9051 Mira Mesa Blvd, #910094
San Diego, CA 92191
Tel: 760-390-3989

SHH Human

Sonic HedgeHog Human Recombinant
CYK0529

Product Overview

Name	SHH Human
Description	
Sonic HedgeHog Human Recombinant	
Accession (Primary)	Q15465
Synonyms	
SHH, HHG-1, HHG1, Sonic hedgehog protein, TPT, HLP3, HPE3, SMMCI, TPTPS, MCOPCB5.	
Introduction	
Recombinant Human Sonic Hedgehog is part of a small group of secreted proteins that are vital for development in both vertebrates and invertebrates. 3 mammalian hedgehog genes (sonic, desert, Indian) share about 60% homology. The Human Sonic Hedgehog is 99% homologous to the mouse gene. Sonic HedgeHog is a protein that is vital in guding the early embryo. It has been associated as the major inductive signal in patterning of the ventral neural tube, the anterior-posterior limb axis, and the ventral somites. Sonic HedgeHog binds to the patched receptor, which functions in association with smoothened, to activate the transcription of target genes. In the absence of sonic HedgeHog, patched receptor represses the constitutive signaling activity of smoothened. Sonic HedgeHog also regulates another factor, the gli oncogene. Sonic HedgeHog intercellular signal is essential for a various patterning events during development: signal produced by the notochord that induces ventral cell fate in the neural tube and somites, and the polarizing signal for patterning of the anterior-posterior axis of the developing limb bud. Sonic HedgeHog exhibits both floor plate- and motor neuron-inducing activity. Mutations in a long-range Sonic HedgeHog enhancer located in an intron of the limb region 1 gene result in preaxial polydactyly.	
Source	
Escherichia Coli.	
Physical Appearance	
Sterile Filtered White lyophilized (freeze-dried) powder.	
Formulation	
SHH is lyophilized from 10mM Na3PO4, pH 7.5.	
Stability	
Lyophilized Human Sonic HedgeHog although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Sonic HedgeHog should be stored at 4°C between 2-7 days and for future use	

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below -18°C. Please prevent freeze-thaw cycles.

Purity

Greater than 95.0% as determined by SDS-PAGE.

Amino acid sequence

MIIGPGRGFG KRRHPKKLTP LAYKQFIPNV AEKTLGASGR YEGKISRNSE RFKELTPNYN PDIIFKDEEN TGADRLMTQR CKDKLNALAI SVMNQWPGVK LRVTEGWDED GHHSEESLHY EGRALDITTS DRDRSKYGML ARLAVEAGFD WVYYESKAHI HCSVKAENSV AAKSGGCFP

Biological Activity

The ED50 is measured by the dose-dependent induction of alkaline phosphatase production by CCL-226 fibroblasts and is 1.47 µg/ml corresponding to a specific activity of 680U/mg.

Solubility

It is recommended to reconstitute the lyophilized SHH in sterile water not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Precautions

SHH Human is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (Q15465)