abcam

ab300036

Anti-PTCH2 antibody [EPR26073-39]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR26073-39
Purification technique	Affinity purification Protein A
Concentration	0.467 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/100
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Mouse
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

ICC/IF

Tested

Species	Human
Dilution info	50 mg/mL
Notes	-

Not recommended

Species	Mouse, Rat

Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/500
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt

Not recommended

Species	Mouse, Human, Rat
Dilution info	-

Notes	-

Target data

See full target information PTCH2

Function	Plays a role in the control of cellular growth (PubMed:18285427). May have a role in epidermal development. May act as a receptor for Sonic hedgehog (SHH).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	PTCH2 also known as Patched 2 is a protein with a mass of approximately 145 kDa. It is a member of the Patched family of proteins and functions as a transmembrane receptor. PTCH2 is predominantly found on the surface of cells in tissues such as skin brain and testes. The protein serves an important role in regulating the signaling of the Hedgehog pathway by binding to its ligand Sonic Hedgehog which controls the activity of the smoothened (SMO) receptor.
Biological function summary	PTCH2 participates in the negative regulation of the Hedgehog signaling pathway. It forms a receptor complex with other proteins to maintain proper cell communication and growth control. PTCH2 is part of a larger complex that includes Patched 1 (PTCH1) contributing to embryonic development and tissue patterning. Its regulation of cellular growth and differentiation processes is critical for these activities.
Pathways	PTCH2 is a critical component of the Hedgehog signaling pathway and the development pathway. It closely interacts with PTCH1 and SMO in regulating signal transduction. Communication within these pathways is essential for tissue patterning and organogenesis. PTCH2's modulation of SMO results in downstream effects which impact the transcription of target genes controlling cell proliferation.
Associated diseases and disorders	PTCH2 has a link to basal cell carcinoma and medulloblastoma. Its aberrant signaling and mutations may lead to uncontrolled cellular proliferation contributing to the onset of these cancers. The protein's interaction with PTCH1 also affects cancer susceptibility since both proteins can influence the progression and risk of developing tumors associated with the Hedgehog pathway.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

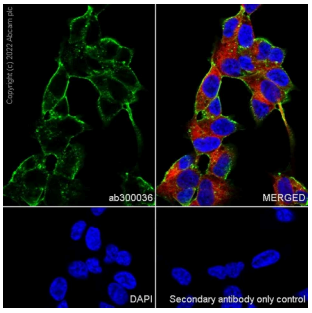
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

7 product images

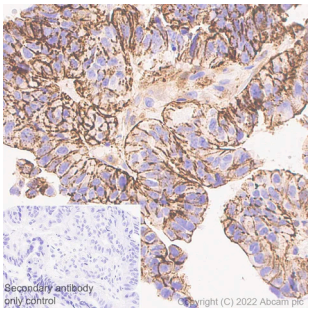


Immunocytochemistry/ Immunofluorescence - Anti-PTCH2 antibody [EPR26073-39] (ab300036)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeilized SH-SY5Y (human neuroblastoma epithelial cell) cells lebelling PTCH2 with ab300036 at 1/50 dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 dilution (Green). Confocal image showing membrane and weak cytoplasm staining in SH-SY5Y cell line.

Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594, ab195889) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: PBS was used instead of primary antibody followed by secondary antibody (ab150081) Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution.



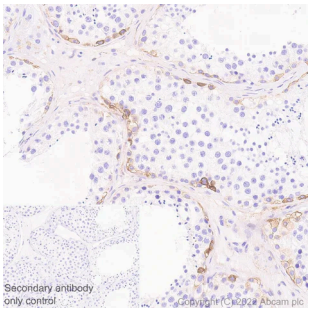
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PTCH2 antibody [EPR26073-39] (ab300036)

PTCH2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PTCH2 antibody

Immunohistochemical analysis of paraffin-embedded human ovarian carcinoma tissue labeling PTCH2 with ab300036 at 1/100 followed by a ready to use LeicaDS9800 (BOND™ Polymer Refine Detection). Positive staining on human ovarian carcinoma. The section was incubated with ab300036 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: PBS was used instead of primary antibody (ab300036) followed by ready to use secondary antibody LeicaDS9800 (BOND™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.

