Active Recombinant Human IHH Protein (178 aa)

Cat. No. IHH-372I **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Indian Hedgehog (IHH) produced in E. coli is a single non-glycosylated polypeptide chain containing 178 amino acids. A fully biologically active molecule, rhIHH has a molecular mass of 20 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques.
Species	Human
Source	E.coli
ProteinLength	178
Description	The Indian Hedgehog protein (IHH) is one of three proteins in the mammalian hedgehog family, the others being desert hedgehog (DHH) and Sonic hedgehog (SHH). Hedgehog proteins are important signaling molecules during embryonic development and are highly conserved across species. Mouse and human IHH share 100% amino acid identity in the signaling domain, while mouse IHH and SHH share 90% amino acid identity in the N-terminal signaling domain. IHH mRNA expression is detected in fetal lung, gut, stomach, liver, kidney, pancreas and strongly in cartilage in growth regions of the developing bone. IHH has a specific role in bone growth and differentiation. In addition, IHH is involved in yolk sac vasculogenesis, having a central role in differentiation of epiblast cells into endothelial and red blood cells. IHH gene mutations cause the brachydactyly type A1 which is characterized by shortening or malformation of the phalanges and also the acrocapitofemoral dysplasia.

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Form	Sterile Filtered White lyophilized (freeze-dried) powder.
Bio-activity	ED50 < 3 μg/mL, measure d by its ability to induce alkaline phosphatase production by CCL-226 cells.
Molecular Mass	20 kDa, observed by reducing SDS-PAGE.
AA Sequence	IIGPGRVVGSRRRPPRKLVPLAYKQFSPNVPEKTLGASGRYEGKIARSSERFKELTP NYNPDIIFKDEENTGADRLMTQRCKDRLNSLAISVMNQWPGVKLRVTEGWDEDGH HSEESLHYEGRAVDITTSDRDRNKYGLLARLAVEAGFDWVYYESKAHVHCSVKSEH SAAAKTGG
Endotoxin	< 0.2 EU/μg, determined by LAL method.
Purity	> 95% as analyzed by SDS-PAGE.
Storage	Lyophilized recombinant Human Indian Hedgehog (IHH), remains stable up to 6 months at -80 centigrade from date of receipt. Upon reconstitution, human IHH should be stable up to 1 week at 4 centigrade or up to 3 months at -20 centigrade.
Storage Buffer	Lyophilized after extensive dialysis against PBS.
Reconstitution	Reconstituted in ddH2O or PBS at 100 μg/mL.

GENE INFORMATION

Gene Name	IHH Indian hedgehog [Homo sapiens]
Official Symbol	IHH
Synonyms	IHH; Indian hedgehog; Indian hedgehog (Drosophila) homolog, Indian hedgehog

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	homolog (Drosophila); indian hedgehog protein; BDA1; HHG2; HHG-2; Indian hedgehog homolog;
Gene ID	3549
mRNA Refseq	NM_002181
Protein Refseq	NP_002172
MIM	600726
UniProt ID	Q14623

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