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IHH

Catalog # PVGS1454

Product Information

Primary Accession	Q14623
Species	Human
Sequence	Cys28-Gly202 (Cys28IleIle)
Purity	> 95% as analyzed by SDS-PAGE
Endotoxin Level	
Biological Activity	ED_{50}
Expression System	E. coli
Formulation	Lyophilized after extensive dialysis against PBS.
Reconstitution	It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH_2O or PBS up to 100 □g/ml.
Storage & Stability	Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

Additional Information

Gene ID	3549
Other Names	Indian hedgehog protein, IHH, 3.1.-.-, HHG-2, Indian hedgehog protein N-product, IHH (HGNC:5956)
Target Background	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.

Protein Information

Name	IHH {ECO:0000303|PubMed:7590746, ECO:0000312|HGNC:HGNC:5956}
Function	[Indian hedgehog protein]: Precursor of indian hedgehog, a morphogen that activates the smoothened signaling pathway, and which is essential for bone and cartilage development (By similarity). The C- terminal part of the precursor displays an autoproteolysis and a cholesterol transferase activity, resulting (1) in the cleavage of the full-length protein into two parts, indian hedgehog protein N-product and C-product and (2) covalent attachment of a cholesterol moiety to the C-terminus of the newly generated N-product (By similarity). Both autoproteolysis and a cholesterol transferase activities occur in the endoplasmic reticulum (By similarity). Following additional lipidation, N-product acts as a morphogen, while C-product is degraded in the endoplasmic reticulum (By similarity).
Cellular Location	[Indian hedgehog protein]: Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:Q15465}. Golgi apparatus membrane {ECO:0000250|UniProtKB:Q15465}. Note=Co-localizes with HHAT in the ER and Golgi membrane. {ECO:0000250|UniProtKB:Q15465}
Tissue Location	Expressed in embryonic lung, and in adult kidney and liver

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.