Human SHH / Sonic hedgehog Protein (aa 198-462, His Tag)

Catalog Number: **10372-H08H**

General Information

Gene Name Synonym:

HHG1; HLP3; HPE3; MCOPCB5; SMMCI; Sonic hedgehog; TPT; TPTPS

Protein Construction:

A DNA sequence encoding the amino acid sequence (Cys 198-Ser 462) of human SHH (Q15465), that is Sonic hedgehog protein C-product, was fused with a polyhistidine tag at the C-terminus and a signal peptide at the N-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 97 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Cys 198

Molecular Mass:

The recombinant human SHH(aa 198-462) consists of 276 amino acids and has a predicted molecular mass of 29 kDa. The apparent molecular mass of the protein is approximately 35 kDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

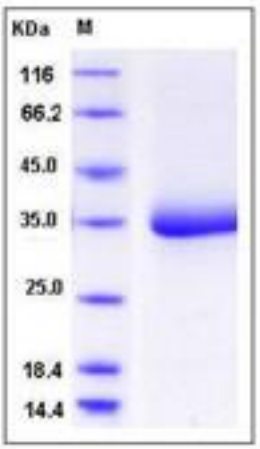
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Sonic HedgeHog, also known as sonic hedgehog protein, belongs to the hedgehog family. It cannot be detected in adult tissues while can be found in fetal intestine, liver, lung, and kidney. Sonic HedgeHog is a protein that is vital in guding the early embryo. 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.

References

1.Ericson J, *et al*. (1997) Graded sonic hedgehog signaling and the specification of cell fate in the ventral neural tube. Cold Spring Harb Symp Quant Biol. 62:451-66. 2.Marigo V, *et al*. (1996) Regulation of patched by sonic hedgehog in the developing neural tube. Proc Natl Acad Sci. 93(18):9346-51. 3.Stone DM, *et al*. (1996) he tumour-suppressor gene patched encodes a candidate receptor for Sonic hedgehog. Nature. 384:129-34.