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Product datasheet

Anti-Patched / PTCH1 antibody ab109096

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Overview

Product name	Anti-Patched / PTCH1 antibody
Description	Goat polyclonal to Patched / PTCH1
Host species	Goat
Specificity	ab109096 is expected to recognise all reported isoforms. Variants (NP_001077073.1; NP_001077074.1; NP_001077075.1; NP_001077076.1 encode the same isoform.
Tested applications	**Suitable for:** ICC/IF, IHC-P
Species reactivity	**Reacts with:** Human **Predicted to work with:** Rat, Chicken, Xenopus laevis
Immunogen	Synthetic peptide corresponding to Human Patched/ PTCH1 aa 1400 to the C-terminus (C terminal). Database link: **Q13635** Run BLAST with Run BLAST with
Positive control	Human Colon tissue.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7.30 Preservative: 0.02% Sodium azide Constituents: Tris buffered saline, 0.5% BSA
Purity	Immunogen affinity purified
Purification notes	ab109096 is purified from Goat serum by ammonium sulphate precipitation followed by antigen affinity chromatography using the immunizing peptide.

Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab109096 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		Use a concentration of 10 µg/ml.
IHC-P	★★★★☆ (1)	Use a concentration of 8 - 0 µg/ml. Steamed antigen retrieval with citrate buffer pH 6.

Target

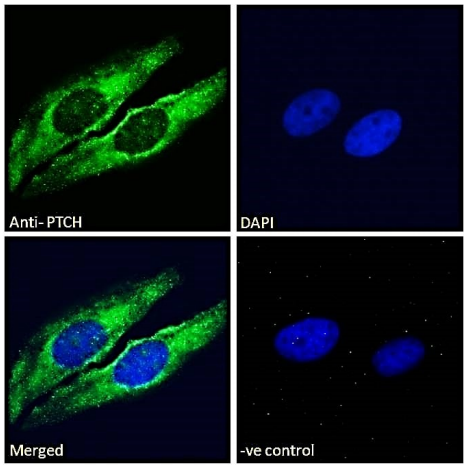
Function	Acts as a receptor for sonic hedgehog (SHH), indian hedgehog (IHH) and desert hedgehog (DHH). Associates with the smoothened protein (SMO) to transduce the hedgehog's proteins signal. Seems to have a tumor suppressor function, as inactivation of this protein is probably a necessary, if not sufficient step for tumorigenesis.
Tissue specificity	In the adult, expressed in brain, lung, liver, heart, placenta, skeletal muscle, pancreas and kidney. Expressed in tumor cells but not in normal skin.
Involvement in disease	Defects in PTCH1 are probably the cause of basal cell nevus syndrome (BCNS) [MIM:109400]; also known as Gorlin syndrome or Gorlin-Goltz syndrome. BCNS is an autosomal dominant disease characterized by nevoid basal cell carcinomas (NBCCS) 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 (BCC), fibromas of the ovaries and heart, cysts of the skin, jaws and mesentery, as well as medulloblastomas and meningiomas. PTCH1 is also mutated in squamous cell carcinoma (SCC). Could also be associated with large body size observed in BCNS patients. Defects in PTCH1 are a cause of sporadic basal cell carcinoma (BCC) [MIM:605462]. Defects in PTCH1 are the cause of holoprosencephaly type 7 (HPE7) [MIM:610828]. Holoprosencephaly (HPE) [MIM:236100] is the most common structural anomaly of the brain, in which the developing forebrain fails to correctly separate into right and left hemispheres. Holoprosencephaly is genetically heterogeneous and associated with several distinct facies and phenotypic variability.
Sequence similarities	Belongs to the patched family. Contains 1 SSD (sterol-sensing) domain.
Developmental stage	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.
Post-translational modifications	Glycosylation is necessary for SHH binding.
Cellular localization	Membrane.

Images

Images

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Patched / PTCH1 antibody (ab109096)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human cortex tissue labelling Patched / PTCH1 with ab109096 at 8 µg/mL.



Immunocytochemistry/ Immunofluorescence - Anti-Patched / PTCH1 antibody (ab109096)

Immunofluorescence analysis of paraformaldehyde fixed HeLa cells, permeabilized with 0.15% Triton. Primary incubation 1hr at 10 ug/mL followed by Alexa Fluor 488 secondary antibody at 2 ug/mL, showing Golgi/cytoplasmic staining. The nuclear stain is DAPI (blue). Negative control: Unimmunized goat IgG at 10 ug/mL followed by Alexa Fluor 488 secondary antibody at 2 ug/mL.

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