Bone Morphogenetic Protein 4 (BMP4) Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	Bone Morphogenetic Protein 4 (BMP4), Polyclonal Antibody
Full Product Name	Biotin-Linked Antibody to Bone Morphogenetic Protein 4 (BMP4)
Product Gene Name	anti-BMP4 antibody
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Pig
Form/Format	Supplied as solution form in PBS, pH7.4, containing 0.02% NaN3,50% glycerol.
Purity/Purification	Affinity Chromatography
Concentration	500ug/ml (lot specific)
Specificity	The antibody is a rabbit polyclonal antibody raised against BMP4 conjugated to biotin. It has been selected for its ability to recognize BMP4 in immunohistochemical staining andwestern blotting.
Preparation and Storage	Store at 4 degree C for frequent use. Stored at -20 degree C to -80 degree C in a manual defrost freezer for one year without detectable loss of activity. Avoid repeated freeze-thaw cycles.
Matching Pairs	Unconjugated Antibody: BMP4 (MBS2003132) Biotin Conjugated Antibody: BMP4 (MBS2004149)
Matching Pairs	Biotin Conjugated Antibody: BMP4 (MBS2004149) Immunogen: BMP4 (MBS2009364)
Molecular Weight	46,555 Da
Chromosome Location	Chromosome: 14; NC_000014.8 (54416454..54423554, complement). Location: 14q22-q23
OMIM	112262
3D Structure	ModBase 3D Structure for P12644
Supply Chain Verification	Manufactured in a lab with traceable raw materials. Bulk orders can typically be prepared to the customer's specifications, please inquire.
Product Categories/Family for anti-BMP4 antibody	Biotin Antibody
ISO Certification	Manufactured in an ISO 9001:2015 and ISO 13485:2016 Certified Laboratory.
Applications Tested/Suitable for anti-BMP4 antibody	Immunohistochemistry (IHC), ELISA (EIA), Western Blot (WB)
Application Notes for anti-BMP4 antibody	Western blotting: 1:100-400 Immunocytochemistry in formalin fixed cells: 1:100-500 Immunohistochemistry in formalin fixed frozen section: 1:100-500 Immunohistochemistry in paraffin section: 1:50-200 Enzyme-linked Immunosorbent Assay: 1:100-200
Related Product Information for anti-BMP4 antibody	MBS2004149 is an antibody targeting BMP4. Also known as Biotin-Linked Antibody to Bone Morphogenetic Protein 4 (BMP4). Reactive in Pig. Host: Rabbit.

Other Notes	Small volumes of anti-BMP4 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for BMP4. It may not necessarily be applicable to this product.

NCBI GI #	1311542
NCBI GeneID	652
NCBI Accession #	BAA06410.1
UniProt Primary Accession #	P12644
UniProt Secondary Accession #	Q9UM80
UniProt Related Accession #	P12644
NCBI Official Full Name	bone morphogenetic protein 4
NCBI Official Synonym Full Names	bone morphogenetic protein 4
NCBI Official Symbol	BMP4
NCBI Official Synonym Symbols	ZYME; BMP2B; OFC11; BMP2B1; MCOPS6
UniProt Protein Name	Bone morphogenetic protein 4
UniProt Synonym Protein Names	Bone morphogenetic protein 2B
Protein Family	Bone morphogenetic protein
UniProt Gene Name	BMP4
UniProt Synonym Gene Names	BMP2B; DVR4; BMP-4; BMP-2B
UniProt Entry Name	BMP4_HUMAN
NCBI Protein Information	bone morphogenetic protein 4; BMP-4; BMP-2B; bone morphogenetic protein 2B
NCBI Summary for BMP4	The protein encoded by this gene is a member of the bone morphogenetic protein family which is part of the transforming growth factor-beta superfamily. The superfamily includes large families of growth and differentiation factors. Bone morphogenetic proteins were originally identified by an ability of demineralized bone extract to induce endochondral osteogenesis in vivo in an extraskeletal site. This particular family member plays an important role in the onset of endochondral bone formation in humans, and a reduction in expression has been associated with a variety of bone diseases, including the heritable disorder Fibrodysplasia Ossificans Progressiva. Alternative splicing in the 5' untranslated region of this gene has been described and three variants are described, all encoding an identical protein. [provided by RefSeq, Jul 2008]

