

SMO / Smoothened Antibody (1st Extracellular Domain)
Rabbit Polyclonal Antibody
Catalog # ALS10565**Specification**

SMO / Smoothened Antibody (1st Extracellular Domain) - Product Information

Application	IHC
Primary Accession	Q99835
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	86kDa KDa

SMO / Smoothened Antibody (1st Extracellular Domain) - Additional Information**Gene ID** 6608**Other Names**

Smoothened homolog, SMO, Protein Gx, SMO, SMOH

Target/Specificity

Human SMO. BLAST analysis of the peptide immunogen showed no homology with other human proteins.

Reconstitution & Storage

Long term: -70°C; Short term: +4°C

Precautions

SMO / Smoothened Antibody (1st Extracellular Domain) is for research use only and not for use in diagnostic or therapeutic procedures.

SMO / Smoothened Antibody (1st Extracellular Domain) - Protein Information**Name** SMO**Synonyms** SMOH**Function**

G protein-coupled receptor which associates with the patched protein (PTCH) to transduce hedgehog protein signaling. Binding of sonic hedgehog (SHH) to its receptor patched prevents inhibition of smoothened (SMO) by patched. When active, SMO binds to and sequesters protein kinase A catalytic subunit PRKACA at the cell membrane, preventing PRKACA-mediated phosphorylation of GLI transcription factors which releases the GLI proteins from PRKACA-mediated inhibition and allows for transcriptional activation of hedgehog pathway target genes (By similarity). Required for the accumulation of KIF7, GLI2 and GLI3 in the cilia (PubMed:19592253). Interacts with DLG5 at the ciliary base to induce the accumulation of KIF7 and GLI2 at the ciliary tip for GLI2 activation (By similarity).

Cellular Location

Cell membrane {ECO:0000250|UniProtKB:P56726}; Multi-pass membrane protein. Cell projection, cilium. Note=Cilium localization is promoted by SHH and is required for activity. {ECO:0000250|UniProtKB:P56726}

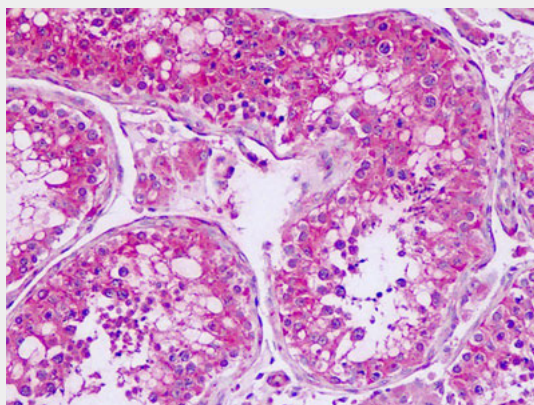
Volume

50 µl

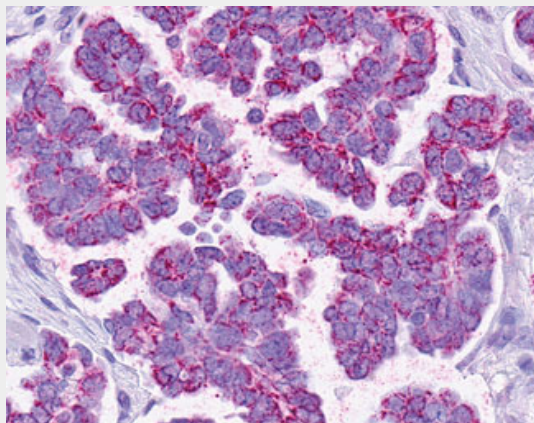
SMO / Smoothened Antibody (1st Extracellular Domain) - Protocols

Provided below are standard protocols that you may find useful for product applications.

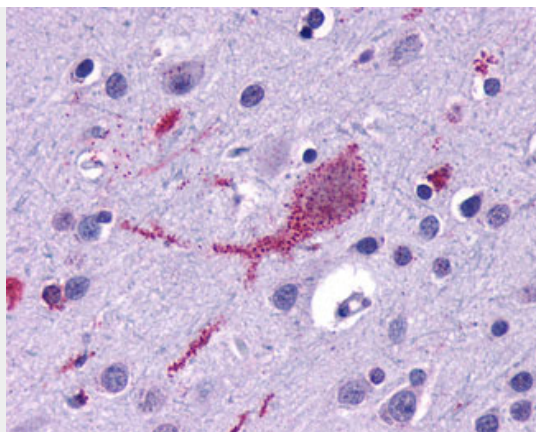
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

SMO / Smoothened Antibody (1st Extracellular Domain) - Images

Human, Testis: Formalin-Fixed Paraffin-Embedded (FFPE)



Anti-SMO / Smoothened antibody IHC of human Ovary, Carcinoma.



Anti-SMO / Smoothened antibody IHC of human brain, cortex.

SMO / Smoothened Antibody (1st Extracellular Domain) - Background

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.

SMO / Smoothened Antibody (1st Extracellular Domain) - References

Stone D.M.,et al.Nature 384:129-134(1996).

Xie J.,et al.Nature 391:90-92(1998).

Jiang N.,et al.Submitted (JAN-1999) to the EMBL/GenBank/DDBJ databases.

Scherer S.W.,et al.Science 300:767-772(2003).

Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.