

**Goat anti-BMP4 Antibody**  
**Peptide-affinity purified goat antibody**  
**Catalog # AF4455a****Specification**

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**Goat anti-BMP4 Antibody - Product Information**

|                   |                             |
|-------------------|-----------------------------|
| Application       | <b>WB, Pep-ELISA</b>        |
| Primary Accession | <a href="#">P12644</a>      |
| Other Accession   | <a href="#">NP_001193.2</a> |
| Reactivity        | <b>Human</b>                |
| Host              | <b>Goat</b>                 |
| Clonality         | <b>Polyclonal</b>           |
| Calculated MW     | <b>46555</b>                |

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

BMP4; bone morphogenetic protein 4; BMP2B; BMP2B1; MCOPS6; OFC11; ZYME; BMP-2B; BMP-4; bone morphogenetic protein 2B

**Dilution**

WB~~1:1000  
Pep-ELISA~~N/A

**Format**

Supplied at 0.5 mg/ml in Tris saline, 0.02% sodium azide, pH7.3 with 0.5% bovine serum albumin. Aliquot and store at -20°C. Minimize freezing and thawing.

**Immunogen**

The immunizing peptide represents the N terminus of the mature protein. Reported variants represent identical protein: NP\_570911.2, NP\_001193.2, NP\_570912.2.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

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

**Goat anti-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](http://www.uniprot.org/citations/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 BMPRI1A and type II receptor BMPRI2 (PubMed: [25868050](http://www.uniprot.org/citations/25868050), PubMed: [8006002](http://www.uniprot.org/citations/8006002)). Once all three components are bound together in a complex at the cell surface, BMPRI2 phosphorylates and activates BMPRI1A. 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 (PubMed: [25868050](http://www.uniprot.org/citations/25868050), PubMed: [29212066](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/31363885)). For example, induces SRC phosphorylation which, in turn, activates VEGFR2, leading to an angiogenic response (PubMed: [31363885](http://www.uniprot.org/citations/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

**Goat anti-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](#)

**Goat anti-BMP4 Antibody - Images**