

# BMP4 Rabbit mAb

Catalog # AP77366

## Product Information

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<b>Application</b>	WB, IHC-P, IF, FC, ICC, IP
<b>Primary Accession</b>	<a href="#">P12644</a>
<b>Reactivity</b>	Human
<b>Host</b>	Rabbit
<b>Clonality</b>	Monoclonal Antibody
<b>Isotype</b>	IgG
<b>Conjugate</b>	Unconjugated
<b>Immunogen</b>	A synthesized peptide derived from human BMP4
<b>Purification</b>	Affinity Chromatography
<b>Calculated MW</b>	46555

## Additional Information

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<b>Gene ID</b>	652
<b>Other Names</b>	BMP4
<b>Dilution</b>	WB~~1/500-1/1000 IHC-P~~N/A IF~~1:50~200 FC~~1:10~50 ICC~~N/A IP~~N/A
<b>Format</b>	Liquid in 10mM PBS, pH 7.4, 150mM sodium chloride, 0.05% BSA, 0.02% sodium azide and 50% glycerol.
<b>Storage</b>	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

## Protein Information

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<b>Name</b>	BMP4 ( <a href="#">HGNC:1071</a> )
<b>Function</b>	Growth factor of the TGF-beta superfamily that plays essential roles in many developmental processes, including neurogenesis, vascular development, angiogenesis and osteogenesis (PubMed: <a href="#">31363885</a> ). 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: <a href="#">25868050</a> , PubMed: <a href="#">8006002</a> ). 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: <a href="#">25868050</a> , PubMed: <a href="#">29212066</a> ). 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

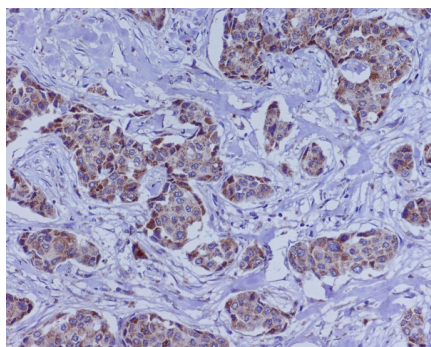
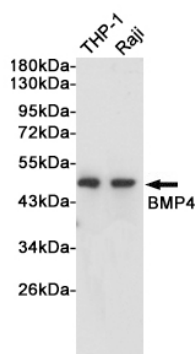
Secreted, extracellular space, extracellular matrix

#### 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

## Images

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