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BMPR1A Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO2247a

Product Information

Application	WB, IHC, FC, E
Primary Accession	P36894
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	4B7B2
Isotype	IgG1
Calculated MW	60198
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

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

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.

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.

Images

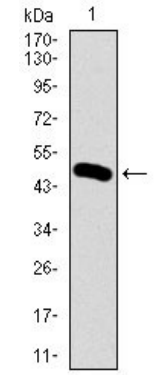


Figure 1: Western blot analysis using BMPR1A mAb against human BMPR1A recombinant protein. (Expected MW is 48.1 kDa)

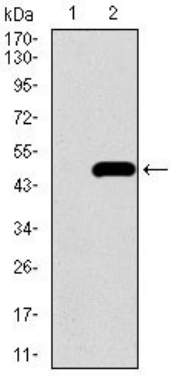
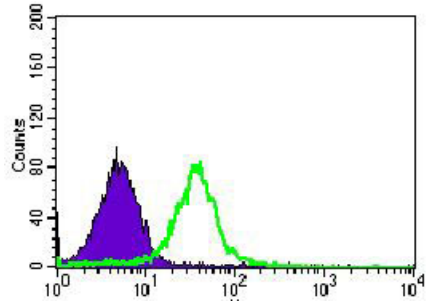


Figure 2: Western blot analysis using BMPR1A mAb against HEK293 (1) and BMPR1A (AA: 179-378)-hIgGFc transfected HEK293 (2) cell lysate.

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



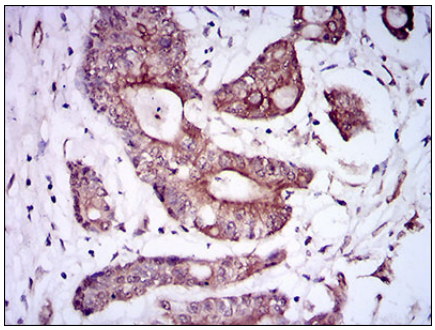


Figure 4: Immunohistochemical analysis of paraffin-embedded colon cancer tissues using BMPR1A mouse mAb with DAB staining.

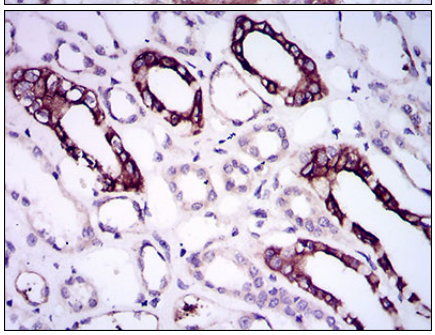


Figure 5: Immunohistochemical analysis of paraffin-embedded kidney tissues using BMPR1A mouse mAb with DAB staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.