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Goat anti-BMP2 (aa288-300) Antibody

Peptide-affinity purified goat antibody
Catalog # AF4529a

Product Information

Application	IF, Pep-ELISA
Primary Accession	P12643
Other Accession	NP_001191.1
Reactivity	Human, Mouse, Rat, Pig, Dog, Bovine
Host	Goat
Clonality	Polyclonal
Clone Names	BMP2
Calculated MW	44702

Additional Information

Gene ID	650
Other Names	BMP2; bone morphogenetic protein 2; BMP2A; BMP-2A; OTTHUMP00000030228; bone morphogenetic protein 2A
Dilution	IF~~1:50~200 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	This antibody is expected to recognize N terminus of mature protein.
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-BMP2 (aa288-300) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	BMP2
Synonyms	BMP2A
Function	Growth factor of the TGF-beta superfamily that plays essential roles in many developmental processes, including cardiogenesis, neurogenesis, and osteogenesis (PubMed:18436533, PubMed:24362451, PubMed:31019025). Induces cartilage and bone formation (PubMed:3201241). Initiates the canonical BMP signaling cascade by associating with type I receptor BMPR1A

and type II receptor BMPR2 (PubMed:15064755, PubMed:17295905, PubMed:18436533). Once all three components are bound together in a complex at the cell surface, BMPR2 phosphorylates and activates BMPR1A (PubMed:7791754). 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. Also acts to promote expression of HAMP, via the interaction with its receptor BMPR1A/ALK3 (PubMed:31800957). Can also signal through non-canonical pathways such as ERK/MAP kinase signaling cascade that regulates osteoblast differentiation (PubMed:16771708, PubMed:20851880). Also stimulates the differentiation of myoblasts into osteoblasts via the EIF2AK3-EIF2A-ATF4 pathway by stimulating EIF2A phosphorylation which leads to increased expression of ATF4 which plays a central role in osteoblast differentiation (PubMed:24362451). 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).

Cellular Location Secreted.

Tissue Location Particularly abundant in lung, spleen and colon and in low but significant levels in heart, brain, placenta, liver, skeletal muscle, kidney, pancreas, prostate, ovary and small intestine