

**Recombinant Human
SHH (Sonic Hedgehog)**

Catalog # (Size): HZ-1305 (5µg) HZ-1306 (10µg) HZ-1307 (100µg)

Product Description

- Endotoxin-free
- Animal-derived product free
- Lyophilized and Carrier Free (CF)

Xeno-free SHH (Sonic Hedgehog)^{HuXp} 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.

Typical Specifications

Species	Human
Expression	HEK293 Cell Expressed
Activity	Typically <350 ng/mL EC ₅₀
Purity	>90%
Endotoxin	<0.5 EU/µg
Molecular Mass	20-24 kDa
Formulation	10mM Tris pH 7.4 + 100mM NaCl + 1% CHAPS

Purity Confirmation

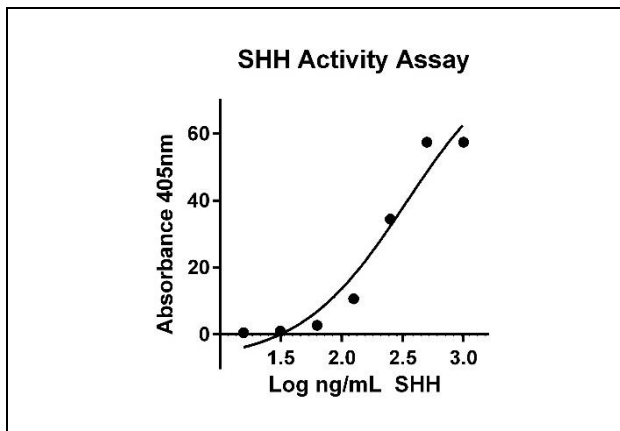
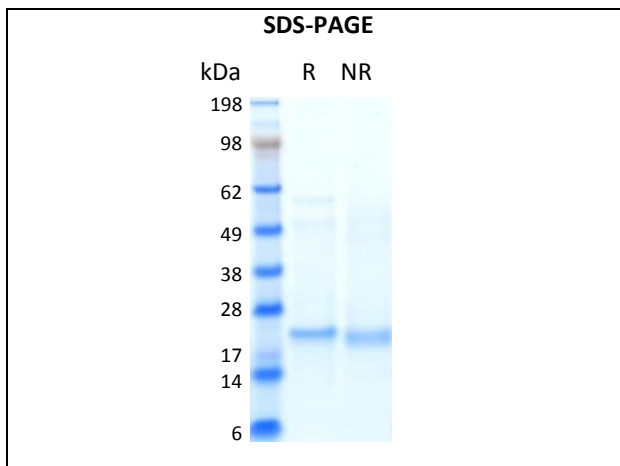
The protein was resolved by SDS-polyacrylamide gel electrophoresis and the gel was stained with Coomassie blue.

Activity Assay

The activity was determined by ability to induce alkaline phosphatase production in C3H10T1/2 mouse embryonic fibroblast cells.



All HumaXpress[®] HumanKine[™] are animal-component-free and Xeno-free[™]



Reconstitution Buffer

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).

Reference

1. Chen, M.H. et al. (2004) Genes and Dev. 18(6) 641-59
2. Nakamura, T. et al. (1997) Biochem. Biophys. Res. Commun. 237:465

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