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(Mouse) Shh Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5359

Product Information

Application	IHC-P, WB
Primary Accession	Q62226
Reactivity	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	47773
Isotype	Rabbit IgG
Antigen Source	HUMAN

Additional Information

Gene ID	20423
Antigen Region	397-431
Other Names	Sonic hedgehog protein, SHH, HHG-1, Sonic hedgehog protein N-product, Sonic hedgehog protein C-product, Shh, Hhg1
Dilution	IHC-P~~1:100~500 WB~~1:1000
Target/Specificity	This (Mouse) Shh antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 397-431 amino acids from the C-terminal region of Mouse Shh.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	(Mouse) Shh Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Shh {ECO:0000303|PubMed:7916661, ECO:0000312|MGI:MGI:98297}
Function	[Sonic hedgehog protein]: Precursor of sonic hedgehog, a morphogen that activates the smoothened signaling pathway, and which is essential for a variety of patterning events during development (PubMed:11389830,

PubMed:31657721, PubMed:7736596, PubMed:7891723, PubMed:8824192). The C-terminal part of the precursor displays an autoproteolysis and a cholesterol transferase activity, resulting (1) in the cleavage of the full-length protein into two parts, Sonic hedgehog protein N-product and C-product (ShhN and ShhC, respectively) and (2) covalent attachment of a cholesterol moiety to the C-terminus of the newly generated ShhN (PubMed:7736596, PubMed:7891723, PubMed:8824192). Both autoproteolysis and a cholesterol transferase activities occur in the endoplasmic reticulum (PubMed:21357747). Following additional lipidation, ShhN acts as a morphogen, while ShhC is degraded in the endoplasmic reticulum (PubMed:21357747).

Cellular Location

[Sonic hedgehog protein]: Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:Q15465}. Golgi apparatus membrane {ECO:0000250|UniProtKB:Q15465}. Note=Co-localizes with HHAT in the ER and Golgi membrane. {ECO:0000250|UniProtKB:Q15465}

Tissue Location

Expressed in a number of embryonic tissues including the notochord, ventral neural tube, floor plate, lung bud, zone of polarizing activity and posterior distal mesenchyme of limbs (PubMed:7916661). In the adult, expressed in lung and neural retina (PubMed:7916661).

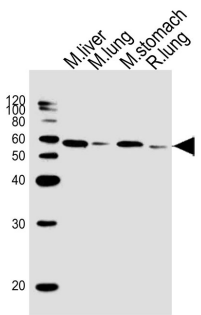
Background

Binds to the patched (PTC) receptor, which functions in association with smoothened (SMO), to activate the transcription of target genes. In the absence of SHH, PTC represses the constitutive signaling activity of SMO. Also regulates another target, the gli oncogene. Intercellular signal essential for a variety of patterning events during development: signal produced by the notochord that induces ventral cell fate in the neural tube and somites, and the polarizing signal for patterning of the anterior-posterior axis of the developing limb bud. Displays both floor plate- and motor neuron-inducing activity. The threshold concentration of N-product required for motor neuron induction is 5-fold lower than that required for floor plate induction (By similarity).

References

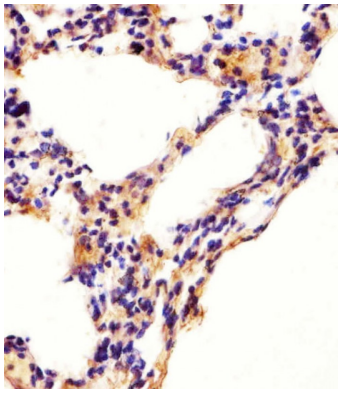
Echelard Y.,et al.Cell 75:1417-1430(1993).
McMahon A.P.,et al.Submitted (NOV-1997) to the EMBL/GenBank/DDBJ databases.
Chang D.T.,et al.Development 120:3339-3353(1994).
Carninci P.,et al.Science 309:1559-1563(2005).
Roelink H.,et al.Cell 81:445-455(1995).

Images



All lanes : Anti-Shh Antibody (C-term)(AW5359) at 1/1000 dilution Lane 1: mouse liver lysates Lane 2: mouse lung lysates Lane 3: mouse stomach lysates Lane 4: rat lung lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L),Peroxidase conjugated at 1/10000 dilution Predicted band size : 57 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Immunohistochemical analysis of paraffin-embedded M.



lung section using (Mouse) Shh Antibody (C-term)(Cat#AW5359). AW5359 was diluted at 1:25 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.

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