

BMP2 Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21447a

Specification

BMP2 Antibody - Product Information

Application	WB,E
Primary Accession	P12643
Reactivity	Human, Rat
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Calculated MW	44702

BMP2 Antibody - Additional Information

Gene ID 650

Other Names

Bone morphogenetic protein 2, BMP-2, Bone morphogenetic protein 2A, BMP-2A, BMP2, BMP2A

Target/Specificity

This BMP2 antibody is generated from a rabbit immunized with a recombinant protein of human BMP2.

Dilution

WB~~1:2000

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

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

Precautions

BMP2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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:[3201241](#)). Initiates the canonical BMP signaling cascade by associating with type I receptor BMPRI1A and type II receptor BMPRI2 (PubMed:[15064755](#), PubMed:[17295905](#), PubMed:[18436533](#)). Once all three components are bound together in a complex at the cell surface, BMPRI2 phosphorylates and activates BMPRI1A (PubMed:[7791754](#)). 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:[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 CTNBN1 signaling (By similarity).

Cellular Location

Secreted.

Tissue Location

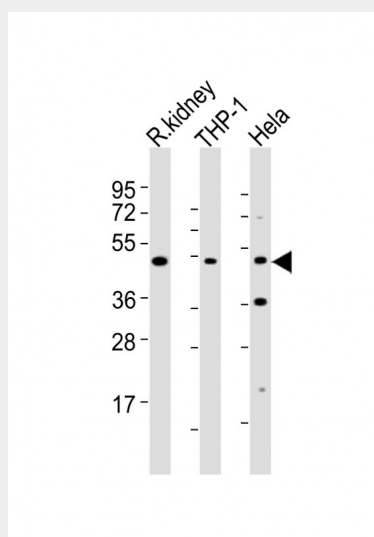
Particularly abundant in lung, spleen and colon and in low but significant levels in heart, brain, placenta, liver, skeletal muscle, kidney, pancreas, prostate, ovary and small intestine

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



All lanes : Anti-BMP2 Antibody at 1:2000 dilution Lane 1: rat kidney lysates Lane 2: THP-1 whole cell lysates Lane 3: Hela whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 45 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

BMP2 Antibody - Background

Induces cartilage and bone formation.

BMP2 Antibody - References

Wozney J.M.,et al.Science 242:1528-1534(1988).
Shore E.M.,et al.Submitted (DEC-1997) to the EMBL/GenBank/DDBJ databases.
Deloukas P.,et al.Nature 414:865-871(2001).
Yeung B.,et al.Anal. Chem. 69:2510-2516(1997).
Yanagita M.,et al.Biochem. Biophys. Res. Commun. 316:490-500(2004).