

BMP2 Antibody (Center) Blocking peptide
Synthetic peptide
Catalog # BP13858c**Specification****BMP2 Antibody (Center) Blocking peptide -
Product Information**Primary Accession [P12643](#)**BMP2 Antibody (Center) 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 AP13858c was selected from the Center region of 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 (Center) Blocking peptide -
Protein Information**

Name BMP2

Synonyms BMP2A

**BMP2 Antibody (Center) Blocking peptide
- Background**

The protein encoded by this gene belongs to the transforming growth factor-beta (TGFB) superfamily. The encoded protein acts as a disulfide-linked homodimer and induces bone and cartilage formation.

**BMP2 Antibody (Center) Blocking peptide
- References**

Liu, Y., et al. Clin. Orthop. Relat. Res. 468(12):3333-3341(2010)
Kupfer, S.S., et al. Gastroenterology 139(5):1677-1685(2010)
Shimada, M., et al. Hum. Genet. 128(4):433-441(2010)
Nikopensius, T., et al. Birth Defects Res. Part A Clin. Mol. Teratol. 88(9):748-756(2010)
Szczesny, G., et al. Arch Orthop Trauma Surg (2010) In press :

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 BMPRI1 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 BMPRI1 (PubMed: [7791754](http://www.uniprot.org/citations/7791754)). In turn, BMPRI1 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 (Center) Blocking peptide
- Protocols**

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

- [Blocking Peptides](#)