

Bmp2 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP1713a**Specification****Bmp2 Antibody (N-term) Blocking Peptide - Product Information**

Primary Accession [P12643](#)
Other Accession [BMP2_HUMAN](#)

Bmp2 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 650

Other Names

Bone morphogenetic protein 2, BMP-2, Bone morphogenetic protein 2A, BMP-2A, BMP2, BMP2A

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP1713a](/product/products/AP1713a) was selected from the N-term region of human Bmp2 . 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.

Bmp2 Antibody (N-term) Blocking Peptide - Protein Information

Name BMP2

Bmp2 Antibody (N-term) Blocking Peptide - Background

BMP2 belongs to the transforming growth factor-beta (TGFB) superfamily. Bone morphogenic protein induces bone formation. BMP2 is a candidate gene for the autosomal dominant disease of fibrodysplasia (myositis) ossificans progressiva.

Bmp2 Antibody (N-term) Blocking Peptide - References

Lories, R.J., et al., Arthritis Rheum. 48(10):2807-2818 (2003). Maguer-Satta, V., et al., Exp. Cell Res. 282(2):110-120 (2003). Langenfeld, E.M., et al., Carcinogenesis 24(9):1445-1454 (2003). Dumont, N., et al., Biochem. Biophys. Res. Commun. 301(1):108-112 (2003). Hallahan, A.R., et al., Nat. Med. 9(8):1033-1038 (2003).

Synonyms BMP2A

Function

Growth factor of the TGF-beta superfamily that plays essential roles in many developmental processes, including cardiogenesis, neurogenesis, and osteogenesis (PubMed: [18436533](http://www.uniprot.org/citations/18436533)), PubMed: [31019025](http://www.uniprot.org/citations/31019025), PubMed: [24362451](http://www.uniprot.org/citations/24362451)). Induces cartilage and bone formation (PubMed: [3201241](http://www.uniprot.org/citations/3201241)). Initiates the canonical BMP signaling cascade by associating with type I receptor BMPRI1A and type II receptor BMPRI2 (PubMed: [15064755](http://www.uniprot.org/citations/15064755), PubMed: [17295905](http://www.uniprot.org/citations/17295905), PubMed: [18436533](http://www.uniprot.org/citations/18436533)). Once all three components are bound together in a complex at the cell surface, BMPRI2 phosphorylates and activates BMPRI1A (PubMed: [7791754](http://www.uniprot.org/citations/7791754)). In turn, BMPRI1A propagates signal by phosphorylating SMAD1/5/8 that travel to the nucleus and act as activators and repressors of transcription of target genes. Can also signal through non-canonical pathways such as ERK/MAP kinase signaling cascade that regulates osteoblast differentiation (PubMed: [20851880](http://www.uniprot.org/citations/20851880)). Stimulates also the differentiation of myoblasts into osteoblasts via the EIF2AK3-EIF2A-ATF4 pathway by stimulating EIF2A phosphorylation which leads to increased expression of ATF4 which plays a central role in osteoblast differentiation (PubMed: [24362451](http://www.uniprot.org/citations/24362451)).

Cellular Location
Secreted.**Tissue Location**

Particularly abundant in lung, spleen and colon and in low but significant levels in heart, brain, placenta, liver, skeletal muscle, kidney, pancreas, prostate, ovary and small intestine

**Bmp2 Antibody (N-term) Blocking Peptide
- Protocols**

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

- [Blocking Peptides](#)