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BMP4 antibody - N-terminal region

Rabbit Polyclonal Antibody
Catalog # AI14915

Product Information

Application	WB
Primary Accession	P12644
Other Accession	NM_130850, NP_570911
Reactivity	Human, Mouse, Rat, Rabbit, Pig, Goat, Dog, Guinea Pig, Horse, Bovine, Sheep
Predicted	Human, Mouse, Rat, Rabbit, Pig, Chicken, Goat, Dog, Guinea Pig, Horse, Bovine, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	46555

Additional Information

Gene ID	652
Alias Symbol	BMP2B, BMP2B1, MCOPS6, OFC11, ZYME
Other Names	Bone morphogenetic protein 4, BMP-4, Bone morphogenetic protein 2B, BMP-2B, BMP4, BMP2B, DVR4
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 ul of distilled water. Final anti-BMP4 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	BMP4 antibody - N-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

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).

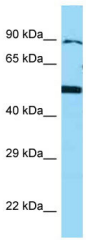
Cellular Location Secreted, extracellular space, extracellular matrix

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

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).

Images



WB Suggested Anti-BMP4 Antibody Titration: 1.0 µg/ml
Positive Control: U937 Whole Cell

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.