

**DATASHEET**

Version 20181206

**IHH, Human****Cat. No.:** Z03277-50**Size:** 50.0 ug**Synonyms:** IHH, Ihh (C28II)**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.

Recombinant Human Indian Hedgehog (IHH) produced in *E. coli* is a single non-glycosylated polypeptide chain containing 178 amino acids. A fully biological

active molecule, rhIHH has a molecular mass of 20 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques at GenScript.

**Source:** *E. coli***Biological Activity:** ED<sub>50</sub> <3µg/ml, measured by its ability to induce alkaline phosphatase production by CCL-226 cells.**Molecular Weight:** 20 kDa, observed by reducing SDS-PAGE.**Formulation:** Lyophilized after extensive dialysis against PBS.**Reconstitution:** Reconstituted in ddH<sub>2</sub>O or PBS at 100 µg/ml.**Purity:** > 95% as analyzed by SDS-PAGE.**Endotoxin Level:** < 0.2 EU/µg, determined by LAL method.**Storage:** Lyophilized recombinant Human Indian Hedgehog (IHH), remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, human IHH should be stable up to 1 week at 4°C or up to 3 months at -20°C.