

**BMP2 Antibody**  
Rabbit mAb  
Catalog # AP91123

## Specification

---

### BMP2 Antibody - Product Information

Application	WB
Primary Accession	<a href="#">P12643</a>
Clonality	Monoclonal
<b>Other Names</b>	
BDA2; BMP-2A; Bmp2; BMP2A; Bone morphogenetic protein 2A;	

Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	44702 Da

### BMP2 Antibody - Additional Information

Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human BMP2
Description	Bone morphogenic proteins (BMPs) are members of the TGF $\beta$ superfamily. BMPs are involved in the induction of cartilage and bone formation. Induces cartilage and bone formation.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

### BMP2 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:[18436533](http://www.uniprot.org/citations/18436533), PubMed:[24362451](http://www.uniprot.org/citations/24362451), PubMed:[31019025](http://www.uniprot.org/citations/31019025)). 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 BMPRII2 (PubMed:[15064755](http://www.uniprot.org/citations/15064755), PubMed:[17295905](http://www.uniprot.org/citations/17295905), PubMed:[17295905](http://www.uniprot.org/citations/17295905), PubMed:[17295905](http://www.uniprot.org/citations/17295905)).

[18436533](http://www.uniprot.org/citations/18436533)). Once all three components are bound together in a complex at the cell surface, BMPR2 phosphorylates and activates BMPR1A (PubMed: [7791754](http://www.uniprot.org/citations/7791754)). 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: [31800957](http://www.uniprot.org/citations/31800957)). Can also signal through non-canonical pathways such as ERK/MAP kinase signaling cascade that regulates osteoblast differentiation (PubMed: [16771708](http://www.uniprot.org/citations/16771708), PubMed: [20851880](http://www.uniprot.org/citations/20851880)). 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: [24362451](http://www.uniprot.org/citations/24362451)). 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**

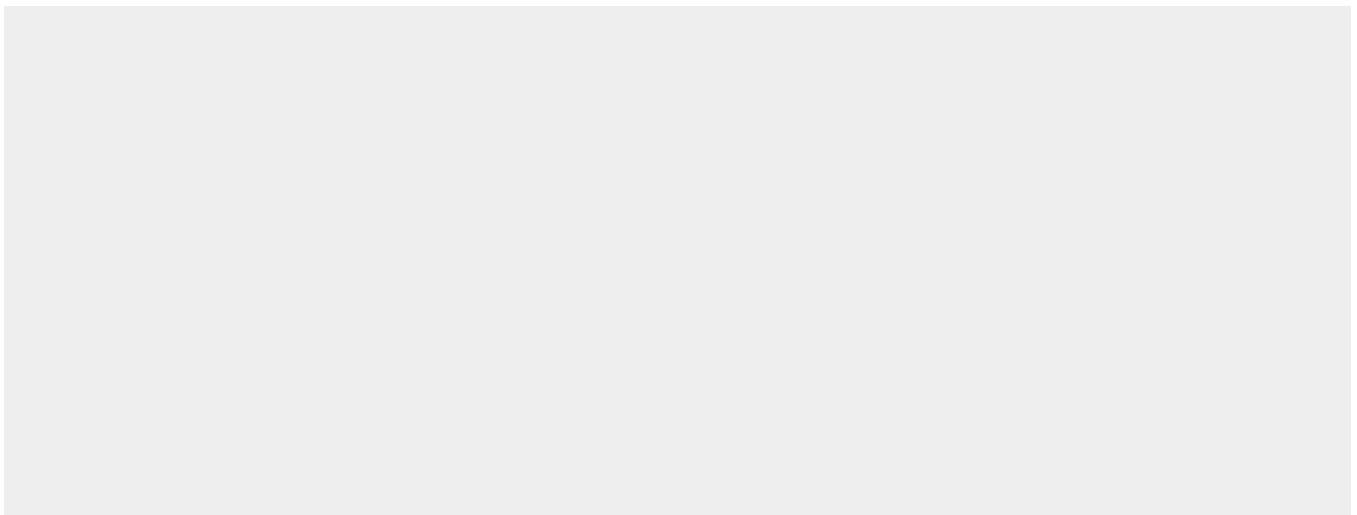
Particularly abundant in lung, spleen and colon and in low but significant levels in heart, brain, placenta, liver, skeletal muscle, kidney, pancreas, prostate, ovary and small intestine

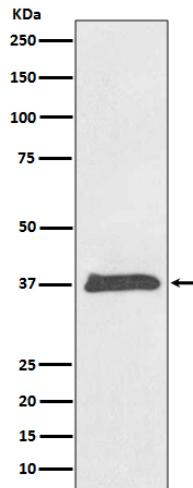
#### **BMP2 Antibody - Protocols**

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](#)

#### **BMP2 Antibody - Images**





Western blot analysis of BMP2 expression in HeLa cell lysate.