abcam

Product datasheet

Anti-Patched / PTCH1 antibody ab53715

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Overview

Product name	Anti-Patched / PTCH1 antibody
Description	Rabbit polyclonal to Patched / PTCH1
Host species	Rabbit
Specificity	ab53715 detects endogenous levels of total Patched/PTCH1 protein. In WB, in addition to the expected band at 150 kDa an extra band at 75 kDa is often detected. Both bands can be blocked with the immunogen peptide. In IHC, cytoplasmic and membrane staining is frequently observed. These results are similar to what we see with other antibodies against this target.
Tested applications	**Suitable for:** WB, IHC-P
Species reactivity	**Reacts with:** Mouse, Human
Immunogen	Synthetic peptide corresponding to Human Patched/ PTCH1 (N terminal). Immunogen is in the range of aa 1-50. Database link: **Q13635**
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. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: 50% Glycerol, 0.87% Sodium chloride, PBS
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab53715 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
WB	★★★★☆ (5)	1/500 - 1/1000. Predicted molecular weight: 161 kDa.
IHC-P	★★★★★ (1)	Use at an assay dependent concentration.

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.

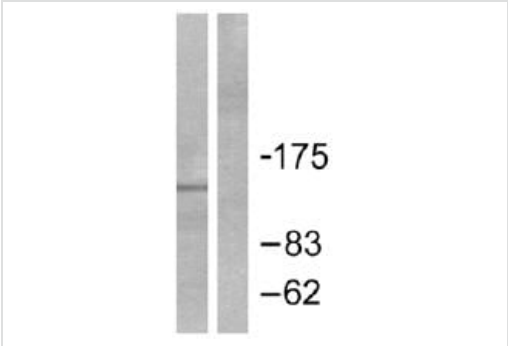
Sequence similarities Belongs to the patched family.
Contains 1 SSD (sterol-sensing) domain.

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

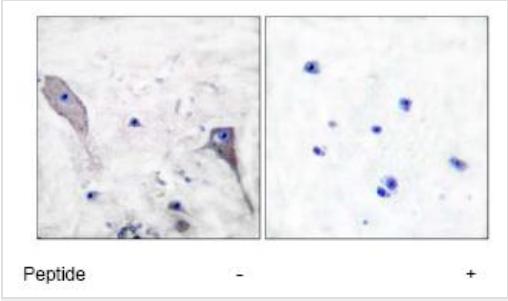


Western blot - Anti-Patched / PTCH1 antibody (ab53715)

All lanes : Anti-Patched / PTCH1 antibody (ab53715) at 1/500 dilution

Lane 1 : Extracts from mouse muscle cells, minus immunising peptide
Lane 2 : Extracts from mouse muscle cells, plus immunising peptide

Predicted band size: 161 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Patched / PTCH1 antibody (ab53715)

ab53715, at a 1/50 dilution, staining Patched / PTCH in paraffin embedded human brain tissue by Immunohistochemsitry in the absence (left image) or presence (right image) of the immunising peptide.

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