

Product datasheet for TP322175

Sonic Hedgehog (SHH) (NM_000193) Human Recombinant Protein

Product data:

Product Type: Recombinant Proteins

Description: Recombinant protein of human sonic hedgehog homolog (Drosophila) (SHH), 20 µg

Species: Human

Expression Host: HEK293T

Expression cDNA Clone or AA Sequence: >RC222175 representing NM_000193

Red=Cloning site **Green**=Tags(s)

MGEMLLLARCLLLLVSSLLVCSGLACGPRGFGKRRHPKLTPLAYKQFIPNVAEKTGASGRYEGKIS
RNSERFKELTPNYNPDIIFKDEENTGADRLMTQRCKDKLNALAISVMNQWPGVKLRVTEGWDEDGHHSEE
SLHYEGRAVDITTSRDRSKYGMLARLAVEAGFDWVYYESKAHIHCSVKAENSVAAKSGGCFPGSATVHL
EQGGTKLVKDLSPGDRVLAADDQGRLLYSDFLFLDRDDGAKKVFIETREPRERLLLTAHLLFVAPH
NDSATGEPEASSGSGPPSGGALGPRALFASRVPRGQRVYVVAERDGDRRLLPAAVHSVTLSEEAAGAYAP
LTAQGTILINRVLASCYAVIEEHSWAHRAFAPFRLAHALLAALAPARTDRGGDSGGDRGGGGGRVALTA
PGAADAPGAGATAGIHWYSQLLYQIGTWLLDSEALHPLGMAVKSS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Tag: C-Myc/DDK

Predicted MW: 47.2 kDa

Concentration: >0.05 µg/µL as determined by microplate BCA method

Purity: > 80% as determined by SDS-PAGE and Coomassie blue staining

Buffer: 25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol

Preparation: Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.

Note: For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.

Storage: Store at -80°C.

Stability: Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.

RefSeq: [NP_000184](#)



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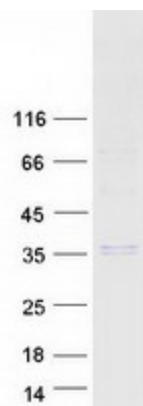
| | |
|---------------|-----------------------------------------------------|
| Locus ID: | 6469 |
| UniProt ID: | Q15465 |
| RefSeq Size: | 1577 |
| Cytogenetics: | 7q36.3 |
| RefSeq ORF: | 1386 |
| Synonyms: | HHG1; HLP3; HPE3; MCOPCB5; ShhNC; SMMCI; TPT; TPTPS |

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]).