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**Product Data Sheet**


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Product Name: SHH Mouse, His  
 Cat. No.: GP20884  
 Batch No.: 1

**Product Data**

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	SHH; HHG-1; HHG1; Sonic hedgehog protein; TPT; HLP3; HPE3; SMMCI; TPTPS; MCOPCB5.		
Amino Acid Sequence	MCGPGRGFGK RRHPKKLTP L AYKQFIPNVA EKTLGASGRY EGKITRNSER FKELTPNYNP DIIFKDEENT GADRLMTQRC KDKLNALAIS VMNQWPGVKL RVTEGWDEDG HHSEESLHYE GRAVDITTSD RDRSKYGMLA RLAVEAGFDW VYYESKAHIH CSVKAENSV A AKSGGLEHHH HHH.		
Formulation	SHH Mouse His Tag solution containing 20mM Tris HCL pH-8, 1mM DTT, and 10% glycerol.		

**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 is a protein that is vital 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 functions in 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 essential for a various patterning events during development: signal produced by the notochord that induces 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

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

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intron of the limb region 1 gene result in preaxial polydactyly.

### Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze thaw cycles.

### Background

SHH Mouse Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 183 amino acids (25-198 a.a.) and having a molecular mass of 20.8 kDa. SHH protein is fused to a 8 amino acid His-Tag at C-terminus and purified by standard chromatography.

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