UniProt Comments for BMP4	BMP4: Induces cartilage and bone formation. Also act in mesoderm induction, tooth development, limb formation and fracture repair. Acts in concert with PTHLH/PTHRP to stimulate ductal outgrowth during embryonic mammary development and to inhibit hair follicle induction. Homodimer; disulfide-linked. Interacts with GREM2. Part of a complex consisting of TWSG1 and CHRD. Interacts with the serine proteases, HTRA1 and HTRA3; the interaction with either inhibits BMP4-mediated signaling. The HTRA protease activity is required for this inhibition. Interacts with SOSTDC1. Expressed in the lung and lower levels seen in the kidney. Present also in normal and neoplastic prostate tissues, and prostate cancer cell lines. Belongs to the TGF-beta family. Protein type: Secreted; Secreted, signal peptide Chromosomal Location of Human Ortholog: 14q22-q23 Cellular Component: proteinaceous extracellular matrix; extracellular space; extracellular region Molecular Function: heparin binding; protein binding; growth factor activity; cytokine activity; transforming growth factor beta receptor binding; chemoattractant activity Biological Process: negative regulation of MAP kinase activity; extracellular matrix organization and biogenesis; renal system process; macrophage differentiation; activation of MAPKK activity; positive regulation of apoptosis; positive regulation of transcription, DNA-dependent; negative regulation of chondrocyte differentiation; lymphoid progenitor cell differentiation; telencephalon regionalization; germ cell development; post-embryonic development; BMP signaling pathway; regulation of protein import into nucleus; positive regulation of endothelial cell differentiation; positive chemotaxis; chondrocyte differentiation; erythrocyte differentiation; mesonephros development; kidney development; endochondral ossification; regulation of odontogenesis of dentine-containing teeth; negative regulation of immature T cell proliferation in the thymus; positive regulation of cardiac muscle fiber development; specification of organ position; monocyte differentiation; neuron fate commitment; embryonic cranial skeleton morphogenesis; negative regulation of striated muscle development; branching morphogenesis of a tube; negative regulation of mitosis; positive regulation of epidermal cell differentiation; negative regulation of phosphorylation; positive regulation of endothelial cell proliferation; positive regulation of transcription from RNA polymerase II promoter; steroid hormone mediated signaling; hemopoietic progenitor cell differentiation; embryonic digit morphogenesis; negative regulation of transcription, DNA-dependent; alveolus development; positive regulation of epithelial cell proliferation; negative regulation of apoptosis; positive regulation of protein binding; positive regulation of smooth muscle cell proliferation; positive regulation of collagen biosynthetic process; cloacal septation; negative regulation of transcription from RNA polymerase II promoter; embryonic hindlimb morphogenesis; negative regulation of cell cycle; odontogenesis; smooth muscle development; negative regulation of cell proliferation; inner ear receptor cell differentiation; ureteric bud development; intermediate mesodermal cell differentiation; regulation of smooth muscle cell differentiation; positive regulation of BMP signaling pathway; dorsoventral neural tube patterning; negative regulation of epithelial cell proliferation; smoothened signaling pathway; common-partner SMAD protein phosphorylation; negative regulation of T cell differentiation in the thymus; positive regulation of bone mineralization; positive regulation of ossification; odontogenesis of dentine-containing teeth; osteoblast differentiation; positive regulation of osteoblast differentiation; blood vessel endothelial cell proliferation during sprouting angiogenesis; telencephalon development; pituitary gland development; ureteric bud branching; neural tube closure; regulation of cell fate commitment; positive regulation of protein amino acid phosphorylation; negative regulation of myoblast differentiation; positive regulation of neuron differentiation; mesodermal cell fate determination; anterior/posterior axis specification Disease: Orofacial Cleft 11; Microphthalmia, Syndromic 6
Research Articles on BMP4	**1.** BMP4 activates intracellular signaling, in particular through enhancing phosphorylation of Smad1/5.
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