

BACKGROUND

Sonic hedgehog (SHH) is a member of a small group of secreted proteins that are essential for development in both vertebrates and invertebrates. Three mammalian hedgehog genes (sonic, desert, Indian) share about 60% homology and all signal via the same receptors.

Recombinant human SHH is a non-glycosylated protein, consisting of 175 amino acids, with a molecular weight of 19.7 kDa. The Cys at position 25 has been substituted with Ile.

Alternative Names:

Shh, HHG-1

Amino Acid Sequence:

MIIGPGRGFG KRRHPKLLTP LAYKQFIPNV AEKTLGASGR
YEGKISRNSF RFKELTPNYN PDIIFKDEEN TGADRLMTQR
CKDKLNALAI SVMNQWPGVK LRVTEGWDED GHHSEESLHY
EGRALDITTS DRDRSKYGML ARLAVEAGFD WYYYESKAHI
HCSVKAENSV AAKSGG

TECHNICAL INFORMATION

Source: *E.coli*

Physical Appearance:

Sterile Filtered white lyophilized (freeze-dried) powder.

Formulation:

Recombinant human SHH is lyophilized from 10 mM Na₂PO₄, pH 7.5.

Stability:

Lyophilized product is very stable at -20°C. Reconstituted material should be aliquoted and frozen at -20°C. It is recommended that a carrier protein (0.1% HSA or BSA) is added for long term storage.

Reconstitution:

Centrifuge vial before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile water at a concentration of 0.1 mg/ml, which can be further diluted into other aqueous solutions.

Protein Content and Purity determined by:

- UV spectroscopy at 280 nm
- RP-HPLC calibrated against a known standard
- Quantitation against a known standard via reducing and non-reducing SDS-PAGE gels.

Endotoxin Level:

Endotoxin level, as measured by LAL analysis, is <0.01ng/ug or <0.1EU/ug.

Biological Activity:

The activity is measured by the dose-dependent induction of alkaline phosphatase production by C3H/10T1/2 fibroblasts and is typically 0.8-1 ug/mL.

Products are for research use only. They are not intended for human, animal, or diagnostic applications.

