

Polyclonal Antibody to Bone Morphogenetic Protein 4 (BMP4)

Bone Morphogenetic Protein 4
Catalog # AP74522

Product Information

Application	WB
Primary Accession	Q2KJH1
Host	Rabbit
Clonality	Polyclonal
Calculated MW	46626

Additional Information

Gene ID	407216
Other Names	BMP2B; BMP2-B; BMP2B1; ZYME; DVR4; Bone morphogenetic protein 2B
Target/Specificity	Bos taurus; Bovine (Cattle)
Dilution	WB~~Western blotting: 0.2-2 μ g/mL;1:250-2500 Immunohistochemistry: 5-20 μ g/mL;1:25-100 Immunocytochemistry: 5-20 μ g/mL;1:25-100 Optimal working dilutions must be determined by end user.
Format	PBS, pH7.4, containing 0.02% NaN ₃ , 50% glycerol.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

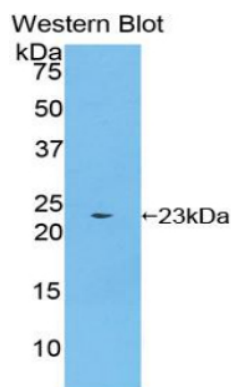
Name	BMP4 {ECO:0000250 UniProtKB:P21275}
Function	Growth factor of the TGF-beta superfamily that plays essential roles in many developmental processes, including neurogenesis, vascular development, angiogenesis and osteogenesis (By similarity). Acts in concert with PTHLH/PTHRP to stimulate ductal outgrowth 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. 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. 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. For example, induces SRC phosphorylation which, in turn, activates VEGFR2, leading to an angiogenic response (By similarity).

Cellular Location

Secreted, extracellular space, extracellular matrix

Images



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