PTCH1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	PTCH1, Polyclonal Antibody
Full Product Name	PTCH1 Antibody, Biotin conjugated
Product Gene Name	anti-PTCH1 antibody
Product Synonym Names	Protein patched homolog 1; PTC; PTC1; PTCH1; PTCH
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Liquid
Purity/Purification	>95%, Protein G purified
Preparation and Storage	Shipped at 4 degree C. Upon delivery aliquot and store at -20 degree C or -80 degree C. Avoid repeated freeze.
Matching Pairs	Unconjugated Antibody: PTCH1 (MBS7050285) Biotin Conjugated Antibody: PTCH1 (MBS7050288)
Molecular Weight	144,356 Da
OMIM	U59464 mRNA
3D Structure	ModBase 3D Structure for Q13635
Immunogen	Recombinant Human Protein patched homolog 1 protein (1180-1411AA)
Preservative	0.03% Proclin 300
Constituents	50% Glycerol, 0.01M PBS, pH 7.4
Conjugation	Biotin
Santa Cruz Alternative	Potential replacement for Santa Cruz Biotechnology antibody catalog# sc-6147 / sc-6149 / sc-9016
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-PTCH1 antibody	ELISA (EIA)
Related Product Information for anti-PTCH1 antibody	Acts as a receptor for sonic hedgehog (SHH), indian hedgehog (IHH) and desert hedgehog (DHH). Associates with the smoothened protein (SMO) to transduce the hedgehog's proteins signal. Seems to have a tumor suppressor function, as inactivation of this protein is probably a necessary, if not sufficient step for tumorigenesis.
Other Notes	Small volumes of anti-PTCH1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, 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.
Searchable Terms for PTCH1 purchase	MBS7050288 is an antibody targeting PTCH1. Also known as PTCH1 Antibody, Biotin conjugated. Reactive in Human. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PTCH1. It may not necessarily be applicable to this product.

NCBI GI #	134254446
NCBI GeneID	5727
NCBI Accession #	NP_000255.2
UniProt Primary Accession #	Q13635
UniProt Secondary Accession #	Q13463; Q5R1U7; Q5R1U9; Q5R1V0; Q5VZC0; Q5VZC2; Q86XG7; A3KBI9; E9PEJ8
UniProt Related Accession #	Q13635
GenBank Nucleotide #	NM_000264.3
NCBI Official Full Name	protein patched homolog 1 isoform L
NCBI Official Synonym Full Names	patched 1
NCBI Official Symbol	PTCH1
NCBI Official Synonym Symbols	PTC; BCNS; HPE7; PTC1; PTCH; NBCCS; PTCH11
UniProt Protein Name	Protein patched homolog 1
UniProt Gene Name	PTCH1
UniProt Synonym Gene Names	PTCH; PTC; PTC1
UniProt Entry Name	PTC1_HUMAN
NCBI Protein Information	protein patched homolog 1
NCBI Summary for PTCH1	This gene encodes a member of the patched gene family. The encoded protein is the receptor for sonic hedgehog, a secreted molecule implicated in the formation of embryonic structures and in tumorigenesis, as well as the desert hedgehog and indian hedgehog proteins. This gene functions as a tumor suppressor. Mutations of this gene have been associated with basal cell nevus syndrome, esophageal squamous cell carcinoma, trichoepitheliomas, transitional cell carcinomas of the bladder, as well as holoprosencephaly. Alternative splicing results in multiple transcript variants encoding different isoforms. Additional splice variants have been described, but their full length sequences and biological validity cannot be determined currently. [provided by RefSeq, Jul 2008]

UniProt Comments for PTCH1	PTCH1: a multi-pass membrane protein member of the ?patched? family that acts as a receptor for sonic hedgehog (SHH), indian hedgehog (IHH) and desert hedgehog (DHH). Associates with the smoothened protein (SMO) to transduce the hedgehog protein?s signal. Seems to have a tumor suppressor function, as inactivation of this protein is probably a necessary, if not sufficient step for tumorigenesis. Interacts with SNX17. Expressed in tumor cells but not in normal skin. In the embryo, found in all major target tissues of sonic hedgehog, such as the ventral neural tube, somites, and tissues surrounding the zone of polarizing activity of the limb bud. Defects in PTCH1 are the cause of basal cell nevus syndrome (BCNS), also known as Gorlin syndrome. BCNS is an autosomal dominant disease characterized by nevoid basal cell carcinomas and developmental abnormalities such as rib and craniofacial alterations, polydactyly, syndactyly, and spina bifida. In addition, the patients suffer from a multitude of tumors like basal cell carcinomas, fibromas of the ovaries and heart, cysts of the skin, jaws and mesentery, as well as medulloblastomas and meningiomas. PTCH1 defects is also the cause of holoprosencephaly, the most common structural anomaly of the brain, in which the developing forebrain fails to correctly separate into right and left hemispheres. Protein type: Cell cycle regulation; Membrane protein, integral; Membrane protein, multi-pass; Tumor suppressor Chromosomal Location of Human Ortholog: 9q22.3 Cellular Component: caveola; Golgi apparatus; intracellular membrane-bound organelle; perinuclear region of cytoplasm; plasma membrane Molecular Function: cholesterol binding; cyclin binding; protein binding; smoothened binding Biological Process: brain development; dorsal/ventral pattern formation; embryonic limb morphogenesis; limb morphogenesis; negative regulation of multicellular organism growth; negative regulation of osteoblast differentiation; negative regulation of smoothened signaling pathway; negative regulation of transcription factor activity; negative regulation of transcription from RNA polymerase II promoter; neural plate pattern formation; neural tube patterning; organ morphogenesis; pharyngeal system development; protein processing; regulation of smoothened signaling pathway; smoothened signaling pathway Disease: Basal Cell Carcinoma, Susceptibility To, 1; Basal Cell Nevus Syndrome; Holoprosencephaly 7
Research Articles on PTCH1	**1.** PTCH1 mutations contribute to as much as 10% of ODA, identify the SHH signaling pathway as a novel effector of SOX2 activity during human ocular development, and indicate that ODA is likely the result of overactive SHH signaling in humans harboring mutations in either PTCH1 or SOX2.
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