

Product datasheet for PH322175

Sonic Hedgehog (SHH) (NM_000193) Human Mass Spec Standard

Product data:

Product Type:	Mass Spec Standards
Description:	SHH MS Standard C13 and N15-labeled recombinant protein (NP_000184)
Species:	Human
Expression Host:	HEK293
Expression cDNA Clone or AA Sequence:	RC222175
Predicted MW:	49.6 kDa
Protein Sequence:	>RC222175 representing NM_000193 Red=Cloning site Green=Tags(s)
	<p>MGEMLLLARCLLLVSVSLLVCSGLACGPGRGFGKRRHPKKTPLAYKQFIPNVAEKTLGASGRYEGKISRNSERFKELTPNYNPDIIIFKDEENTGADRLMTQRCKDKLNALAI SVMNQWPGVKLRVTEGWDEDGHHSEESLHYEGRAVDITTSRRDRSKYGMLARLAVEAGFDWVYYESKAHIHCSVKAENSVAAKSGGCFPGSATVHLEQGGTKLVKDLSPGDRVLAADDQGRLLYSDFLTFDRDDGAKKVFYVIETREPRERLLLTAHLLFVAPHNDSATGEPEASSGSGPPSGGALGPRALFASRVPGQRVYVVAERDGRRLPAAVHSVTLSEEAAGAYAPLTAQGTILINRVLASCYAVIEEHSWAHRAFAPFRLAHALLAALAPARTDRGGDSGGDRGGGGRVALTPGAADAPGAGATAGIHWYSQLLYQIGTWLLDSEALHPLGMAVKSS</p> <p>TRTRPLEQKLI SEEDLAANDILDYKDDDDKV</p>
Tag:	C-Myc/DDK
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Labeling Method:	Labeled with [U- 13C6, 15N4]-L-Arginine and [U- 13C6, 15N2]-L-Lysine
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3
Storage:	Store at -80°C. Avoid repeated freeze-thaw cycles.
Stability:	Stable for 3 months from receipt of products under proper storage and handling conditions.
RefSeq:	<u>NP_000184</u>
RefSeq Size:	1577
RefSeq ORF:	1386
Synonyms:	HHG1; HLP3; HPE3; MCOPCB5; ShhNC; SMMCI; TPT; TPTPS



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Locus ID: 6469

UniProt ID: [Q15465](#)

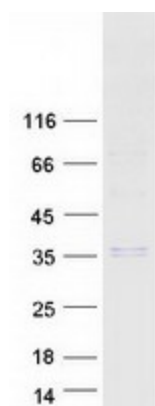
Cytogenetics: 7q36.3

Summary: 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 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. [provided by RefSeq, Jul 2008]

Protein Families: Druggable Genome, ES Cell Differentiation/IPS, Secreted Protein, Transmembrane

Protein Pathways: Basal cell carcinoma, Hedgehog signaling pathway, Pathways in cancer

Product images:



Coomassie blue staining of purified SHH protein (Cat# [TP322175]). The protein was produced from HEK293T cells transfected with SHH cDNA clone (Cat# [RC222175]) using MegaTran 2.0 (Cat# [TT210002]).