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

Specification

Anti-BMP2 Antibody - Product Information

Application	**WB**
Primary Accession	P12643
Other Accession	P21274
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, PubMed:24362451, PubMed:31019025). Induces cartilage and bone formation (PubMed:<a href="http://www.uniprot.org/citations/3201241"

target="_blank">3201241). Initiates the canonical BMP signaling cascade by associating with type I receptor BMPR1A and type II receptor BMPR2 (PubMed:15064755, PubMed:17295905, PubMed:18436533). Once all three components are bound together in a complex at the cell surface, BMPR2 phosphorylates and activates BMPR1A (PubMed: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). 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

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 Cytomety
- Cell Culture

Anti-BMP2 Antibody - Images

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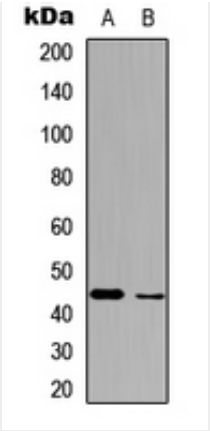

Western blot analysis of BMP2 expression in HepG2 (A), HeLa (B) whole cell lysates.

Anti-BMP2 Antibody - Background

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