

# Anti-BMP2 Antibody

Rabbit polyclonal antibody to BMP2

Catalog # AP60433

## 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

## 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

## 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="#">18436533</a> , PubMed: <a href="#">24362451</a> , PubMed: <a href="#">31019025</a> ). Induces cartilage and bone formation (PubMed: <a href="#">3201241</a> ). Initiates the canonical BMP signaling cascade by associating with type I receptor BMPR1A and type II receptor BMPR2 (PubMed: <a href="#">15064755</a> , PubMed: <a href="#">17295905</a> , PubMed: <a href="#">18436533</a> ). Once all three components are bound together in a complex at the cell surface, BMPR2 phosphorylates and activates BMPR1A (PubMed: <a href="#">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="#">31800957</a> ). Can also

signal through non-canonical pathways such as ERK/MAP kinase signaling cascade that regulates osteoblast differentiation (PubMed:[16771708](#), PubMed:[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](#)). 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

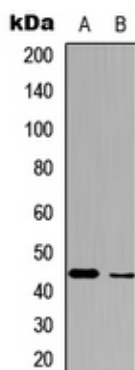
## Background

---

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

## Images

---



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

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.