10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

SMO Antibody (Center)

Rabbit Polyclonal Antibody
Catalog # ABV11768

Product Information

Application	WB
Primary Accession	Q99835
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	86397

Additional Information

Gene ID	6608
Positive Control	Western blot
Application & Usage	WB: 1:1000
Alias Symbol	SMO
Other Names	SMO Antibody (Center) polyclonal antibody, SMO antibody, Smoothened homolog antibody, SMO antibody, SMO polyclonal antibody, SMOH antibody
Appearance	Colourless liquid
Formulation	100 □g (0.5 mg/ml) of antibody in PBS with 0.09% (W/V) sodium azide.
Reconstitution & Storage	-20 °C
Background Descriptions	
Precautions	SMO Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SMO {ECO:0000303|PubMed:8906787, ECO:0000312|HGNC:HGNC:11119}
Function	G protein-coupled receptor, which transduces the smoothened signaling pathway (PubMed:19592253, PubMed:27437577, PubMed:28344083, PubMed:31168089, PubMed:32929279, PubMed:36202993). Activated by cholesterol in response to hedgehog (DHH, IHH or SHH) morphogens (PubMed:27437577, PubMed:28344083, PubMed:32929279). In absence of hedgehog, SMO is inactivated by patched protein (PTCH1 or PTCH2), which prevents SMO access to cholesterol (PubMed:28344083). In response to hedgehog-binding to pathched, inhibition is relieved, promoting SMO translocation to primary cilium and activation by cholesterol: cholesterol

causes a conformation change that triggers signaling via G protein G(i), mediating inhibition of adenylate cyclase activity and decreassed production of cAMP (PubMed:28344083, PubMed:31168089). Decreased cAMP levels then inhibit protein kinase A (PKA) and promote release of GLI (GLI1, GLI2 and GLI3) transcription factors, which activate expression of target genes (PubMed:31168089). Active SMO also directly inhibits PKA by sequestering its catalytic subunit, PRKACA, at the cell membrane, preventing PRKACA-mediated phosphorylation and subsequent processing of GLI transcription factors (PubMed:36202993, PubMed:39138140). Active SMO also promotes the removal of GPR161, a key inhibitor of the smoothened signaling pathway, from primary cilia (By similarity).

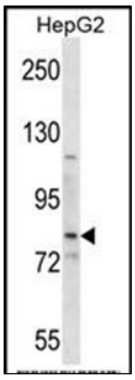
Cellular Location

Cell membrane {ECO:0000250|UniProtKB:P56726}; Multi-pass membrane protein. Cell projection, cilium membrane; Multi-pass membrane protein. Note=Translocates to primary cilium in response to hedgehog (DHH, IHH or SHH) morphogens (By similarity) Cilium localization is mediated via a beta-arrestin and KIF3A-dependent mechanism (By similarity). {ECO:0000250|UniProtKB:P56726}

Background

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.

Images



Western blot analysis in HepG2 cell line Lysates using SMO purified antibody.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.