



## Sonic HedgeHog, His Tag, mouse recombinant (rmSHH-His)

**Catalog No:** 97356  
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**Source:** *E. coli*  
**Synonyms:** SHH, HHG-1, HHG1, Sonic hedgehog protein, TPT, HLP3, HPE3, SMMCI, TTPS, MCOPCB5

### Background

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

### Description

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.

### Physical Appearance

Sterile filtered colorless solution.

### Formulation

The SHH Mouse His Tag solution contains 20 mM Tris-HCL pH 8, 1 mM DTT and 10% glycerol.

### Stability

SHH Mouse although stable at 4°C for 1 week, should be stored desiccated below -18°C. Please prevent freeze thaw cycles.

### Purity

Greater than 95% as determined by SDS-PAGE.

### Amino Acid Sequence

MCGPGRGFGK RRHPKLTPL AYKQFIPNVA EKTLGASGRY EGKITRNSER FKELTPNYNP DIIFKDEENT GADRLMTQRC  
KDKLNALAIS VMNQWPGVKL RVTEGWDEDG HHSEESLHYE GRAVDITTS D RDRSKYGMLA RLAVEAGFDW VYYESKAHIH  
CSVKAENSV A AKSGGLEHHH HHH

### Usage

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**CONTACT US TODAY**

BIOMOL GmbH • Kieler Straße 303a • 22525 Hamburg • Germany • info@biomol.de • www.biomol.de

Fon: +49 (0)40-853 260 0 • TOLL FREE IN GERMANY: Fon: 0800-246 66 51