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BMPR2 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP2006a

Specification

BMPR2 Antibody (N-term) - Product Information

Application	**WB, IHC-P, FC,E**
Primary Accession	Q13873
Other Accession	O35607
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**28-59**

BMPR2 Antibody (N-term) - Additional Information

Gene ID 659

Other Names
Bone morphogenetic protein receptor type-2, BMP type-2 receptor, BMPR-2, Bone morphogenetic protein receptor type II, BMP type II receptor, BMPR-II, BMPR2, PPH1

Target/Specificity
This BMPR2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 28-59 amino acids from the N-terminal region of human BMPR2.

Dilution
WB~~1:1000
IHC-P~~1:10~50
FC~~1:10~50

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
BMPR2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

BMPR2 Antibody (N-term) - Protein Information

Name BMPR2

Synonyms PPH1

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. Can also mediate signaling through the activation of the p38MAPK cascade (PubMed:12045205). Binds to BMP7, BMP2 and, less efficiently, BMP4. Binding is weak but enhanced by the presence of type I receptors for BMPs. Mediates induction of adipogenesis by GDF6.

Cellular Location
Cell membrane; Single-pass type I membrane protein

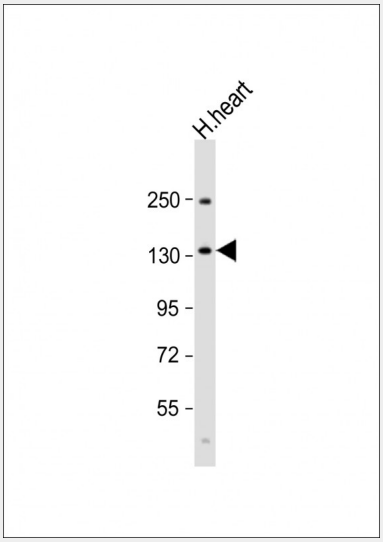
Tissue Location
Highly expressed in heart and liver.

BMPR2 Antibody (N-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

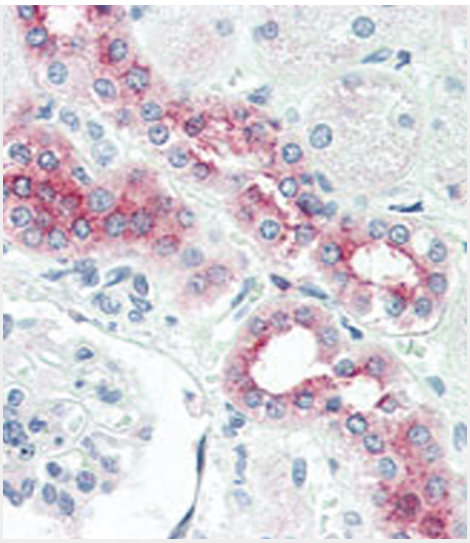
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

BMPR2 Antibody (N-term) - Images

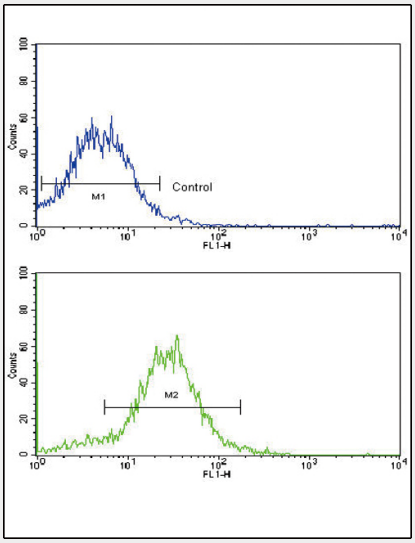


Anti-BMPR2 Antibody (D43) at 1:1000 dilution + human heart lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 115 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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Formalin-fixed and paraffin-embedded human Kidney tissue reacted with BMPR2 antibody (N-term)(Cat.#AP2006a), which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Flow cytometric analysis of HepG2 cells using BMPR2 Antibody (N-term)(bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

BMPR2 Antibody (N-term) - Background

BMPR2 is a member of the bone morphogenetic protein (BMP) receptor family of transmembrane serine/threonine kinases. The ligands of this receptor are BMPs, which are members of the TGF-beta superfamily. BMPs are involved in endochondral bone formation and embryogenesis. These proteins transduce their signals through the formation of heteromeric complexes of 2 different types of serine (threonine) kinase receptors: type I receptors of about 50-55 kD and type II receptors of about 70-80 kD. Type II receptors bind ligands in the absence of type I receptors, but they require their respective type I receptors for signaling, whereas type I receptors require their respective type II receptors for ligand binding. Mutations in BMPR2 have been associated with primary pulmonary hypertension.

BMPR2 Antibody (N-term) - References

Pouliot, F., et al., Cancer Res. 63(2):277-281 (2003). Nishihara, A., et al., Mol. Biol. Cell 13(9):3055-3063 (2002). Humbert, M., et al., Eur Respir J 20(3):518-523 (2002). Vitt, U.A., et al., Biol. Reprod. 67(2):473-480 (2002). Nohe, A., et al., J. Biol. Chem. 277(7):5330-5338 (2002).

BMPR2 Antibody (N-term) - Citations

- BMP-dependent, injury-induced stem cell niche as a mechanism of heterotopic ossification.
- BMP signaling induces astrocytic differentiation of clinically derived oligodendroglioma propagating cells.
- Roles of miR-1-1 and miR-181c in ventricular septal defects.
- Binding of carbon nanotube to BMP receptor 2 enhances cell differentiation and inhibits apoptosis via regulating bHLH transcription factors.
- Expression of gremlin, a bone morphogenetic protein antagonist,is associated with vascular calcification in uraemia.
- Dysfunction of Golgi tethers, SNAREs, and SNAPs in monocrotaline-induced pulmonary hypertension.
- The BMP type II receptor is located in lipid rafts, including caveolae, of pulmonary endothelium in vivo and in vitro.