

DATASHEET
Version 20181206**Shh, Mouse****Cat. No.:** Z02990-1**Size:** 1.0 mg**Synonyms:** Hh1**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 mouse Sonic Hedgehog (rmShh) produced in *E. coli* is a single non-glycosylated polypeptide chain containing 176 amino acids. A fully biologically active molecule, rmShh, is obtained by proprietary chromatographic techniques at GenScript with a molecular mass of 19.8kDa analyzed by reducing SDS-PAGE.

Amino Acid Sequence:

00001 IVIGPGRGFG KRRHPKKLTP LAYKQFIPNV AEKTLGASGR
00041 YEGKITRNSE RFKELTPNPNY PDIIFKDEEN TGADRLMTQR
00081 CKDKLNALAI SVMNQWPGVK LRVTEGWDED GHHSEESLHY
00121 EGRAVDITTS DRDRSKYGML ARLAVEAGFD WVYYESKAHI
00161 HCSVKAENSV AAKSGG

Source: *E. coli***Species:** Mouse

Biological Activity: $ED_{50} < 1.0 \mu\text{g/ml}$, measured by its ability to induce alkaline phosphatase production by C3H/10T1/2 (CCL-226) Cells, corresponding to a specific activity of $> 1.0 \times 10^3$ units/mg.

Molecular Weight: 19.8kDa, observed by reducing SDS-PAGE.

Formulation: Lyophilized after extensive dialysis against PBS.

Reconstitution: Reconstituted in ddH₂O at 100 $\mu\text{g/ml}$.

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

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

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