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BMP2 Antibody (Pro275)

Rabbit Polyclonal Antibody

Catalog # ALS16057

Specification

BMP2 Antibody (Pro275) - Product Information

Application	**WB, IHC-P**
Primary Accession	P12643
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**45kDa KDa**
Dilution	**WB~~1:1000** **IHC-P~~N/A**

BMP2 Antibody (Pro275) - Additional Information

Gene ID 650

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

Target/Specificity
Human BMP2

Reconstitution & Storage
Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze-thaw cycles.

Precautions
BMP2 Antibody (Pro275) is for research use only and not for use in diagnostic or therapeutic procedures.

BMP2 Antibody (Pro275) - 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 BMPR1A and type II receptor BMPR2 (PubMed:15064755, PubMed:<a

href="http://www.uniprot.org/citations/17295905" target="_blank">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

Volume
50 µl

BMP2 Antibody (Pro275) - 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

BMP2 Antibody (Pro275) - Images

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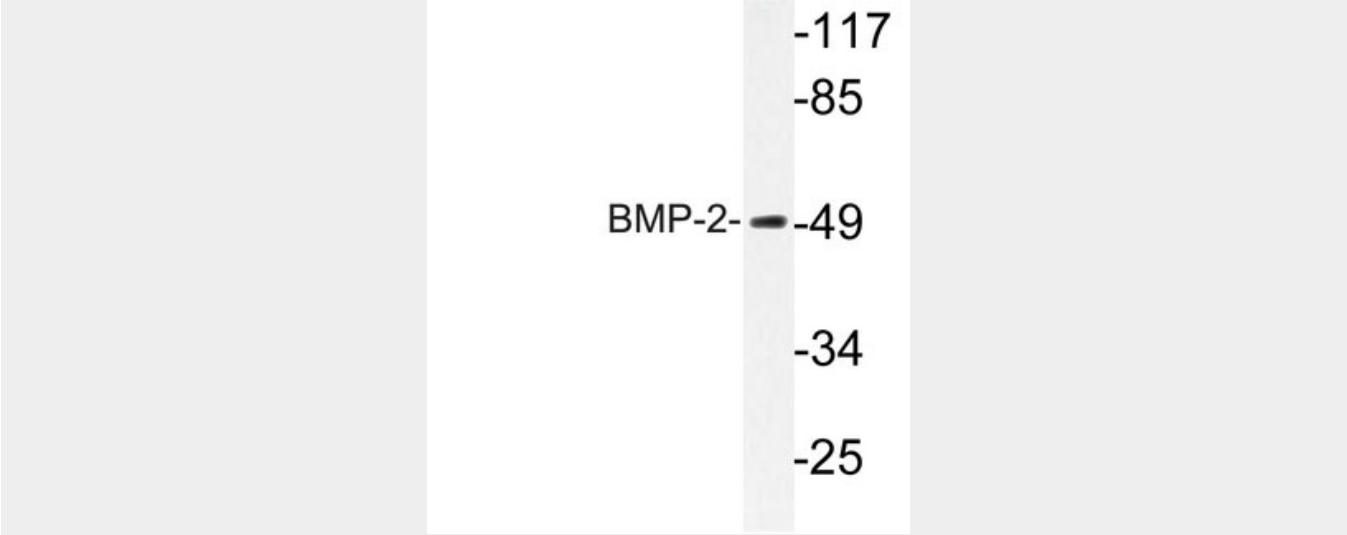

Western blot of BMP-2 (P275) pAb in extracts from HUVEC cells.

BMP2 Antibody (Pro275) - Background

Induces cartilage and bone formation.

BMP2 Antibody (Pro275) - 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).