


## Product datasheet

### Anti-Ihh antibody ab39634

★★★★★ [3 Abreviews](#) [41 References](#) [5 Images](#)

#### Overview

<b>Product name</b>	Anti-Ihh antibody
<b>Description</b>	Rabbit polyclonal to Ihh
<b>Host species</b>	Rabbit
<b>Specificity</b>	Replenishment batches of our polyclonal antibody, ab39634 are tested in IHC-P. Previous batches were additionally validated in ICC/IF and WB. These applications are still expected to work and are covered by our Abpromise guarantee. You may also be interested in our alternative recombinant antibody, <a href="#">ab52919</a> .
<b>Tested applications</b>	<b>Suitable for:</b> WB, ICC/IF, IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Human <b>Predicted to work with:</b> Cow 
<b>Immunogen</b>	Synthetic peptide corresponding to Mouse Ihh aa 350 to the C-terminus (C terminal) conjugated to keyhole limpet haemocyanin. (Peptide available as <a href="#">ab39633</a> )
<b>Positive control</b>	Brain (Mouse) Tissue Lysate Colon (Mouse) Tissue Lysate - normal tissue NIH 3T3 (Mouse embryonic fibroblast cell line) Whole cell lysate
<b>General notes</b>	<p>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.</p> <p>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&amp;As</p>

#### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS

Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.

<b>Purity</b>	Immunogen affinity purified
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab39634 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		Use a concentration of 1 µg/ml. Detects a band of approximately 42 kDa (predicted molecular weight: 45 kDa).
ICC/IF		Use a concentration of 1 µg/ml.
IHC-P	★★★★★ (2)	Use a concentration of 5 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

## Target

**Function** Intercellular signal essential for a variety of patterning events during development. Binds to the patched (PTC) receptor, which functions in association with smoothened (SMO), to activate the transcription of target genes. Implicated in endochondral ossification: may regulate the balance between growth and ossification of the developing bones. Induces the expression of parathyroid hormone-related protein (PTHrP).

**Tissue specificity** Expressed in embryonic lung, and in adult kidney and liver.

**Involvement in disease** Defects in IHH are the cause of brachydactyly type A1 (BDA1) [MIM:112500]. BDA1 is an autosomal dominant disorder characterized by middle phalanges of all the digits rudimentary or fused with the terminal phalanges. The proximal phalanges of the thumbs and big toes are short. Defects in IHH are a cause of acrocapitofemoral dysplasia (ACFD) [MIM:607778]. ACFD is a disorder characterized by short stature of variable severity with postnatal onset. The most constant radiographic abnormalities are observed in the tubular bones of the hands and in the proximal part of the femur. Cone-shaped epiphyses or a similar epiphyseal configuration with premature epimetaphyseal fusion result in shortening of the skeletal components involved. Cone-shaped epiphyses were also present to a variable extent at the shoulders, knees, and ankles.

**Sequence similarities** Belongs to the hedgehog family.

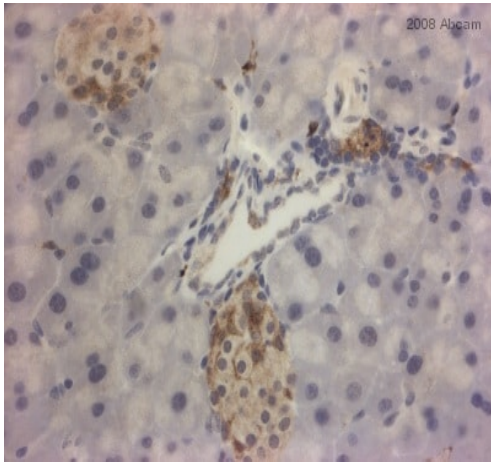
**Post-translational modifications** The C-terminal domain displays an autoproteolysis activity and a cholesterol transferase activity. Both activities result in the cleavage of the full-length protein and covalent attachment of a cholesterol moiety to the C-terminal of the newly generated N-terminal fragment (N-product). The N-product is the active species in both local and long-range signaling, whereas the C-product has no signaling activity. Cholesterylation is required for N-product targeting to lipid rafts and multimerization.

Palmitoylated. N-palmitoylation is required for N-product multimerization and full activity.

## Cellular localization

Secreted > extracellular space. The C-terminal peptide diffuses from the cell and Cell membrane. The N-terminal peptide remains associated with the cell surface.

## Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Lihh antibody (ab39634)

This image is courtesy of an Abreview submitted by Antibody Solutions Ltd.

ab39634 (1/50) staining Lihh in paraffin-embedded mouse pancreas tissue sections. Tissue underwent fixation in formaldehyde, heat-mediated antigen retrieval in citrate buffer pH 6.0 and blocking (5 minutes/peroxidase block and 10 minutes/protein block). For further experimental details please refer to abreview. Strongest staining observed in islet cells of the pancreas.



Western blot - Anti-Lihh antibody (ab39634)

Anti-Lihh antibody (ab39634) at 1 µg/ml + Lung (Human) Whole Cell Lysate - fetal normal tissue ([ab30282](#)) at 10 µg

### Secondary

Goat Anti-Rabbit IgG H&L (HRP) preadsorbed ([ab97080](#)) at 1/5000 dilution

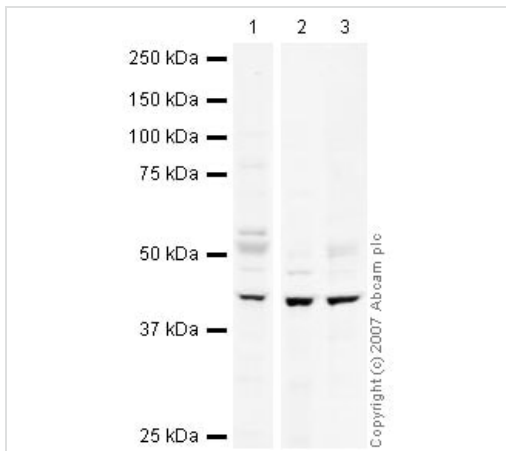
Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 45 kDa

**Observed band size:** 45 kDa

**Exposure time:** 30 seconds



Western blot - Anti-Ihh antibody (ab39634)

**All lanes :** Anti-Ihh antibody (ab39634) at 1 µg/ml

**Lane 1 :** Brain (Mouse) Tissue Lysate

**Lane 2 :** Mouse colon tissue lysate - total protein ([ab29544](#))

**Lane 3 :** NIH/3T3 whole cell lysate ([ab7179](#))

Lysates/proteins at 10 µg per lane.

### Secondary

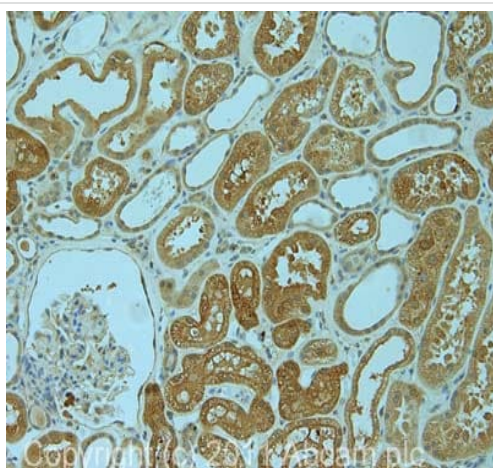
**All lanes :** IRDye 680 Conjugated Goat Anti-Rabbit IgG (H+L) at 1/10000 dilution

Performed under reducing conditions.

**Predicted band size:** 45 kDa

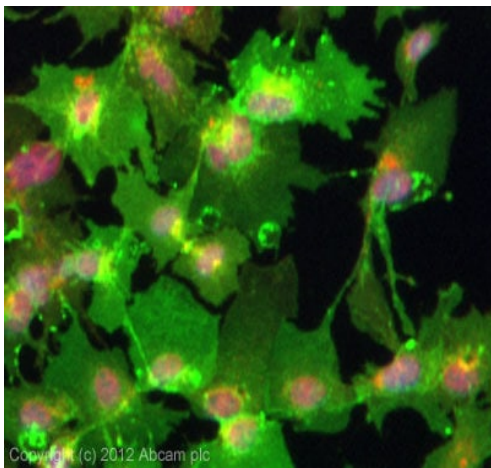
**Observed band size:** 42 kDa

The Ihh protein has a predicted molecular weight of 45 kDa. The first 27 amino acids of the Ihh sequence act as a signal sequence, and when cleaved the protein has an expected molecular weight of 42 kDa.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ihh antibody (ab39634)

IHC image of Ihh staining in human normal kidney formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab39634, 5µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunocytochemistry/ Immunofluorescence - Anti-Ihh antibody (ab39634)

ICC/IF image of ab39634 stained HepG2 cells. The cells were 4% PFA fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab39634, 1µg/ml) overnight at +4°C. The secondary antibody (green) was **ab96899**, DyLight® 488 goat anti-rabbit IgG (H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM. This antibody also gave a positive result in 100% methanol fixed (5 min) HepG2 cells at 5µg/ml.

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

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