

Revision 3

Store at -20C

#71711

# Human/Mouse Indian Hedgehog (Ihh) Recombinant Protein

25 µg


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## For Research Use Only. Not For Use In Diagnostic Procedures.

**MW (kDa):**  
19.9

**UniProt ID:**  
Q80X19, Q14623

**Entrez-Gene Id:**  
16147, 3549

## Background

Indian hedgehog (Ihh) is a cell signaling protein that is one of the three proteins in the hedgehog family (1-3). Ihh is expressed in adult kidney and liver and acts as an antagonist of the Wnt signaling pathway in colon cancers (1,2). The Wnt signaling pathway plays a role in carcinogenesis and in embryonic development, and any gene mutations in this pathway lead to various diseases (2,4-6). The Ihh protein is involved in chondrocyte differentiation, proliferation, and maturation especially during endochondral ossification, and is a regulator of bone growth (7).

## Endotoxin

Endotoxin levels are less than or equal to 1 EU / 1 µg h/mlhh.

## Purity

A greater than or equal to 95% purity was determined by SDS-PAGE.

## Source / Purification

Recombinant human/mouse Ihh was expressed in *E. coli* and is supplied in a lyophilized form.

## Bioactivity

## Storage

Human/Mouse Indian Hedgehog (Ihh) Recombinant Protein is supplied as lyophilized material that is very stable at -20°C. It is recommended to reconstitute with sterile 10mM HCl at a concentration of 0.1 mg/mL which can be further diluted in aqueous solutions as needed. Addition of a carrier protein (0.1% HSA or BSA) is recommended for long-term storage.

## Background References

1. Marigo, V. et al. (1995) *Genomics* 28, 44-51.
2. van den Brink, G.R. et al. (2004) *Nat Genet* 36, 277-82.
3. Kumar, S. et al. (1996) *Genetics* 142, 965-72.
4. Nusse, R. and Varmus, H.E. (1992) *Cell* 69, 1073-87.
5. Logan, C.Y. and Nusse, R. (2004) *Annu Rev Cell Dev Biol* 20, 781-810.
6. Komiya, Y. and Habas, R. (2008) *Organogenesis* 4, 68-75.
7. Vortkamp, A. et al. (1996) *Science* 273, 613-22.

## APPLICATIONS KEY

**CROSS-REACTIVITY KEY** H: human M: mouse R: rat Hm: hamster Mk: monkey Vir: virus Mi: mink C: chicken Dm: D. melanogaster X: Xenopus Z: zebrafish B: bovine Dg: dog Pg: pig Sc: S. cerevisiae Ce: C. elegans Hr:

hsp90, Rab1, rabbit All: all species expected

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## Human/Mouse Indian Hedgehog (Ihh) Recombinant Protein

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