
Product Data Sheet

Product Name: SHH Rat
 Cat. No.: GP20885
 Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	SHH; HHG-1; HHG1; Sonic hedgehog protein; TPT; HLP3; HPE3; SMMCI; TPTPS; MCOPCB5.		
Amino Acid Sequence	MIIGPGRGFG KRQHPKCLTP LAYKQFIPNV AEKTLGASGR YEGKITRNSE RFKELTPNYN PDIIFKDEEN TGADRLMTQR CKDKLNALAI SVMNQWPGVK LRVTEGWDED GHHSEESLHY EGRAVDITTS DRDRSKYGML ARLAVEAGFD WVYYESKARI HCSVKAENSV AAKSDG.		
Solubility	It is recommended to reconstitute the lyophilized SHH in sterile 18MΩ-cm H ₂ O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.		
Formulation	SHH is lyophilized from a sterile (0.2 μm) filtered solution containing 10 mM sodium phosphate, pH 7.5.		

Introduction

Recombinant Human Sonic Hedgehog is part of a small group of secreted proteins that are vital for development in both vertebrates and invertebrates. 3 mammalian hedgehog genes (sonic, desert, Indian) share about 60% homology. The Human Sonic Hedgehog is 99% homologous to the mouse gene. Sonic HedgeHog helps in guiding the early embryo. It has been associated as the major inductive signal in patterning of the ventral neural tube, the anterior-posterior limb axis, and the ventral somites. Sonic HedgeHog binds to the patched receptor, which association with smoothened, to activate the transcription of target genes. In the absence of sonic HedgeHog, patched receptor represses the constitutive signaling activity of smoothened. Sonic HedgeHog also regulates another factor, the gli oncogene. Sonic HedgeHog intercellular signal is necessary for a various patterning events during development: signal produced by the notochord that induces

Caution: Product has not been fully validated for medical applications. For research use only.

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ventral cell fate in the neural tube and somites, and the polarizing signal for patterning of the anterior-posterior axis of the developing limb bud. Sonic HedgeHog exhibits both floor plate- and motor neuron-inducing activity. Mutations in a long-range Sonic HedgeHog enhancer located in an intron of the limb region 1 gene result in preaxial polydactyly.

Stability

Lyophilized Human Sonic HedgeHog although stable at room temperature for 3 weeks, should be stored desiccated below -18°C . Upon reconstitution Sonic HedgeHog should be stored at 4°C between 2-7 days and for future use below -18°C . Please prevent freeze-thaw cycles.

Background

Sonic HedgeHog Recombinant Rat produced in E.Coli is a single, non-glycosylated polypeptide chain containing 176 amino acids and having a molecular mass of 19.9kDa. SHH is purified by proprietary chromatographic techniques.

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