

Recombinant Human SHH Protein, His-tagged

Cat. No. SHH-1229H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant Human SHH Protein (Pro36-Ala193) with His tag was expressed in 293F.

Species Human

Source HEK293

ProteinLength Pro36-Ala193

Description

This gene encodes a protein that is instrumental in patterning the early embryo. It has been implicated as the key inductive signal in patterning of the ventral neural tube, the anterior-posterior limb axis, and the ventral somites. Of three human proteins showing sequence and functional similarity to the sonic hedgehog protein of *Drosophila*, this protein is the most similar. The protein is made as a precursor that is autocatalytically cleaved; the N-terminal portion is soluble and contains the signalling activity while the C-terminal portion is involved in precursor processing. More importantly, the C-terminal product covalently attaches a cholesterol moiety to the N-terminal product, restricting the N-terminal product to the cell surface and preventing it from freely diffusing throughout the developing embryo. Defects in this protein or in its signalling pathway are a cause of holoprosencephaly (HPE), a disorder in which the developing forebrain fails to correctly separate into right and left hemispheres. HPE is manifested by facial deformities. It is also thought that mutations in this gene or in its signalling pathway may be responsible for VACTERL syndrome, which is characterized by vertebral defects, anal atresia, tracheoesophageal fistula with

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esophageal atresia, radial and renal dysplasia, cardiac anomalies, and limb abnormalities. Additionally, mutations in a long range enhancer located approximately 1 megabase upstream of this gene disrupt limb patterning and can result in preaxial polydactyly.

Form Freeze-dried powder

Molecular Mass Predicted Molecular Mass: 19.5 kDa; Accurate Molecular Mass: 20 kDa

Purity > 97%

Applications Positive Control; Immunogen; SDS-PAGE; WB.

Stability The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37 centigrade for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

Storage Avoid repeated freeze/thaw cycles. Store at 2-8 centigrade for one month. Aliquot and store at -80 centigrade for 12 months.

Storage Buffer PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.

Reconstitution Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

GENE INFORMATION

Gene Name SHH sonic hedgehog [Homo sapiens (human)]

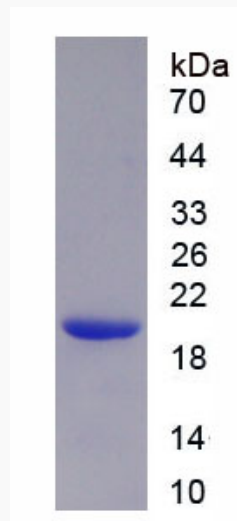
Official Symbol SHH

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Synonyms	SHH; sonic hedgehog; HLP3, HPE3, sonic hedgehog (Drosophila) homolog, sonic hedgehog homolog (Drosophila); sonic hedgehog protein; HHG1; MCOPCB5; SMMCI; TPT; TPTPS; sonic hedgehog homolog; HLP3; HPE3;
Gene ID	6469
mRNA Refseq	NM_000193
Protein Refseq	NP_000184
MIM	600725
UniProt ID	Q15465



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