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BMPR1A Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP2004a

Specification

BMPR1A Antibody (N-term) Blocking Peptide - Product Information

Primary Accession	P36894
Other Accession	NP_004320

BMPR1A Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 657

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

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP2004a was selected from the N-term region of human BMPR1A . A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

BMPR1A Antibody (N-term) Blocking Peptide - 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 {ECO:0000250|UniProtKB:P36898}; Single-pass type I membrane protein. Cell surface {ECO:0000250|UniProtKB:P36895}

Tissue Location
Highly expressed in skeletal muscle.

BMPR1A Antibody (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides

BMPR1A Antibody (N-term) Blocking Peptide - Images

BMPR1A Antibody (N-term) Blocking Peptide - Background

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.

BMPR1A Antibody (N-term) Blocking Peptide - References

Waite, K.A., et al., Hum. Mol. Genet. 12(6):679-684 (2003).Zhou, X.P., et al., Am. J. Hum. Genet. 69(4):704-711 (2001).Astrom, A.K., et al., Mamm. Genome 10(3):299-302 (1999).ten Dijke, P., et al., Oncogene 8(10):2879-2887 (1993).Ide, H., et al., Cytogenet. Cell Genet. 81 (3-4), 285-286 (1998).