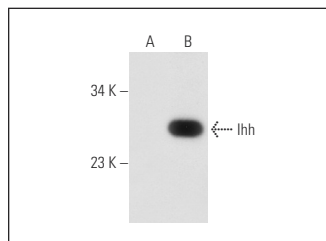
Molecular Weight of Ihh: 45 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210 or Ihh (m): 293T Lysate: sc-121020.

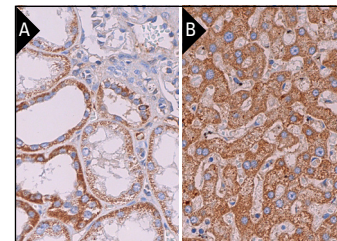
STORAGE

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

DATA



Ihh (H-12): sc-271101. Western blot analysis of Ihh expression in non-transfected: sc-117752 (A) and mouse Ihh transfected: sc-121020 (B) 293T whole cell lysates.



Ihh (H-12): sc-271101. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes (B).

SELECT PRODUCT CITATIONS

- Yang, W., et al. 2020. Mechanoresponsive and lubricating changes of mandibular condylar cartilage associated with mandibular lateral shift and recovery in the growing rat. *Clin. Oral Investig.* 24: 3547-3557.
- Fu, S., et al. 2021. Primary cilia as a biomarker in mesenchymal stem cells senescence: influencing osteoblastic differentiation potency associated with hedgehog signaling regulation. *Stem Cells Int.* 2021: 8850114.
- Hsieh, Y.L., et al. 2021. Chondrocyte Tsc1 controls cranial base bone development by restraining the premature differentiation of synchondroses. *Bone* 153: 116142.
- Li, X., et al. 2021. SAG therapy restores bone growth and reduces enchondroma incidence in a model of skeletal chondrodysplasias caused by Ihh deficiency. *Mol. Ther. Methods Clin. Dev.* 23: 461-475.
- Shanmugam, D.A.S., et al. 2022. Maternal exposure to di(2-ethylhexyl) phthalate (DEHP) causes multigenerational adverse effects on the uterus of F₁ and F₂ offspring rats. *Reprod. Toxicol.* 115: 17-28.

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.