

**Anti-BMP2 Antibody**  
Rabbit polyclonal antibody to BMP2  
Catalog # AP60433

### Specification

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#### Anti-BMP2 Antibody - Product Information

Application	WB
Primary Accession	<a href="#">P12643</a>
Other Accession	<a href="#">P21274</a>
Reactivity	Human, Mouse, Rat, Rabbit, Zebrafish, Pig, Chicken, Bovine, SARS
Host	Rabbit
Clonality	Polyclonal
Calculated MW	44702

#### Anti-BMP2 Antibody - Additional Information

Gene ID 650

#### Other Names

BMP2A; Bone morphogenetic protein 2; BMP-2; Bone morphogenetic protein 2A; BMP-2A

#### Target/Specificity

Recognizes endogenous levels of BMP2 protein.

#### Dilution

WB~~WB (1/500 - 1/1000)

#### Format

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.

#### Storage

Store at -20 °C. Stable for 12 months from date of receipt

#### Anti-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))

target=" \_blank">3201241</a>). Initiates the canonical BMP signaling cascade by associating with type I receptor BMPRI1A and type II receptor BMPRI2 (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, BMPRI2 phosphorylates and activates BMPRI1A (PubMed:<a href="http://www.uniprot.org/citations/7791754" target=" \_blank">7791754</a>). 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. Also acts to promote expression of HAMP, via the interaction with its receptor BMPRI1A/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 CTNIB1 signaling (By similarity).

**Cellular Location**  
Secreted.

**Tissue Location**

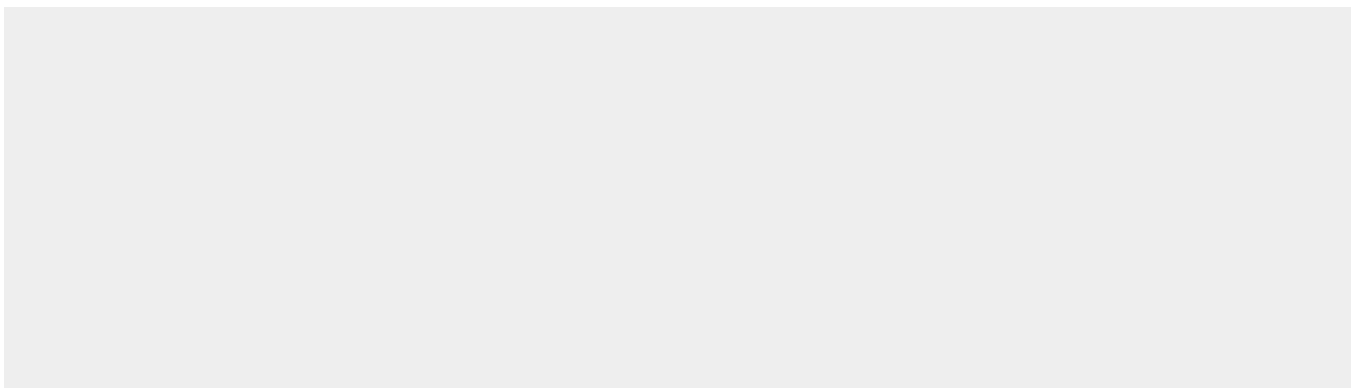
Particularly abundant in lung, spleen and colon and in low but significant levels in heart, brain, placenta, liver, skeletal muscle, kidney, pancreas, prostate, ovary and small intestine

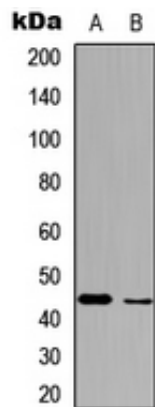
**Anti-BMP2 Antibody - Protocols**

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](#)

**Anti-BMP2 Antibody - Images**





Western blot analysis of BMP2 expression in HepG2 (A), HeLa (B) whole cell lysates.

#### **Anti-BMP2 Antibody - Background**

KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human BMP2. The exact sequence is proprietary.