



Recombinant Protein Technical Manual  
Recombinant Mouse Sonic Hedgehog/SHH Protein  
(His Tag)(Active)  
RPES2723

### Product Data:

**Product SKU:** RPES2723

**Size:** 5µg

**Species:** Mouse

**Expression host:** HEK293 Cells

**Uniprot:** Q62226

### Protein Information:

**Molecular Mass:** 21 kDa

**AP Molecular Mass:**

**Tag:** C-His

**Bio-activity:** Measured by its ability to induce alkaline phosphatase production by C3H10T1/2 mouse embryonic fibroblast cells. Nakamura, T. et al. (1997) Biochem. Biophys. Res. Commun.237:465. The ED50 for this effect is typically 5-40 µg/mL.

**Purity:** > 90 % as determined by SDS-PAGE

**Endotoxin:** < 1.0 EU per µg of the protein as determined by the LAL method.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from sterile PBS, pH 7.4

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** Sonic Hedgehog Protein; SHH; HHG; SHH;9530036O11Rik; Dsh; Hhg1; Hx; Hxl3; M10008

## Immunogen Information:

**Sequence:** Met1-Gly198

## Background:

Sonic HedgeHog, also known as sonic hedgehog protein, belongs to the hedgehog family. It cannot be detected in adult tissues while can be found in fetal intestine, liver, lung, and kidney. 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 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 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. Defects in sonic hedgehog can cause microphthalmia isolated with coloboma type 5, triphalangeal thumb-polysyndactyly syndrome and holoprosencephaly type 3.