# Anti-Patched / PTCH1 antibody ab51983

**Product name**: Anti-Patched / PTCH1 antibody

**Description**: Goat polyclonal to Patched / PTCH1

**Host species**: Goat

**Tested applications**: Suitable for: ICC/IF, 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)

**Positive control**: Human brain lysate

**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**

- Preservative: 0.02% Sodium Azide
- Constituents: 0.5% BSA, Tris buffered saline, pH 7.3

**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
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.

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<th>Application</th>
<th>Abviews</th>
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<tr>
<td>ICC/IF</td>
<td></td>
<td>Use at an assay dependent concentration. PubMed: 21533246</td>
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<tr>
<td>WB</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use a concentration of 1 - 3 µg/ml. Detects a band of approximately 150 kDa (predicted molecular weight: 161 kDa). Can be blocked with Human Patched / PTCH1 peptide (ab200894).</td>
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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.
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.

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

why is the actual band size different from the predicted?

Primary incubation was 1 hour. Detected by chemiluminescence.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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