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BMPR1A Rabbit pAb

Catalog # AP99637

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	P36894
Other Accession	P36894
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	60198
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human BMPR-1A
Epitope Specificity	101-200/532
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the protein kinase superfamily. TKL Ser/Thr protein kinase family. TGFB receptor subfamily. Contains 1 GS domain. Contains 1 protein kinase domain.
DISEASE	Defects in BMPR1A are a cause of juvenile polyposis syndrome (JPS) [MIM:174900]; also known as juvenile intestinal polyposis (JIP). JPS is an autosomal dominant gastrointestinal hamartomatous polyposis syndrome in which patients are at risk for developing gastrointestinal cancers. The lesions are typified by a smooth histological appearance, predominant stroma, cystic spaces and lack of a smooth muscle core. Multiple juvenile polyps usually occur in a number of Mendelian disorders. Sometimes, these polyps occur without associated features as in JPS; here, polyps tend to occur in the large bowel and are associated with an increased risk of colon and other gastrointestinal cancers.Defects in BMPR1A are a cause of Cowden disease (CD) [MIM:158350]. CD is an autosomal dominant cancer syndrome characterized by multiple hamartomas and by a high risk for breast, thyroid and endometrial cancers.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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. [provided by RefSeq].

Additional Information

Gene ID	657
Other Names	10q23del; ACVRLK3; ALK-3; ALK3; BMPR-1A; CD292; SKR5; 1110037I22Rik; BMPR-IA; Bmpr; BMR1A_HUMAN; BMPR1A; BMP type-1A receptor; Activin receptor-like kinase 3 (ALK-3); Serine/threonine-protein kinase receptor R5 (SKR5); 2.7.11.30; BMR1A_MOUSE; BMP-2/BMP-4 receptor; BMR1A_RAT; Bone morphogenetic protein 4 receptor; bone morphogenetic protein receptor type 1A; bone morphogenetic protein receptor, type IA
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=1ug /Test
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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.

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