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BMP1 Rabbit pAb

Catalog # AP99243

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	P13497
Other Accession	P13497
Reactivity	Rat, Human, Mouse
Predicted	Pig, Rabbit, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	111249
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human BMP1
Epitope Specificity	901-986/986
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the peptidase M12A family. Contains 5 CUB domains. Contains 2 EGF-like domains.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Bone morphogenetic protein 1 (BMP1) was first identified in osteogenic extracts of bone. It is an extracellular zinc endopeptidase, implicated in morphogenetic processes in a broad range of species. BMP1 is a member of the astacin family of metalloproteinases. The astacin family includes BMP1, astacin, meprin A and B, tolloid-like proteins, and choriolysin. BMP1 is involved in extracellular matrix (ECM) formation, suggesting that a functional link may exist between astacin metalloproteinases, growth factors, and cell differentiation and pattern formation during development. The name PCP reflects this enzyme's involvement in the collagen deposition of growing bone. The enzymes known as the procollagen C and N proteinases (PCP and PNP) are involved in the processing of fibrillar procollagen precursors to mature collagens, which is an essential requirement for fibril formation. PCP cleaves the C-terminus from procollagen, to allow the formation of mature, triplehelical collagen. The N-terminus is cleaved by the procollagen N-proteinase (PNP or ADAM-TS2). Defects in PNP have been linked to the skin disorder dermatosparaxis, and defects in BMP1 are thought to lead to aberrant collagen processing, and connective tissue disorders. Many forms of BMP1 have been reported, with varying truncation at the C-terminus. The long form of BMP1 is most similar to the tolloid-like proteins, which have extra EGF-like and CUB domains.

Additional Information

Gene ID	649

Other Names	OI13; PCOLC; PCP; PCP2; TLD; BMP1_HUMAN; BMP1; BMP-1; Mammalian tolloid protein (mTld); Procollagen C-proteinase (PCP); 3.4.24.19; BMP1_MOUSE; bone morphogenetic protein 1; procollagen C-endopeptidase; tolloid-like
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	BMP1
Synonyms	PCOLC
Function	Metalloprotease that plays key roles in regulating the formation of the extracellular matrix (ECM) via processing of various precursor proteins into mature functional enzymes or structural proteins (PubMed:33206546). Thereby participates in several developmental and physiological processes such as cartilage and bone formation, muscle growth and homeostasis, wound healing and tissue repair (PubMed:32636307, PubMed:33169406). Roles in ECM formation include cleavage of the C-terminal propeptides from procollagens such as procollagen I, II and III or the proteolytic activation of the enzyme lysyl oxidase LOX, necessary to formation of covalent cross- links in collagen and elastic fibers (PubMed:31152061, PubMed:33206546). Additional substrates include matricellular thrombospondin-1/THBS1 whose cleavage leads to cell adhesion disruption and TGF-beta activation (PubMed:32636307).
Cellular Location	Golgi apparatus, trans-Golgi network. Secreted, extracellular space, extracellular matrix. Secreted. Note=Co-localizes with POSTN in the Golgi.
Tissue Location	Ubiquitous.

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