Recombinant Human SHH Protein, Myc/DDK-tagged, C13 and N15-labeled

Cat. No. SHH-4018H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	SHH MS Standard C13 and N15-labeled recombinant protein (NP_000184) with a C-terminal MYC/DDK tag, was expressed in HEK293 cells.
Species	Human
Source	HEK293
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 esophageal atresia, radial and renal dysplasia, cardiac anomalies, and limb

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	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.
Molecular Mass	49.6 kDa
AA Sequence	MGEMLLLARCLLLVLVSSLLVCSGLACGPGRGFGKRRHPKKLTPLAYKQFIPNVAEK TLGASGRYEGKISRNSERFKELTPNYNPDIIFKDEENTGADRLMTQRCKDKLNALAIS VMNQWPGVKLRVTEGWDEDGHHSEESLHYEGRAVDITTSDRDRSKYGMLARLAVE AGFDWVYYESKAHIHCSVKAENSVAAKSGGCFPGSATVHLEQGGTKLVKDLSPGD RVLAADDQGRLLYSDFLTFLDRDDGAKKVFYVIETREPRERLLLTAAHLLFVAPHNDS ATGEPEASSGSGPPSGGALGPRALFASRVRPGQRVYVVAERDGDRRLLPAAVHSV TLSEEAAGAYAPLTAQGTILINRVLASCYAVIEEHSWAHRAFAPFRLAHALLAALAPA RTDRGGDSGGGDRGGGGGRVALTAPGAADAPGAGATAGIHWYSQLLYQIGTWLL DSEALHPLGMAVKSSTRTRPLEQKLISEEDLAANDILDYKDDDDKV
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 3 months from receipt of products under proper storage and handling conditions.
Storage	Store at -80 centigrade. Avoid repeated freeze-thaw cycles.
Concentration	50 μg/mL as determined by BCA
Storage Buffer	100 mM glycine, 25 mM Tris-HCl, pH 7.3.

GENE INFORMATION

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

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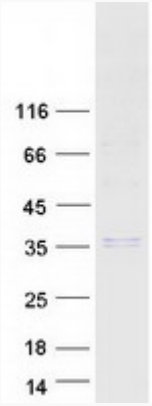
Official Symbol	SHH
Synonyms	SHH; sonic hedgehog; HLP3, HPE3, sonic hedgehog (Drosophila) homolog, sonic hedgehog homolog (Drosophila); sonic hedgehog protein; HHG1; MCOPCB5; SMMCI; TPT; TPTPS; sonic hedgehog homolog; HLP3; HPE3;
Gene ID	6469
mRNA Refseq	NM_000193
Protein Refseq	NP_000184
MIM	600725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

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