


Anti-BMPR1A antibody ab174815

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Overview

Product name	Anti-BMPR1A antibody
Description	Rabbit polyclonal to BMPR1A
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P
Species reactivity	Reacts with: Human Predicted to work with: Mouse, Rat, Sheep, Rabbit, Goat, Cow, Cat, Pig, Chimpanzee, Macaque monkey, Gorilla 
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	This antibody gave a positive signal in the following whole cell lysates: MCF7; MDA MB 231; Caco2; LoVo; HeLa. This antibody gave a positive result in IHC in the following FFPE tissue: Normal human heart muscle.
General notes	<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&As</p>

Properties

Form	Liquid
Storage instructions	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.
Storage buffer	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.

Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab174815 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 58 kDa (predicted molecular weight: 60 kDa).
IHC-P		Use a concentration of 5 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Target

Function On ligand binding, forms a receptor complex consisting of two type II and two type I transmembrane serine/threonine kinases. Type II receptors phosphorylate and activate type I receptors which autophosphorylate, then bind and activate SMAD transcriptional regulators. Receptor for BMP2, BMP4, GDF5 and GDF6. Positively regulates chondrocyte differentiation through GDF5 interaction. Mediates induction of adipogenesis by GDF6.

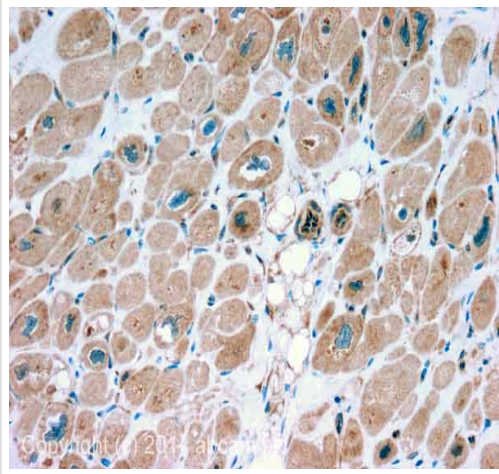
Tissue specificity Highly expressed in skeletal muscle.

Involvement in disease Juvenile polyposis syndrome
Polyposis syndrome, mixed hereditary 2
A microdeletion of chromosome 10q23 involving BMPR1A and PTEN is a cause of chromosome 10q23 deletion syndrome, which shows overlapping features of the following three disorders: Bannayan-Zonana syndrome, Cowden disease and juvenile polyposis syndrome.

Sequence similarities Belongs to the protein kinase superfamily. TKL Ser/Thr protein kinase family. TGFB receptor subfamily.
Contains 1 GS domain.
Contains 1 protein kinase domain.

Cellular localization Membrane.

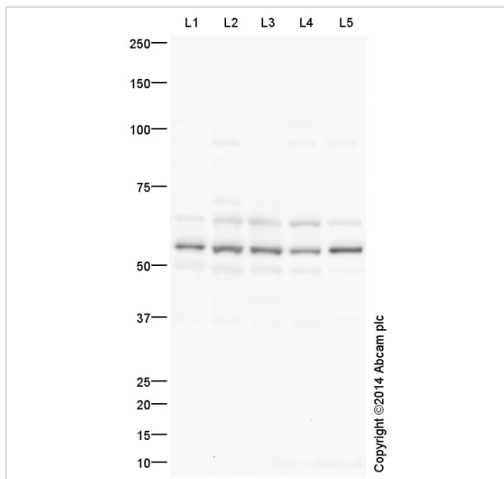
Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-BMPR1A antibody (ab174815)

IHC image of TBMPR1A staining in Normal human heart muscle 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 ab174815, 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.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.



Western blot - Anti-BMPR1A antibody (ab174815)

All lanes : Anti-BMPR1A antibody (ab174815) at 1 µg/ml

Lane 1 : MCF7 (Human breast adenocarcinoma cell line) Whole Cell Lysate

Lane 2 : MDA-MB-231 (Human breast adenocarcinoma cell line) Whole Cell Lysate

Lane 3 : Caco 2 (Human colonic carcinoma cell line) Whole Cell Lysate

Lane 4 : SW480 (Human colon adenocarcinoma cell line) Whole Cell Lysate

Lane 5 : HeLa (Human epithelial carcinoma cell line) Whole Cell Lysate

Lysates/proteins at 1 µg/ml per lane.

Secondary

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

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 60 kDa

Observed band size: 58 kDa

Additional bands at: 65 kDa (possible non-specific binding)

Exposure time: 2 minutes

The band observed at 58 kDa could potentially be a cleaved form of BMPR1A due to the presence of a 23 amino acid signal peptide.

This blot was produced using a 4-12% Bis-tris gel under the MOPS buffer system. The gel was run at 200V for 50 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes.

The membrane was then blocked for an hour using 2% Bovine Serum Albumin before being incubated with ab174815 overnight at 4°C. Antibody binding was detected using an anti-rabbit antibody conjugated to HRP, and visualised using ECL development solution **ab133406**

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