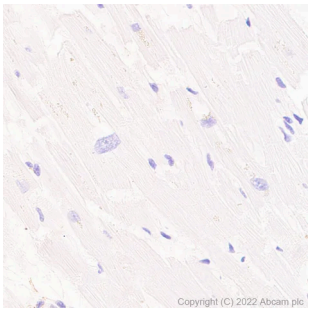


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PTCH2 antibody [EPR26073-39] (ab300036)

Immunohistochemical analysis of paraffin-embedded human testis tissue labeling PTCH2 with ab300036 at 1/100 followed by a ready to use LeicaDS9800 (BOND™ Polymer Refine Detection). Positive staining on human testis. The section was incubated with ab300036 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

Secondary antibody only control: PBS was used instead of primary antibody (ab300036) followed by ready to use secondary antibody LeicaDS9800 (BOND™ Polymer Refine Detection).

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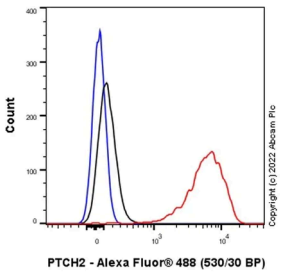
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PTCH2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-PTCH2 antibody

Immunohistochemical analysis of paraffin-embedded human cardiac muscle tissue labeling PTCH2 with ab300036 at 1/100 followed by a ready to use LeicaDS9800 (BOND™ Polymer Refine Detection). **Negative control:** no staining on human cardiac muscle. The section was incubated with ab300036 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin.

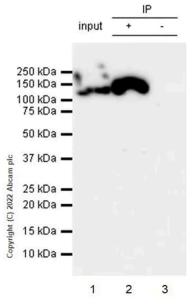
Secondary antibody only control: PBS was used instead of primary antibody (ab300036) followed by ready to use secondary antibody LeicaDS9800 (BOND™ Polymer Refine Detection).

Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Flow Cytometry (Intracellular) - Anti-PTCH2 antibody [EPR26073-39] (ab300036)

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized SH-SY5Y (human neuroblastoma epithelial cell) cells labelling PTCH2 with ab300036 at 1/500 dilution (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody.



Immunoprecipitation - Anti-PTCH2 antibody [EPR26073-39] (ab300036)

PTCH2 was immunoprecipitated from 0.35 mg SH-SY5Y (human neuroblastoma epithelial cell) whole cell lysate 10 µg with ab300036 at 1/30 dilution. Western blot was performed on the immunoprecipitate using ab300036 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP) (ab131366) was used at 1/5000 dilution.

Lane 1: SH-SY5Y (human neuroblastoma epithelial cell) whole cell lysate 10 µg (Input)

Lane 2: ab300036 IP in SH-SY5Y whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab300036 in SH-SY5Y whole cell lysate

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 32 seconds

Lysates were made freshly and used in IP test immediately to minimize protein degradation.

All lanes:
Immunoprecipitation - Anti-PTCH2 antibody [EPR26073-39] (ab300036) at 1/1000 dilution

Lane 1:

SH-SY5Y (human neuroblastoma epithelial cell) whole cell lysate (Input) at 10 µg

Lane 2:
ab300036 IP in SH-SY5Y whole cell lysate

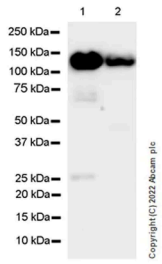
Lane 3:
Rabbit monoclonal IgG (ab172730) instead of ab300036 in SH-SY5Y whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Predicted band size: 131 kDa

Exposure time: 32s



Western blot - Anti-PTCH2 antibody [EPR26073-39] (ab300036)

Blocking and dilution buffer and concentration: 5% NFDM/TBST.
All lanes:
Western blot - Anti-PTCH2 antibody [EPR26073-39] (ab300036) at 1/1000 dilution

Lane 1:
SH-SY5Y (human neuroblastoma epithelial cell) whole cell lysate at 20 µg

Lane 2:
MDA-MB-231 (human breast adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/50000 dilution

Predicted band size: 131 kDa

Observed band size: 130 kDa

Exposure time: 158s

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.