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BMPR1A Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO2246a

Specification

BMPR1A Antibody - Product Information

Application	**E, WB, FC, IHC**
Primary Accession	P36894
Reactivity	**Human, Mouse**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**
Calculated MW	**60kDa KDa**

Description
The bone morphogenetic protein (BMP) receptors are a family of transmembrane serine/threonine kinases that include the type I receptors BMPR1A and BMPR1B and the type II receptor BMPR2. These receptors are also closely related to the activin receptors, ACVR1 and ACVR2. The ligands of these receptors are members of the TGF-beta superfamily. TGF-betas and activins transduce their signals through the formation of heteromeric complexes with 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.

Immunogen
Purified recombinant fragment of human BMPR1A (AA: 179-378) expressed in E. Coli.

Formulation
Ascitic fluid containing 0.03% sodium azide.

BMPR1A Antibody - Additional Information

Gene ID 657

Other Names
Bone morphogenetic protein receptor type-1A, BMP type-1A receptor, BMPR-1A, 2.7.11.30, Activin receptor-like kinase 3, ALK-3, Serine/threonine-protein kinase receptor R5, SKR5, CD292, BMPR1A, ACVRLK3, ALK3

Dilution
E~~1/10000
WB~~1/500 - 1/2000
FC~~1/200 - 1/400
IHC~~1/200 - 1/1000

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
BMPR1A Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

BMPR1A Antibody - Protein Information

Name BMPR1A

Synonyms ACVRLK3, ALK3

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. May promote the expression of HAMP, potentially via its interaction with BMP2 (By similarity).

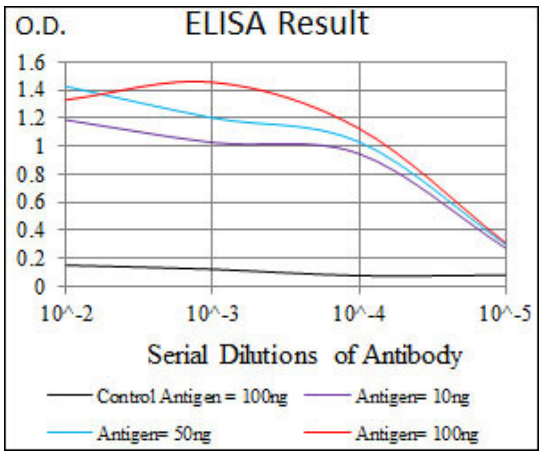
Cellular Location
Cell membrane; Single-pass type I membrane protein. Cell surface {ECO:0000250|UniProtKB:P36895}

Tissue Location
Highly expressed in skeletal muscle.

BMPR1A Antibody - 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



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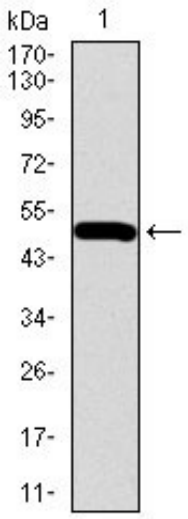

Figure 1: Western blot analysis using BMPR1A mAb against human BMPR1A recombinant protein. (Expected MW is 48.1 kDa)

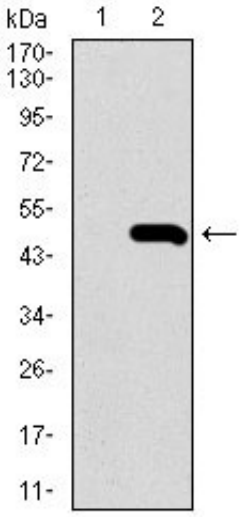

Figure 2: Western blot analysis using BMPR1A mAb against HEK293 (1) and BMPR1A (AA: 179-378)-hIgGFc transfected HEK293 (2) cell lysate.

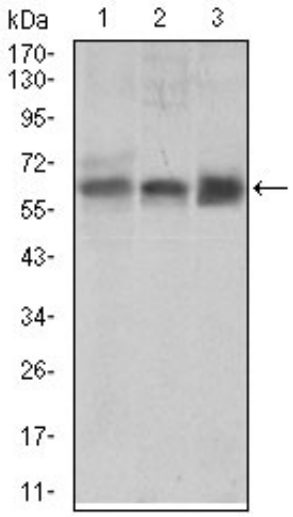

Figure 3: Western blot analysis using BMPR1A mouse mAb against PC-3 (1), K562 (2) cell lysate, and Mouse liver (3) tissue lysate.

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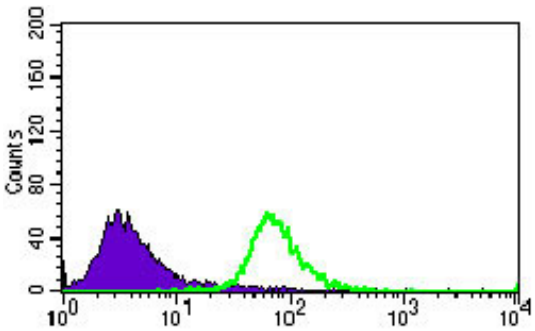

Figure 4: Flow cytometric analysis of HeLa cells using BMPR1A mouse mAb (green) and negative control (purple).

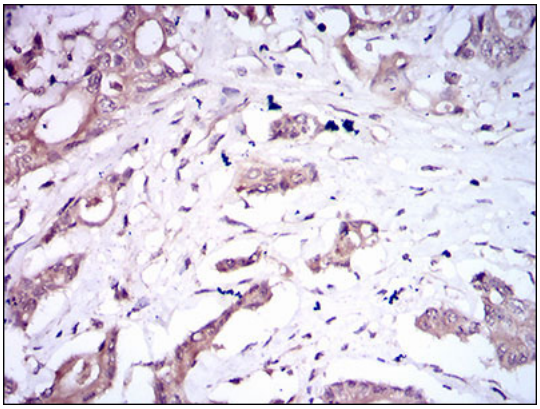

Figure 5: Immunohistochemical analysis of paraffin-embedded colon cancer tissues using BMPR1A mouse mAb with DAB staining.

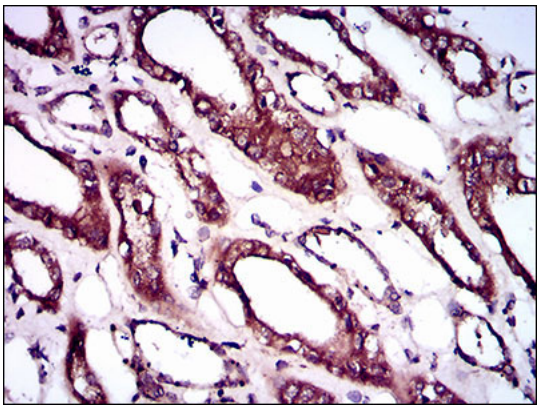

Figure 6: Immunohistochemical analysis of paraffin-embedded kidney tissues using BMPR1A mouse mAb with DAB staining.

BMPR1A Antibody - References

1.Acta Crystallogr Sect F Struct Biol Cryst Commun. 2011 May 1;67(Pt 5):551-5. 2.Gastroenterology. 2011 Jul;141(1):e23-6.