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Product datasheet for RC222175L1V

Sonic Hedgehog (SHH) (NM_000193) Human Tagged ORF Clone Lentiviral Particle

Product data:

Product Type:	Lentiviral Particles
Product Name:	Sonic Hedgehog (SHH) (NM_000193) Human Tagged ORF Clone Lentiviral Particle
Symbol:	Sonic Hedgehog
Synonyms:	HHG1; HLP3; HPE3; MCOPCB5; ShhNC; SMMCI; TPT; TPTPS
Mammalian Cell Selection:	None
Vector:	pLenti-C-Myc-DDK (PS100064)
Tag:	Myc-DDK
ACCN:	NM_000193
ORF Size:	1386 bp
ORF Nucleotide Sequence:	`The ORF insert of this clone is exactly the same as(RC222175).`
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
RefSeq:	NM_000193.2
RefSeq Size:	1577 bp
RefSeq ORF:	1389 bp
Locus ID:	6469
UniProt ID:	Q15465
Cytogenetics:	7q36.3
Protein Families:	Druggable Genome, ES Cell Differentiation/IPS, Secreted Protein, Transmembrane
Protein Pathways:	Basal cell carcinoma, Hedgehog signaling pathway, Pathways in cancer

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MW: 49.6 kDa

Gene 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]