

**BMP4 Antibody**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP21762a****Specification**

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**BMP4 Antibody - Product Information**

Application	WB,E
Primary Accession	<a href="#">P12644</a>
Reactivity	Human
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Calculated MW	46555

**BMP4 Antibody - Additional Information****Gene ID** 652**Other Names**

Bone morphogenetic protein 4, BMP-4, Bone morphogenetic protein 2B, BMP-2B, BMP4, BMP2B, DVR4

**Target/Specificity**

This BMP4 antibody is generated from a rabbit immunized with a recombinant protein of human BMP4.

**Dilution**

WB~~1:2000

E~~Use at an assay dependent concentration.

**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**

BMP4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**BMP4 Antibody - Protein Information****Name** BMP4 ([HGNC:1071](#))**Function** Growth factor of the TGF-beta superfamily that plays essential roles in many developmental processes, including neurogenesis, vascular development, angiogenesis and osteogenesis (PubMed:[31363885](#)). Acts in concert with PTHLH/PTHRP to stimulate ductal

outgrowth during embryonic mammary development and to inhibit hair follicle induction (By similarity). Initiates the canonical BMP signaling cascade by associating with type I receptor BMPR1A and type II receptor BMPR2 (PubMed:[25868050](#), PubMed:[8006002](#)). Once all three components are bound together in a complex at the cell surface, BMPR2 phosphorylates and activates BMPR1A. 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 (PubMed:[25868050](#), PubMed:[29212066](#)). Positively regulates the expression of odontogenic development regulator MSX1 via inducing the IPO7- mediated import of SMAD1 to the nucleus (By similarity). Required for MSX1-mediated mesenchymal molar tooth bud development beyond the bud stage, via promoting Wnt signaling (By similarity). 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). Able to induce its own expression in dental mesenchymal cells and also in the neighboring dental epithelial cells via an MSX1-mediated pathway (By similarity). Can also signal through non-canonical BMP pathways such as ERK/MAP kinase, PI3K/Akt, or SRC cascades (PubMed:[31363885](#)). For example, induces SRC phosphorylation which, in turn, activates VEGFR2, leading to an angiogenic response (PubMed:[31363885](#)).

**Cellular Location**

Secreted, extracellular space, extracellular matrix

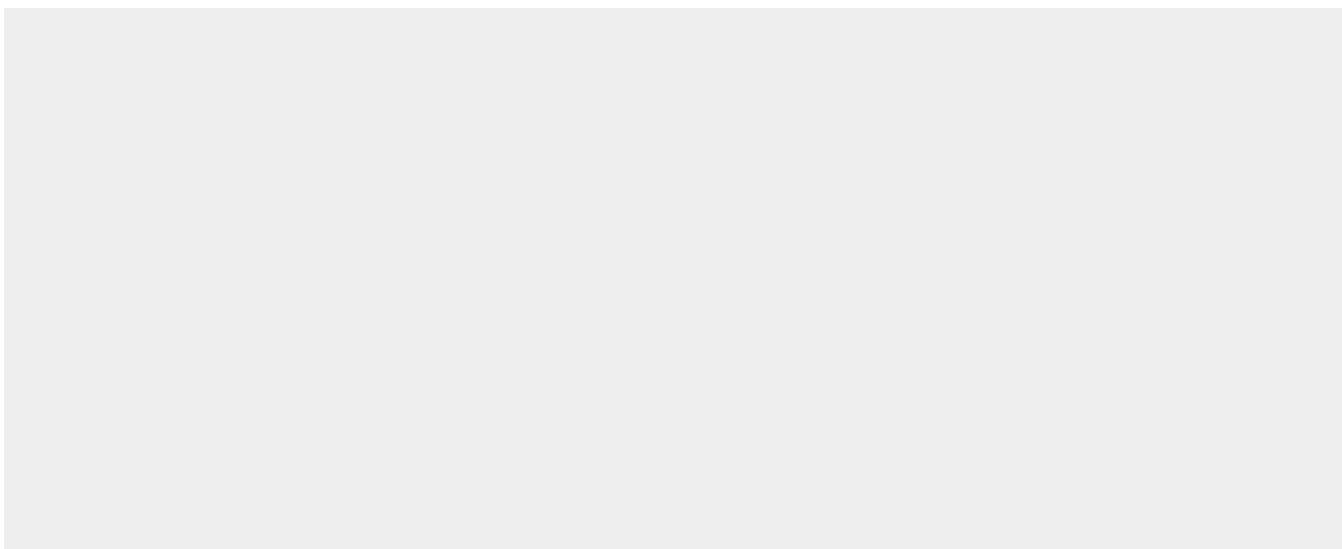
**Tissue Location**

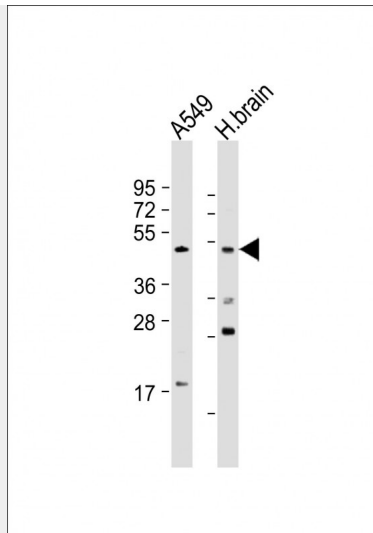
Expressed in the lung and lower levels seen in the kidney. Present also in normal and neoplastic prostate tissues, and prostate cancer cell lines

**BMP4 Antibody - Protocols**

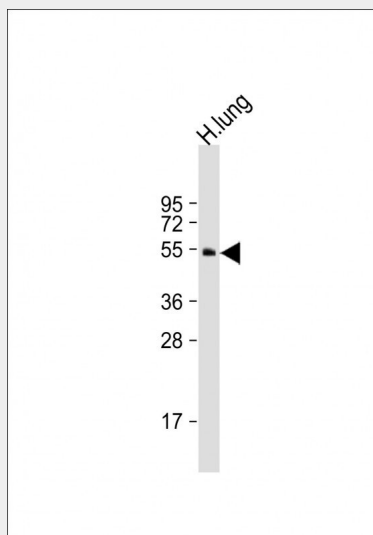
Provided below are standard protocols that you may find useful for product applications.

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

**BMP4 Antibody - Images**



All lanes : Anti-BMP4 Antibody at 1:1000-1:2000 dilution Lane 1: A549 whole cell lysate Lane 2: human brain lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 47 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Anti-BMP4 Antibody at 1:2000 dilution + human lung lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 47 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

### **BMP4 Antibody - Background**

Induces cartilage and bone formation. Also act in mesoderm induction, tooth development, limb formation and fracture repair. Acts in concert with PTHLH/PTHRP to stimulate ductal outgrowth during embryonic mammary development and to inhibit hair follicle induction (By similarity).

### **BMP4 Antibody - References**

- Wozney J.M.,et al.Science 242:1528-1534(1988).
- Shore E.M.,et al.Calcif. Tissue Int. 63:221-229(1998).
- Oida S.,et al.DNA Seq. 5:273-275(1995).
- Yanagita M.,et al.Biochem. Biophys. Res. Commun. 316:490-500(2004).
- Felder B.,et al.Eur. J. Hum. Genet. 10:753-756(2002).

