RP00056

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Recombinant Human Sonic hedgehog protein N-product/SHH(C24IVI) Protein

Catalog No.: RP00056 Recombinant

Sequence Information

Species	Gene ID	Swiss Prot
<I>E. coli</I>	6469	Q15465

Tags
No tag

Synonyms
HHG1; HLP3; HPE3; MCOPCB5; SMMCI; TPT; TPTPS;SHH; HHG1; sonic hedgehog;HLP3;HPE3;MCOPCB5;SMMCI;TPT;TPTPS

Product Information

Source	Purification
<I>E. coli</I>	> 97% by SDS-PAGE.

Endotoxin
< 1.0 EU/μg of the protein by LAL method.

Formulation
Lyophilized from a 0.22 μm filtered solution of 20mM Tris, 300mM NaCl, pH 7.4.Contact us for customized product form or formulation.

Reconstitution
Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Contact

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Background

This protein 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.

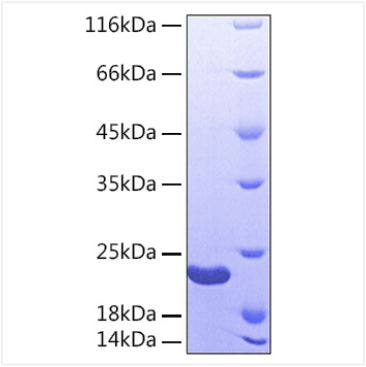
Basic Information

Description
Recombinant Human Sonic hedgehog protein N-product/SHH(C24IVI) Protein is produced by <I>E. coli</I> expression system. The target protein is expressed with sequence (Cys24-Gly197 (Cys24Ile-Val-Ile)) of human Sonic hedgehog N-product (Accession #NP_000184.1).

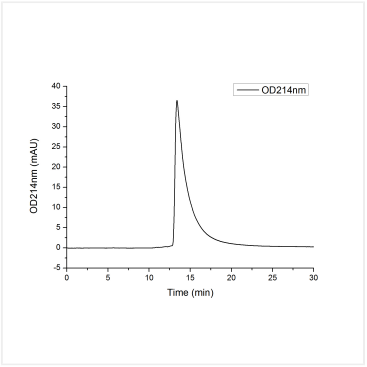
Bio-Activity
Measured by its ability to inhibit p53 expression in C3H10T1/2 mouse embryonic fibroblast cells. 1.25-2.5 μg/mL of Recombinant Human Sonic hedgehog can effectively decrease p53 expression.

Storage
Store at -20℃.Store the lyophilized protein at -20℃ to -80 ℃ up to 1 year from the date of receipt.
After reconstitution, the protein solution is stable at -20℃ for 3 months, at 2-8℃ for up to 1 week.
Avoid repeated freeze/thaw cycles.

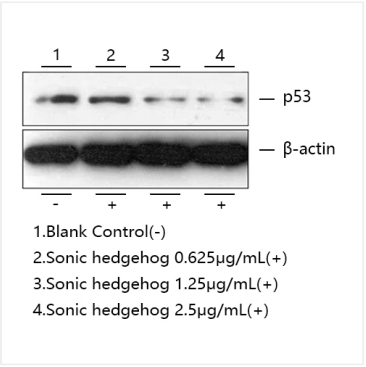
Validation Data



Recombinant Human Sonic hedgehog protein N-product/SHH(C24IVI) Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



The purity of Human Sonic hedgehog N-product Protein (Cat.RP00056) was greater than 95% as determined by SEC-HPLC.



Recombinant Human Sonic hedgehog inhibits p53 expression in C3H10T1/2 mouse embryonic fibroblast cells. 1.25-2.5μg/mL of Recombinant Human Sonic hedgehog can effectively decrease p53 expression .