abcam

Product datasheet

Anti-Patched / PTCH1 antibody ab51983

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Overview

Product name	Anti-Patched / PTCH1 antibody
Description	Goat polyclonal to Patched / PTCH1
Host species	Goat
Tested applications	**Suitable for:** ICC, WB
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Cow, Dog, Pig
Immunogen	Synthetic peptide corresponding to Human Patched/ PTCH1 aa 1271-1285 (internal sequence). Sequence: C-HPESRHHPPSNPRQQ Database link: **Q13635** (Peptide available as **ab200894**) Run BLAST with Run BLAST with
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 or -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer	pH: 7.30 Preservative: 0.02% Sodium azide Constituents: 0.5% BSA, Tris buffered saline
Purity	Immunogen affinity purified
Purification notes	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 ab51983 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		Use at an assay dependent concentration.
WB	★★☆☆☆ (1)	Use a concentration of 1 - 3 µg/ml. Detects a band of approximately 150 kDa (predicted molecular weight: 161 kDa). 1 hour primary incubation is recommended for this product.

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.

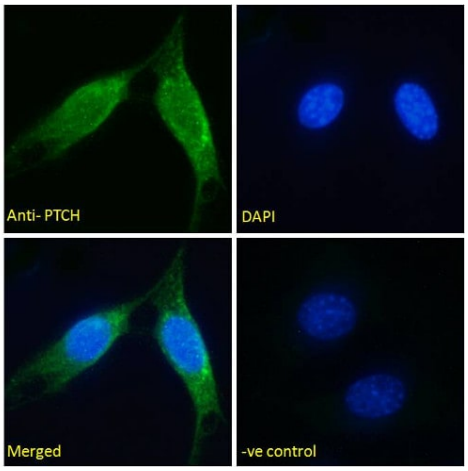
Sequence similarities Belongs to the patched family.
Contains 1 SSD (sterol-sensing) domain.

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.

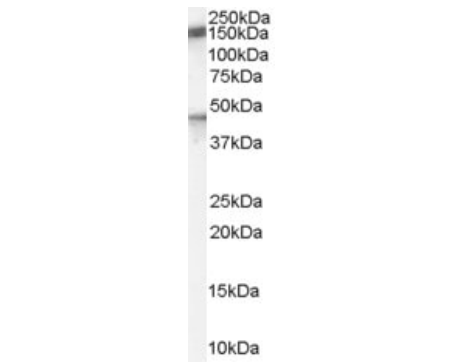
Cellular localization Membrane.

Images



Immunocytochemistry - Anti-Patched / PTCH1 antibody (ab51983)

Immunofluorescence analysis of paraformaldehyde fixed NIH3T3 cells permeabilized with 0.15% Triton staining Patched / PTCH1. Primary incubation with ab51983 (5µg/ml) for 1 hour followed by Alexa Fluor 488 secondary antibody (2µg/ml). Nuclear counter stain is DAPI.



Western blot - Anti-Patched / PTCH1 antibody (ab51983)

Anti-Patched / PTCH1 antibody (ab51983) at 1 µg/ml + Human Brain lysate in RIPA buffer at 35 µg

Predicted band size: 161 kDa
Observed band size: 150 kDa

Primary incubation was 1 hour. Detected by chemiluminescence.

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