



Human SHH blocking peptide (DAG-P1854)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Antigen 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 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]

Specificity	Expressed in fetal intestine, liver, lung, and kidney. Not expressed in adult tissues.
Conjugate	Unconjugated
Applications	BL
Sequence Similarities	Belongs to the hedgehog family.
Format	Liquid
Preservative	None
Storage	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles. Information available upon request.

GENE INFORMATION

Gene Name	SHH sonic hedgehog [Homo sapiens (human)]
Official Symbol	SHH
Synonyms	SHH; sonic hedgehog; TPT; HHG1; HLP3; HPE3; SMMCI; TPTPS; MCOPCB5; sonic hedgehog protein; sonic hedgehog homolog;
Entrez Gene ID	6469
mRNA Refseq	NM_000193.2
Protein Refseq	NP_000184.1
UniProt ID	Q15465
Chromosome Location	7q36
Pathway	Basal cell carcinoma, organism-specific biosystem; Basal cell carcinoma, conserved biosystem; Class B/2 (Secretin family receptors), organism-specific biosystem; FOXA1 transcription factor network, organism-specific biosystem; GPCR ligand binding, organism-specific biosystem; Glypican 3 network, organism-specific biosystem; Heart Development, organism-specific biosystem; Hedgehog Signaling Pathway, organism-specific biosystem; Hedgehog signaling events mediated by Gli proteins, organism-specific
Function	calcium ion binding; glycoprotein binding; glycosaminoglycan binding; laminin-1 binding; morphogen activity; patched binding; peptidase activity; protein binding; signal transducer activity; zinc ion binding;