

# **BMPR1A Antibody**

Purified Mouse Monoclonal Antibody Catalog # AO2247a

### **Specification**

# **BMPR1A Antibody - Product Information**

Application E, WB, FC, IHC

Primary Accession
Reactivity
Host
Clonality
Isotype
Calculated MW

P36894
Human
Mouse
Mouse
Monoclonal
IgG1
CokDa 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**

Purified antibody in PBS with 0.05% 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}

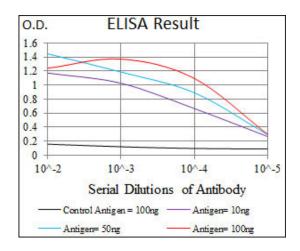
### **Tissue Location**

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





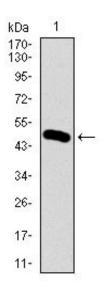


Figure 1: Western blot analysis using BMPR1A mAb against human BMPR1A recombinant protein. (Expected MW is 48.1 kDa)

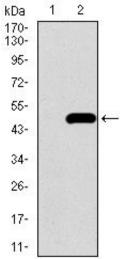


Figure 2: Western blot analysis using BMPR1A mAb against HEK293 (1) and BMPR1A (AA: 179-378)-hlgGFc transfected HEK293 (2) cell lysate.

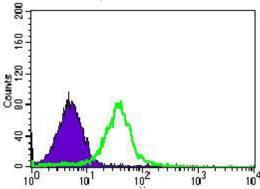


Figure 3: Flow cytometric analysis of Jurkat cells using BMPR1A mouse mAb (green) and negative control (purple).



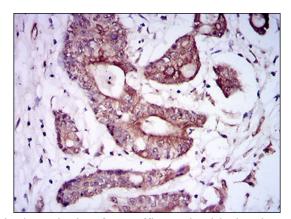


Figure 4: Immunohistochemical analysis of paraffin-embedded colon cancer tissues using BMPR1A mouse mAb with DAB staining.

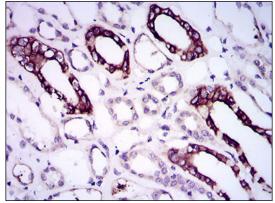


Figure 5: Immunohistochemical analysis of paraffin-embedded kidney tissues using BMPR1A mouse mAb with DAB staining.

# **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.