

# Recombinant Human Sonic Hedgehog Homolog (Drosophila)

**Cat. No.** SHH-1504H    **Lot. No.** (See product label)

## SPECIFICATION

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| <b>Product Overview</b>    | Recombinant human Sonic HedgeHog is a 20.0 kDa protein consisting of 176 amino acid residues, including an N-terminal Ile-Val-Ile sequence substituted for the natural occurring chemically modified Cys residue expressed in <i>E. coli</i> . MW=20.0 kDa.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Species</b>             | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Source</b>              | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Description</b>         | Members of the Hedgehog (Hh) family are highly conserved proteins which are widely represented throughout the animal kingdom. The three known mammalian Hh proteins, Sonic (Shh), Desert (Dhh) and Indian (Ihh) are structurally related and share a high degree of amino acid sequence identity (e.g., Shh and Ihh are 93% identical). The biologically active form of Hh molecules is obtained by autocatalytic cleavage of their precursor proteins and corresponds to approximately the N-terminal one half of the precursor molecule. Although Hh proteins have unique expression patterns and distinct biological roles within their respective regions of secretion, they use the same signaling pathway and can substitute for each other in experimental systems. |
| <b>Quantity</b>            | 25 µg.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Purity</b>              | Greater than 98% (determined by SDS-PAGE and HPLC analysis).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Endotoxin Level</b>     | < 0.1 ng per µg of rHu Shh (1EU/µg).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Biological Activity</b> | Determined by its ability to induce alkaline phosphatase production by C3H/10T1/2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

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(CCL-226) cells. The expected ED50 for this effect is 0.8-1.0 µg/ml.

**Formulation**

Lyophilized from a sterile-filtered solution with no additives.

**Reconstitution**

Please Note: Always centrifuge product before opening vial. The lyophilized protein should be reconstituted with distilled, sterile water to a concentration of 0.1-1.0 mg/ml. For further dilution, carrier protein (0.1% BSA or HSA) should be added to avoid loss of bioactivity.

**Storage And Stability**

The lyophilized protein, though stable at room temperature for up to 3 weeks, is best stored desiccated at -20°C. Reconstituted protein should be used immediately or stored long-term in undiluted working aliquots at -20°C. For long-term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid repeated freeze-thaw cycles.

## GENE INFORMATION

**Gene Name**

SHH sonic hedgehog homolog (Drosophila) [ Homo sapiens ]

**Synonyms**

SHH; sonic hedgehog homolog (Drosophila); TPT; HHG1; HLP3; HPE3; SMMCI; TPTPS; MCOPCB5; sonic hedgehog (Drosophila) homolog; Sonic hedgehog protein; HHG-1; Sonic hedgehog protein N-product; Sonic hedgehog protein C-product

**Gene ID**

6469

**mRNA Refseq**

NM\_000193

**Protein Refseq**

NP\_000184

**UniProt ID**

Q15465

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|-------------------------------------------------------|-------------------------------------------------------------------------|
| <b>Chromosome Location</b>                            | 7q36                                                                    |
| <b>MIM</b>                                            | 600725                                                                  |
| <b>Pathway</b>                                        | Basal cell carcinoma; Hedgehog signaling pathway; Pathways in cancer    |
| <b>Function</b>                                       | laminin-1 binding; patched binding; peptidase activity; protein binding |
| <b>Signaling domain of the murine Sonic hedgehog.</b> |                                                                         |

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