SMO Human Protein

PRODUCT OVERVIEW

Product Name	SMO, Protein
Full Product Name	Human SMO full length protein-synthetic nanodisc
Product Gene Name	SMO protein
Product Synonym Names	CRJS; FZD11; Gx; PHLS; SMOH
Host	HEK293
Form/Format	Lyophilized from nanodisc solubilization buffer (20 mM Tris-HCl, 150 mM NaCl, pH 8.0). Normally 5% - 8% trehalose is added as protectants before lyophilization. Please see Certificate of Analysis for specific instructions.
Preparation and Storage	Store at -20 degree C to -80 degree C for 12 months in lyophilized form. After reconstitution, if not intended for use within a month, aliquot and store at -80 degree C (Avoid repeated freezing and thawing).
Molecular Weight	86,397 Da
Chromosome Location	Chromosome: 7; NC_000007.13 (128828713..128853386). Location: 7q32.3
OMIM	601500
3D Structure	ModBase 3D Structure for Q99835
Product Categories/Family for SMO protein	FLP 489; Full Length Transmembrane Proteins
Related Product Information for SMO protein	The protein encoded by this gene is a G protein-coupled receptor that interacts with the patched protein, a receptor for hedgehog proteins. The encoded protein tranduces signals to other proteins after activation by a hedgehog protein/patched protein complex. [provided by RefSeq, Jul 2010]
Other Notes	Small volumes of SMO protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for SMO purchase	MBS1880217 is a protein targeting SMO. Also known as Human SMO full length protein-synthetic nanodisc. Host: HEK293.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for SMO. It may not necessarily be applicable to this product.

NCBI GI #	5032099
NCBI GeneID	6608
NCBI Accession #	NP_005622.1
UniProt Primary Accession #	Q99835
UniProt Related Accession #	Q99835
GenBank Nucleotide #	NM_005631.4
NCBI Official Full Name	smoothened homolog
NCBI Official Synonym Full Names	smoothened, frizzled family receptor
NCBI Official Symbol	SMO

NCBI Official Synonym Symbols	Gx; SMOH; FZD11
UniProt Protein Name	Smoothened homolog
UniProt Synonym Protein Names	Protein Gx
Protein Family	Protein smoothened
UniProt Gene Name	SMO
UniProt Synonym Gene Names	SMOH; SMO
UniProt Entry Name	SMO_HUMAN
NCBI Protein Information	smoothened homolog; protein Gx; frizzled family member 11; seven transmembrane helix receptor; smoothened, seven transmembrane spanning receptor
UniProt Comments for SMO	SMO: G protein-coupled receptor that probably associates with the patched protein (PTCH) to transduce the hedgehog's proteins signal. Binding of sonic hedgehog (SHH) to its receptor patched is thought to prevent normal inhibition by patched of smoothened (SMO). Required for the accumulation of KIF7 and GLI3 in the cilia. Belongs to the G-protein coupled receptor Fz/Smo family. Protein type: Membrane protein, multi-pass; Oncoprotein; GPCR, Fz/Smo family; Receptor, GPCR; Cell development/differentiation; Membrane protein, integral Chromosomal Location of Human Ortholog: 7q32.3 Cellular Component: Golgi apparatus; intracellular membrane-bound organelle; plasma membrane; integral to membrane; caveola Molecular Function: G-protein coupled receptor activity; Wnt-protein binding; protein binding; Wnt receptor activity; patched binding; drug binding Biological Process: developmental growth; central nervous system neuron differentiation; ventral midline determination; negative regulation of epithelial cell differentiation; skeletal muscle fiber development; cell fate specification; negative regulation of transcription from RNA polymerase II promoter; thalamus development; Wnt receptor signaling pathway through beta-catenin; anterior/posterior pattern formation; positive regulation of mesenchymal cell proliferation; positive regulation of smoothened signaling pathway; heart looping; vasculogenesis; activation of hh target transcription factor; neural crest cell migration; dorsoventral neural tube patterning; positive regulation of neuroblast proliferation; smoothened signaling pathway; hair follicle morphogenesis; protein stabilization; smoothened signaling pathway in regulation of granule cell precursor cell proliferation; in utero embryonic development; multicellular organism growth; smoothened signaling pathway in ventral spinal cord patterning; forebrain morphogenesis; negative regulation of hair follicle development; negative regulation of DNA binding; odontogenesis of dentine-containing teeth; osteoblast differentiation; G-protein coupled receptor protein signaling pathway; positive regulation of protein import into nucleus; cerebellar cortex morphogenesis; myoblast migration; midgut development; positive regulation of transcription from RNA polymerase II promoter; positive regulation of epithelial cell proliferation; negative regulation of apoptosis
Research Articles on SMO	**1.** crystal structure of the transmembrane domain of the human SMO receptor bound to the small-molecule antagonist LY2940680 at 2.5 A resolution
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