

Goat Anti-SMO (internal) Antibody
Peptide-affinity purified goat antibody
Catalog # AF2009b

Specification

Goat Anti-SMO (internal) Antibody - Product Information

Application	WB
Primary Accession	Q99835
Other Accession	NP_005622 , 6608 , 319757 (mouse) , 25273 (rat)
Reactivity	Human
Predicted	Mouse, Rat, Zebrafish, Dog
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	86397

Goat Anti-SMO (internal) Antibody - Additional Information

Gene ID 6608

Other Names

Smoothened homolog, SMO, Protein Gx, SMO, SMOH

Format

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Goat Anti-SMO (internal) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-SMO (internal) Antibody - 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}

Goat Anti-SMO (internal) Antibody - 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](#)

Goat Anti-SMO (internal) Antibody - Images



A) AF2009a and B) AF2009b (0.3 µg/ml) staining of Human Bone Marrow lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-SMO (internal) Antibody - 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 transduces signals to other proteins after activation by a hedgehog protein/patched protein complex.

Goat Anti-SMO (internal) Antibody - References

Immunohistochemical expression of SHH, PTC, SMO and GLI1 in glandular odontogenic cysts and

dentigerous cysts. Zhang L, et al. Oral Dis, 2010 Jun 18. PMID 20561215.

Overexpression of smoothened activates the sonic hedgehog signaling pathway in pancreatic cancer-associated fibroblasts. Walter K, et al. Clin Cancer Res, 2010 Mar 15. PMID 20215540.

Smoothened as a new therapeutic target for human osteosarcoma. Hirotsu M, et al. Mol Cancer, 2010 Jan 12. PMID 20067614.

Hedgehog signaling maintains hair follicle stem cell phenotype in young and aged human skin.

Ritti L, et al. Aging Cell, 2009 Dec. PMID 20050020.

The variant rs1867277 in FOXE1 gene confers thyroid cancer susceptibility through the recruitment of USF1/USF2 transcription factors. Landa I, et al. PLoS Genet, 2009 Sep. PMID 19730683.