Active Recombinant Human SHH Protein (Animal Free-Ready-to-Use)

Cat. No. SHH-07H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human SHH Protein (Animal Free-Ready-to-Use) without tag was expressed in E. coli. The protein is manufactured using all non-animal reagents.
Species	Human
Source	E.coli
Description	Sonic hedgehog (SHH) is used to study differentiation and expansion of human and mouse embryonic and adult stem cells. Studies suggest SHH is involved in regulating stem cell fates of neural and hematopoetic lineages1. It controls cell division of adult stem cells and has been implicated in development of some cancers2. SHH is instrumental in early embryo patterning and development. It has been implicated as the key inductive signal in patterning of the ventral neural tube, the anterior-posterior limb axis, and the ventral somites3. The mature biologically active form of SHH molecule is produced by autocatalytic cleavage of its precursor protein and corresponds to approximately the N-terminal half of the precursor molecule. Sonic Hedgehog is an approximately 20 kDa protein expressed in E. coli consisting of 175 amino acid residues.
Form	Lyophilized
Bio-activity	Determined by its ability to induce alkaline phosphatase production by C3H/10T1/2 (CCL-226) cells. The expected ED50 for this effect is 0.1 to 0.75 μg/mL.

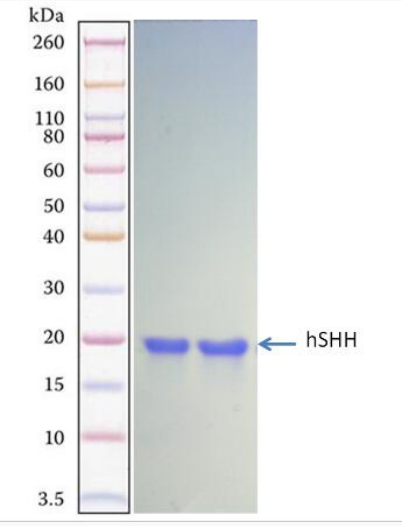
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AA Sequence	IIGPGRGFGKRRHPKKLTPLAYKQFIPNVAEKTLGASGRYEGKITRNSERFKELTPNY NPDIIFKDEENTGADRLMTQRCKDKLNALAISVMNQWPGVKLRVTEGWDEDGHHSE ESLHYEGRAVDITTSDRDRSKYGMLARLAVEAGFDWVYYESKAHIHCSVKAENSVA AKSGG
Endotoxin	< 0.01 ng/μg cytokine as determined by the LAL assay
Purity	> 98% by SDS-PAGE
Usage	Useful for cell culture and for the study of signaling pathways.
Storage	Upon receipt, it should be stored immediately at -80 centigrade. It is stable for 12 months at -80 centigrade. It maintains activity at 4 centigrade for 1 week under sterile conditions.
Storage Buffer	Lyophilized (freeze-dried) from a 0.22 sterile-filtered solution in 1×PBS & 0.1 M NaCl.
Shipping	The product is shipped on dry ice.

GENE INFORMATION

Gene Name	SHH sonic hedgehog [Homo sapiens (human)]
Official Symbol	SHH
Synonyms	SHH; sonic hedgehog; HLP3, HPE3, sonic hedgehog (Drosophila) homolog , sonic hedgehog homolog (Drosophila); sonic hedgehog protein; HHG1; MCOPCB5; SMMCI; TPT; TPTPS; sonic hedgehog homolog; HLP3; HPE3;
Gene ID	6469

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mRNA Refseq	NM_000193
Protein Refseq	NP_000184
MIM	600725
UniProt ID	Q15465
SDS-PAGE	

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