

**Goat anti-BMP2 (aa288-300) Antibody**  
**Peptide-affinity purified goat antibody**  
**Catalog # AF4529a****Specification**

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**Goat anti-BMP2 (aa288-300) Antibody - Product Information**

Application	IF, Pep-ELISA
Primary Accession	<a href="#">P12643</a>
Other Accession	<a href="#">NP_001191.1</a>
Reactivity	Human, Mouse, Rat, Pig, Dog, Bovine
Host	Goat
Clonality	Polyclonal
Calculated MW	44702

**Goat anti-BMP2 (aa288-300) Antibody - Additional Information****Gene ID** 650**Other Names**

BMP2; bone morphogenetic protein 2; BMP2A; BMP-2A; OTTHUMP00000030228; bone morphogenetic protein 2A

**Dilution**IF~~1:50~200  
Pep-ELISA~~N/A**Format**

Supplied at 0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin. Aliquot and store at -20°C. Minimize freezing and thawing.

**Immunogen**

This antibody is expected to recognize N terminus of mature protein.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Goat anti-BMP2 (aa288-300) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Goat anti-BMP2 (aa288-300) Antibody - Protein Information****Name** BMP2**Synonyms** BMP2A

## Function

Growth factor of the TGF-beta superfamily that plays essential roles in many developmental processes, including cardiogenesis, neurogenesis, and osteogenesis (PubMed:<a href="http://www.uniprot.org/citations/18436533" target="\_blank">18436533</a>, PubMed:<a href="http://www.uniprot.org/citations/24362451" target="\_blank">24362451</a>, PubMed:<a href="http://www.uniprot.org/citations/31019025" target="\_blank">31019025</a>). Induces cartilage and bone formation (PubMed:<a href="http://www.uniprot.org/citations/3201241" target="\_blank">3201241</a>). Initiates the canonical BMP signaling cascade by associating with type I receptor BMPR1A and type II receptor BMPR2 (PubMed:<a href="http://www.uniprot.org/citations/15064755" target="\_blank">15064755</a>, PubMed:<a href="http://www.uniprot.org/citations/17295905" target="\_blank">17295905</a>, PubMed:<a href="http://www.uniprot.org/citations/18436533" target="\_blank">18436533</a>). Once all three components are bound together in a complex at the cell surface, BMPR2 phosphorylates and activates BMPR1A (PubMed:<a href="http://www.uniprot.org/citations/7791754" target="\_blank">7791754</a>). In turn, BMPR1A propagates signal by phosphorylating SMAD1/5/8 that travel to the nucleus and act as activators and repressors of transcription of target genes. Also acts to promote expression of HAMP, via the interaction with its receptor BMPR1A/ALK3 (PubMed:<a href="http://www.uniprot.org/citations/31800957" target="\_blank">31800957</a>). Can also signal through non-canonical pathways such as ERK/MAP kinase signaling cascade that regulates osteoblast differentiation (PubMed:<a href="http://www.uniprot.org/citations/16771708" target="\_blank">16771708</a>, PubMed:<a href="http://www.uniprot.org/citations/20851880" target="\_blank">20851880</a>). Also stimulates 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:<a href="http://www.uniprot.org/citations/24362451" target="\_blank">24362451</a>). Acts as a positive regulator of odontoblast differentiation during mesenchymal tooth germ formation, expression is repressed during the bell stage by MSX1-mediated inhibition of CTNNB1 signaling (By similarity).

## 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

## Goat anti-BMP2 (aa288-300) Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## Goat anti-BMP2 (aa288-300) Antibody - Images