Product datasheet

Anti-Patched / PTCH1 antibody ab53715

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, ELISA, 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
Positive control       IHC-P: Human brain tissue WB: Mouse muscle membrane lysate

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

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.
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.

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<td>ELISA</td>
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<td>1/10000.</td>
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<tr>
<td>IHC-P</td>
<td>★★★★☆</td>
<td>Use at an assay dependent concentration.</td>
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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 Immunohistochemistry in the absence (left image) or presence (right image) of the immunising peptide.

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

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