

Active GMP Recombinant Human SHH Protein

Cat. No. SHH-01HG Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant human SHH protein, was expressed in CHO-K1 cell-derived in an animal component free process under cGMP guidelines.
Species	Human
Source	CHO
Description	This gene encodes a protein that is instrumental in patterning the early embryo. It has been implicated as the key inductive signal in patterning of the ventral neural tube, the anterior-posterior limb axis, and the ventral somites. Of three human proteins showing sequence and functional similarity to the sonic hedgehog protein of <i>Drosophila</i>, this protein is the most similar. The protein is made as a precursor that is autocatalytically cleaved; the N-terminal portion is soluble and contains the signalling activity while the C-terminal portion is involved in precursor processing. More importantly, the C-terminal product covalently attaches a cholesterol moiety to the N-terminal product, restricting the N-terminal product to the cell surface and preventing it from freely diffusing throughout the developing embryo. Defects in this protein or in its signalling pathway are a cause of holoprosencephaly (HPE), a disorder in which the developing forebrain fails to correctly separate into right and left hemispheres. HPE is manifested by facial deformities.
Form	Lyophilized powder
Endotoxin	<20 EU/mg

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Bio-activity	>1.0 x 10 ⁶ IU/mg
Purity	>95.0% by high performance liquid chromatography (SEC-HPLC) and SDS-PAGE.
Storage Buffer	10mM Phosphate-Buffered Saline (pH 7.2)
Storage	Stable storage at 4°C for 7-10 days; for long-term storage, please store at -20°C after dispensing.
Sterility	Sterility
Instructions	It is recommended that lyophilized GMP rhSHH be dissolved in water for injection or sterilized ultrapure water at a concentration of not less than 100 µg/ml, pending further dilution to working concentration.

GENE INFORMATION

Gene Name	SHH sonic hedgehog signaling molecule [Homo sapiens (human)]
Official Symbol	SHH
Synonyms	TPT; HHG1; HLP3; HPE3; SMMCI; ShhNC; TPTPS; MCOPCB5
Gene ID	6469
mRNA Refseq	NM_000193.4
Protein Refseq	NP_000184.1
UniProt ID	Q15465

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