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SHH
Recombinant Human Sonic Hedgehog Protein (aa 1-197, His Tag)

Catalog No.	CRH467A-His2	**Quantity:**	20 µg
	CRH467B-His2		100 µg
	CRH467C-His2		1.0 mg
	CRH467D-His2		500 µg

Alternate Names: Sonic hedgehog protein, SHH, HHG-1, Shh unprocessed N-terminal signaling domain, Sonic hedgehog protein N-product, ShhN, Shh N-terminal processed signaling domains, ShhNp

Description: Sonic HedgeHog protein, belongs to the hedgehog family and is vital in the early embryo. It cannot be detected in adult tissues while can be found in fetal intestine, liver, lung, and kidney. 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.

UniProt ID: Q15465

Protein Construction: A DNA sequence encoding the amino acid sequence (Met 1-Gly 197) of SHH, Sonic hedgehog protein N-product was fused with a polyhistidine tag at the C-terminus.

Source: HEK293 Cells

Formulation: Lyophilized from sterile PBS, pH 7.4
Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.

Molecular Weight: The recombinant human SHH (aa 1-197) consists of 185 amino acids and has a predicted molecular mass of 21 kDa. The apparent molecular mass of the protein is ~24 kDa in SDS-PAGE under reducing conditions due to glycosylation.

Purity: > 95 % as determined by SDS-PAGE

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

Biological Activity: Measured by its ability to induce alkaline phosphatase production by C3H10T1/2 mouse embryonic fibroblast cells. The ED50 for this effect is typically 2-10 µg/mL.

Predicted N-terminal: Cys 24

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Reconstitution: **Centrifuge vial prior to opening.** Add sterile distilled water to a concentration of 0.1 mg/mL and gently pipette the solution up and down the sides of the vial. **DO NOT VORTEX**. Allow several minutes for complete reconstitution.

Storage & Stability: Stable for up to 1 year from date of receipt at -20°C to -80°C
After reconstitution, store working aliquots at -20°C to -80°C.
Avoid repeated freeze-thaw cycles.

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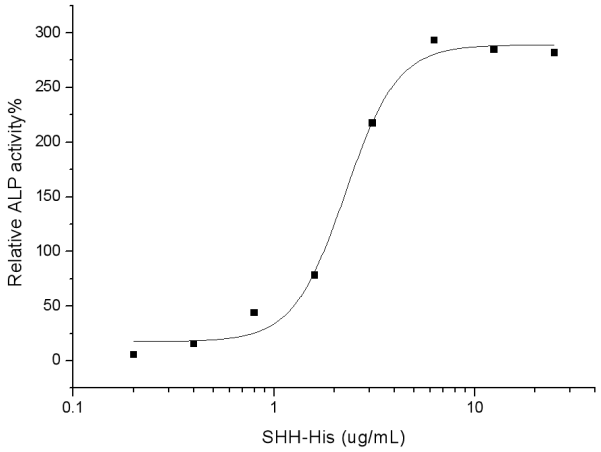
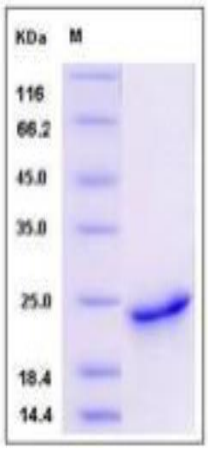


SDS-PAGE



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