

BMP2 Antibody (clone AT15B3)
Mouse Monoclonal Antibody
Catalog # ALS16632**Specification**

BMP2 Antibody (clone AT15B3) - Product Information

Application	IHC, WB
Primary Accession	P12643
Other Accession	650
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2b,k
Calculated MW	44702

BMP2 Antibody (clone AT15B3) - Additional Information

Gene ID 650

Other Names

BMP2, BDA2, BMP-2, BMP-2A, BMP2A, Bone morphogenetic protein 2, Bone morphogenetic protein 2A

Target/Specificity

Human BMP2 / BMP-2

Reconstitution & Storage

Supplied in PBS, pH 7.4, 10% glycerol, 0.02% sodium azide. Can be stored at 4°C. For long term storage, aliquot and store at -20°C. Avoid repeated freezing and thawing cycles.

Precautions

BMP2 Antibody (clone AT15B3) is for research use only and not for use in diagnostic or therapeutic procedures.

BMP2 Antibody (clone AT15B3) - 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)). 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

Volume
50 µl

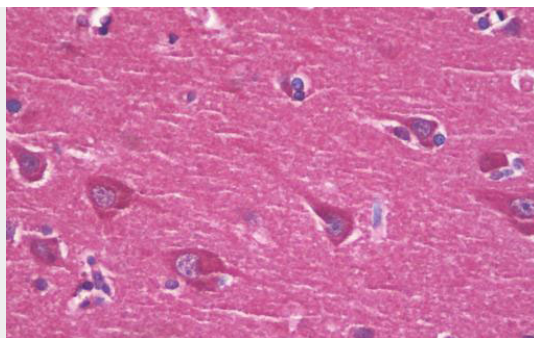
BMP2 Antibody (clone AT15B3) - Protocols

Provided below are standard protocols that you may find useful for product applications.

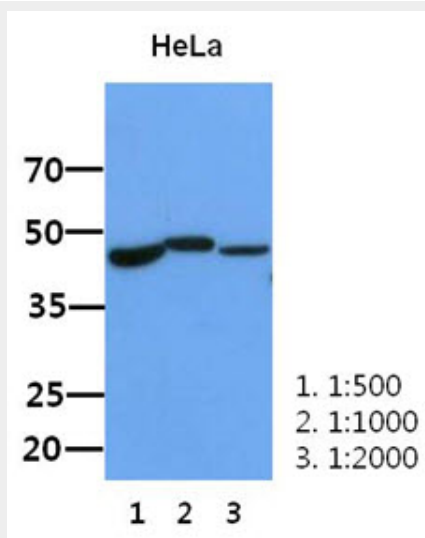
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

BMP2 Antibody (clone AT15B3) - Images





Anti-BMP2 antibody IHC staining of human brain, cortex.



Western Blot: The lysate of HeLa (30 ug) were resolved by SDS-PAGE, transferred to PVDF membrane...

BMP2 Antibody (clone AT15B3) - Background

Induces cartilage and bone formation.

BMP2 Antibody (clone AT15B3) - 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).