

## **BMPR1A Antibody (N-term K36) Blocking Peptide**

Synthetic peptide  
Catalog # BP2004c

### **Specification**

#### **BMPR1A Antibody (N-term K36) Blocking Peptide - Product Information**

Primary Accession [P36894](#)  
Other Accession [NP\\_004320](#)

#### **BMPR1A Antibody (N-term K36) 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 [<a href=/product/products/AP2004c>AP2004c</a> 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 K36) Blocking Peptide - Protein Information**

#### **BMPR1A Antibody (N-term K36) Blocking Peptide - Background**

The bone morphogenetic protein (BMP) receptors belong to a family of transmembrane serine/threonine kinases including 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. Both activins and TGF-beta transduce their signals through the formation of heteromeric complexes with 2 different types of serine (threonine) kinase receptors. 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. BMP receptors are highly expressed in bone, skeletal muscle, heart and liver tissue. BMPRs play a crucial role during development as mutations or deletions to the BMPR genes can cause juvenile polyposis, disrupt normal dorsal/ventral patterning during limb development, and may be a factor in the progression of Cowden-like syndrome. Germline mutations in the BMPR2 gene encoding bone morphogenetic protein (BMP) type II receptor (BMPR-II) have been reported in patients with primary pulmonary hypertension (PPH).

#### **BMPR1A Antibody (N-term K36) Blocking Peptide - References**

Zhou, X.-P., et al., Am. J. Hum. Genet. 69(4):704-711 (2001). Howe, J.R., et al., Nat. Genet. 28(2):184-187 (2001). ten Dijke, P., et al., Oncogene 8(10):2879-2887 (1993).

**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.

**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 K36) Blocking Peptide - Protocols**

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

- [Blocking Peptides](#)