

Product datasheet

Anti-BMPR1B antibody [MM0055-3E12] ab78417

[7 References](#) [2 Images](#)

Overview

Product name	Anti-BMPR1B antibody [MM0055-3E12]
Description	Mouse monoclonal [MM0055-3E12] to BMPR1B
Host species	Mouse
Specificity	ab78417 detects BMPR1B. No cross reactivity was found to BMPR1A (ALK3).
Tested applications	Suitable for: WB, IHC-P
Species reactivity	Reacts with: Human
Immunogen	Recombinant human BMPR1B extracellular domain
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. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	Constituent: PBS
Purity	Protein G purified
Purification notes	The IgG fraction of culture supernatant was purified by Protein G affinity chromatography and lyophilized from a 0.2 µm filtered solution in phosphate buffered saline (PBS).
Clonality	Monoclonal
Clone number	MM0055-3E12
Isotype	IgG2a

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab78417 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		1/100 - 1/1000. Detects a band of approximately 57 kDa (predicted molecular weight: 57 kDa).
IHC-P		1/50 - 1/200.

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 BMP7/OP-1 and GDF5.

Involvement in disease

Defects in BMPR1B are the cause of acromesomelic chondrodysplasia with genital anomalies (AMDGA) [MIM:609441]. Acromesomelic chondrodysplasias are rare hereditary skeletal disorders characterized by short stature, very short limbs, and hand/foot malformations. The severity of limb abnormalities increases from proximal to distal with profoundly affected hands and feet showing brachydactyly and/or rudimentary fingers (knob-like fingers). Defects in BMPR1B are a cause of brachydactyly type A2 (BDA2) [MIM:112600]. Brachydactylies (BDs) are a group of inherited malformations characterized by shortening of the digits due to abnormal development of the phalanges and/or the metacarpals. They have been classified on an anatomic and genetic basis into five groups, A to E, including three subgroups (A1 to A3) that usually manifest as autosomal dominant traits. BDA2 was described first in a large Norwegian kindred. BDA2 is caused by mutations in BMPR1B gene and studies demonstrate that these mutations function as dominant negatives in vitro and in vivo.

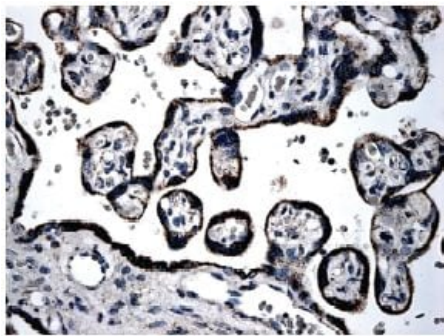
Sequence similarities

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

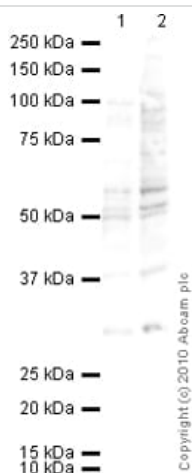
Membrane.

Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-BMPR1B antibody [MM0055-3E12] (ab78417)

ab78417 at 1/200 dilution staining BMPR1B in human placental tissue section by Immunohistochemistry (Formalin/PFA fixed paraffin-embedded sections).



Western blot - Anti-BMPR1B antibody [MM0055-3E12] (ab78417)

All lanes : Anti-BMPR1B antibody [MM0055-3E12] (ab78417) at 1 µg/ml

Lane 1 : Human bone tumor tissue lysate - total protein ([ab29359](#))

Lane 2 : WI38 (Human lung fibroblast cell line) Whole Cell Lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : Goat Anti-Mouse IgG H&L (HRP) preadsorbed ([ab97040](#)) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 57 kDa

Observed band size: 57 kDa

Additional bands at: 30 kDa, 37 kDa, 50 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 30 seconds

The band observed at 53 kDa could potentially be a cleaved form of BMPR1B due to presence of a 13 amino acid signal peptide.

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