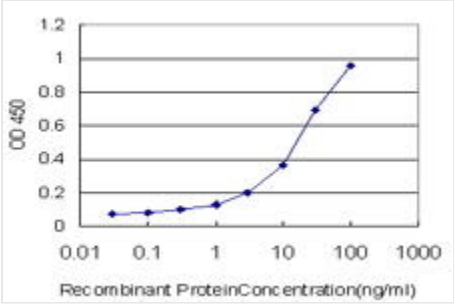
SMO Antibody – Mouse Monoclonal

PRODUCT OVERVIEW

Product Name	SMO, Monoclonal Antibody
Full Product Name	SMO (Smoothened Homolog (Drosophila), Gx, SMOH) (HRP)
Product Gene Name	anti-SMO antibody
Product Synonym Names	Smoothened Homolog (Drosophila); Gx; SMOH
Clonality	Monoclonal
Isotype	IgG1,k
Clone Number	2F12
Host	Mouse
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with horseradish peroxidase (HRP).
Purity/Purification	Purified
Specificity	Recognizes SMO.
Preparation and Storage	Store product at 4 degree C if to be used immediately within two weeks. For long-term storage, aliquot to avoid repeated freezing and thawing and stor at -20 degree C. Aliquots are stable at -20 degree C for 12 months after receipt. Dilute required amount only prior to immediate use. Further dilutions ca be made in assay buffer. Note: Sodium azide is a potent inhibitor of peroxidase and should not be added to HRP conjugates. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.
OMIM	601500
3D Structure	ModBase 3D Structure for Q99835
Immunogen	SMO (NP_005622, 56aa-155aa) partial recombinant protein with GST tag. MW of the GST tag alone is 26kD.
Immunogen Sequence	GPPPPLSHCGRAAPCEPLRYNVCLGSVLPYGATSTLLAGDSDSQEEAHGKLVLWSGLRNAPRCWAVIQPLLCAVYMPKCENDRVELPSRTLCQATRGP
Conjugate	HRP
Product Categories/Family for anti-SMO antibody	Antibodies; Neuroscience
Applications Tested/Suitable for anti-SMO antibody	ELISA (EIA)
Application Notes for anti-SMO antibody	Applications are based on unconjugated antibody.
Related Product Information for anti-SMO antibody	MBS6181337 is an antibody targeting SMO. Also known as SMO (Smoothened Homolog (Drosophila), Gx, SMOH) (HRP). Host: Mouse.

Other Notes	Small volumes of anti-SMO antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessa 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.



Testing Data of anti-SMO antibody
Detection limit for recombinant GST tagged SMO is approximately 0.3ng/ml as a capture antibody.

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
UniProt Primary Accession #	Q99835
UniProt Related Accession #	Q99835
GenBank Nucleotide #	NP_005622.1
NCBI Official Full Name	smoothened homolog
NCBI Official Synonym Full Names	smoothened, frizzled class receptor
NCBI Official Symbol	SMO
NCBI Official Synonym Symbols	Gx; CRJS; 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
NCBI Summary for SMO	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]

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.** Molecular dynamics simulations of SMO embedded in cholesterol containing lipid bilayers reveal a direct interaction of cholesterol with the transmembrane domain at regions distinct from those observed in class A GPCRs. In particular the extracellular tips of helices TM2 and TM3 form a well-defined cholesterol interaction site.
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