Recombinant Human Sonic Hedgehog Homolog (Drosophila)

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

SPECIFICATION

Product Overview	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*E. coli*. MW=20.0 kDa.
Species	Human
Source	E.coli
Description	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 aminoacid 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.
Quantity	25 μg.
Purity	Greater than 98% (determined by SDS-PAGE and HPLC analysis).
Endotoxin Level	< 0.1 ng per μg of rHu Shh (1EU/μg).
Biological Activity	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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Chromosome Location	7q36
MIM	600725
Pathway	Basal cell carcinoma; Hedgehog signaling pathway; Pathways in cancer
Function	laminin-1 binding; patched binding; peptidase activity; protein binding
Signaling domain of the murine Sonic hedgehog.	

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