

## HumanKine<sup>®</sup> Sonic Hedgehog (SHH) (Recombinant Human)



Animal Component-Free

Human cell expressed

Tag-Free

Endotoxin Free

### Product Description

Animal-free Recombinant Human SHH (Sonic Hedgehog) protein is the orthologue of drosophila hedgehog (Hh) and plays a critical role in vertebrate limb development. SHH gene encodes for a 45 kDa protein that undergoes autoproteolysis activated by its own C-terminal domain. Furthermore, the C-terminal domain also carries out cholesterol transferase activity. This auto-cleavage results in the formation of a 174 amino acid N-terminal product with covalently linked cholesterol moiety and a palmitoyl modification. The presence of the cholesterol and palmitoyl moieties is required for the activity of the mature SHH protein. These modifications are found in SHH derived from human cells, but are absent in bacterially expressed SHH. The N-terminal (active) form of SHH shares 98% aa homology to mouse, rat, canine, porcine and chicken SHH. It has been associated with tissue regeneration following injury and development of certain cancers in adults.

**Alternative Names** HHG 1, HHG1, HLP3, HPE3, MCOPCB5, SHH, SMMCI, Sonic hedgehog protein, TPT, TPTPS

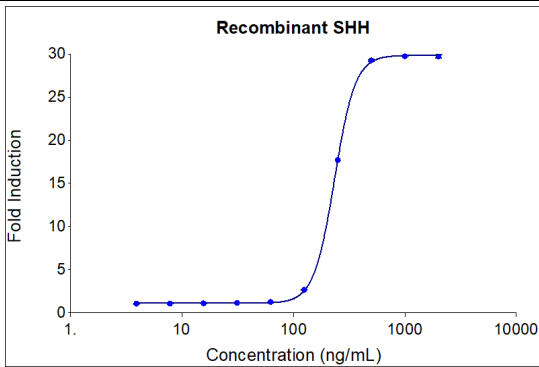
**Source** Human Embryonic Kidney cells (HEK293). HEK293-derived Sonic Hedgehog (SHH) protein

**Species Reactivity** human,mouse,rat

### Specifications

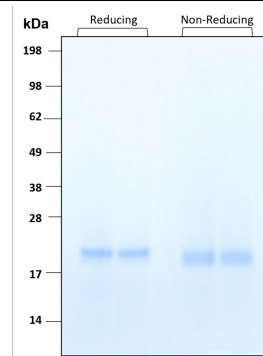
Test	Method	Specification
Activity	The ability to induce alkaline phosphatase production in C3H10T1/2 mouse embryonic fibroblast cells.	Typically $\leq 350$ ng/mL EC50
Molecular Mass	SDS-PAGE	19-22 kDa
Purity	SDS-PAGE	>90%
Endotoxin	LAL	<1.0 EU/ $\mu$ g

### Activity Data



Recombinant human SHH (HZ-1306) stimulates dose-dependent induction of alkaline phosphatase production in the C3H10T1/2 mouse embryonic fibroblast cell line. Alkaline phosphatase production was assessed using pNPP as a chromogenic substrate. C3H10T1/2 cells were treated with increasing concentrations of recombinant human SHH for

### SDS-PAGE



Preparation	
Shipping Temperature	ambient temperature
Formulation	10mM Tris pH 7.4 + 100mM NaCl + 1% CHAPS, See Certificate of Analysis for details
Reconstitution	Briefly centrifuge the vial before opening. It is recommended to reconstitute the protein in sterile water containing 0.1% endotoxin-free recombinant human serum albumin (HSA).

Stability and Storage	Product Form	Temperature Conditions	Storage Time (From Date of Receipt)
	Lyophilized	-20°C to -80°C	Until Expiry Date
	Lyophilized	Room Temperature	2 weeks
	Reconstituted as per CofA	-20°C to -80°C	6 months
	Reconstituted as per CofA	4°C	1 week
Avoid repeated freeze-thaw cycles.			

[www.ptglab.com](http://www.ptglab.com)

Document #: FR-QA118-101 Rev 0  
Data Sheet Version #: 1

**Proteintech Group, Inc.**  
5500 Pearl Street, Suite 400 Rosemont, IL 60612  
t: 1-888-478-4522; f: 1-312-455-8408  
Email: [proteintech@ptglab.com](mailto:proteintech@ptglab.com)