

PRODUCT DESCRIPTION

Mouse Sonic Hedgehog (Shh-N) is an important signaling molecule expressed during embryonic development. It is involved in regulating the patterning of the developing central nervous system, somite and limbs. mShh may also play a role in the development of whiskers, hair, foregut, teeth and bone in the mouse embryo.

SOURCE

A DNA sequence encoding amino acid residues Cys 25 - Gly 198 of mouse Shh¹ was fused to a 6X histidine tag at the carboxy-terminus. The fusion protein was expressed in *E. coli*.

PURITY

Purity is greater than 97%, as determined by SDS-PAGE and visualized by silver stain. Endotoxin level is <1.0 EU per 1 µg cytokine, as determined by the LAL method.

ACTIVITY

The biological activity of recombinant mouse Shh-N is measured by its ability to induce alkaline phosphatase production by C3H10T1/2 fibroblasts.² The ED₅₀ for this effect is typically 0.6 - 3 µg/mL.

FORMULATION

Recombinant mouse Shh-N is lyophilized from a 0.2 µm filtered solution in phosphate buffered saline (PBS) containing 5% Trehalose and 50 µg bovine serum albumin per 1 µg cytokine.

RECONSTITUTION

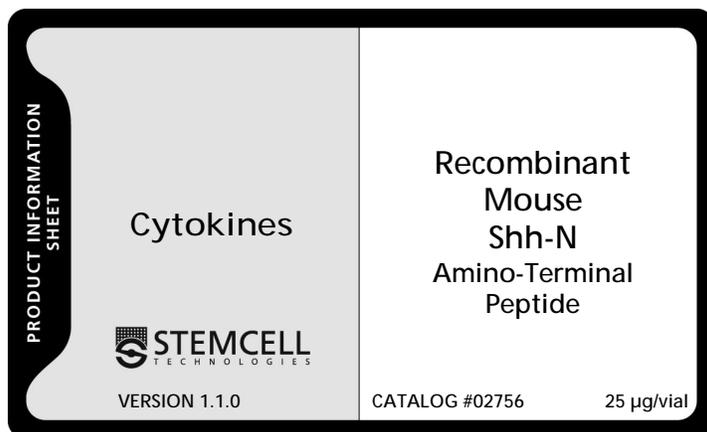
Reconstitute mouse Shh-N at a concentration greater than 10 µg/mL with sterile PBS containing at least 0.1% human or bovine serum albumin.

STABILITY AND STORAGE

Lyophilized mouse Shh-N is stable for up to twelve months from date of receipt at -20°C to -70°C.

Reconstituted mouse Shh-N can be stored under sterile conditions at 2°C - 8°C for one month, or at -20°C to -70°C (in a manual defrost freezer) for three months without detectable loss of activity.

Avoid repeated freezing and thawing.



REFERENCES

1. Echelard Y, Epstein DJ, St-Jacques B, Shen L, Mohler J, McMahon JA, McMahon AP: Sonic hedgehog, a member of a family of putative signaling molecules, is implicated in the regulation of CNS polarity. *Cell* 75: 1417-1430, 1993
2. Nakamura T, Aikawa T, Iwamoto-Enomoto M, Iwamoto M, Higuchi Y, Maurizio P, Kinto N, Yamaguchi A, Noji S, Kurisu K, Matsuya T: Induction of Osteogenic Differentiation by Hedgehog Proteins. *Biochem Biophys Res Comm* 237: 465-469, 1997