

BMPR1A Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP2004e**Specification**

BMPR1A Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [P36894](#)**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 [AP2004e](/product/products/AP2004e) 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.

BMPRI1 Antibody (N-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

BMPRI1 Antibody (N-term) Blocking Peptide - Images**BMPRI1 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 BMPRI1 and BMPRI2 and the type II receptor BMPRII. 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. BMPRI1 binds BMP4 with high-affinity in solution and is a potent BMP-4 antagonist in vitro. In adult tissues, BMPRI1 is widely expressed, with the highest expression levels detected in skeletal muscle. BMPRI1 is also widely expressed during embryogenesis.