**DATASHEET**
Version 20181206

# Shh (C24II), Human

**Cat. No.**: Z03067-1

**Size**: 1.0 mg

**Synonyms**: Hhg1

**Description:**

Sonic Hedgehog (Shh) is a member of the Hedgehog (Hh) family of highly conserved proteins which are widely represented throughout the animal kingdom. In mammal, there are three related Hh proteins, Sonic (Shh), Desert (Dhh) and Indian (Ihh). They share a high degree of amino-acid sequence identity (e.g., Shh and Ihh are 93% identical). Sonic Hedgehog plays a role in cell growth, cell specialization, and the normal shaping (patterning) of the body. Shh is also important for development of the brain and spinal cord (central nervous system), eyes, limbs, and many other parts of the body.
Recombinant human Sonic Hedgehog (C24II) (rhShh) produced in *E. coli* is a single non-glycosylated polypeptide chain containing 175 amino acids. A fully biologically active molecule, rhShh has a molecular mass of 19.7 kDa analyzed by reducing SDS-PAGE and is obtained by proprietary chromatographic techniques at GenScript.

**Amino Acid Sequence:**

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00001 IIGPGRGFGK RRHPKKLTPL AYKQFIPNVA EKTLGASGRY
00041 EGKISRNSER FKELTPNYNP DIIFKDEENT GADRLMTQRC
00081 KDKLNALAIS VMNQWPGVKL RVTEGWDEDG HHSEESLHYE
00121 GRAVDITTSD RDRSKYGMLA RLAVEAGFDW VYYESKAHIH
00161 CSVKAENSVA AKSGG
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**Source**: *E. coli*

**Species**: Human

**Biological Activity**: $ED_{50}$ < 2.0 μg/ml, measured by its ability to induce alkaline phosphatase production by C3H/10T1/2 (CCL-226) Cells, corresponding to a specific activity of > 500 units/mg.

**Molecular Weight**: 19.7 kDa, observed by reducing SDS-PAGE.

**Formulation**: Lyophilized after extensive dialysis against PBS.

**Reconstitution**: Reconstituted in dd$H_2O$ at 100 μg/ml.

**Purity**: > 95% by SDS-PAGE and HPLC analyses.

**Endotoxin Level**: < 0.2 EU/μg, determined by LAL method.

**Storage**: Lyophilized recombinant human Sonic Hedgehog (C24II) (rhShh) remains stable up to 6 months at lower than -70°C from date of receipt. Upon reconstitution, rhShh should be stable up to 2 weeks at 4°C or up to 3 months at -20°C.



**GenScript USA, Inc.**
860 Centennial Ave. Piscataway, NJ 08854
Tel: 1-877-436-7274; 1-732-885-9188