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Bmp1 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1712a

Product Information

Application	IHC-P, WB, E
Primary Accession	P13497
Other Accession	P98063
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB1853-1854
Calculated MW	111249
Antigen Region	957-986

Additional Information

Gene ID	649
Other Names	Bone morphogenetic protein 1, BMP-1, Mammalian tolloid protein, mTld, Procollagen C-proteinase, PCP, BMP1, PCOLC
Target/Specificity	This Bmp1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 957-986 amino acids from the C-terminal region of human Bmp1.
Dilution	IHC-P~~1:100~500 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Bmp1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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.

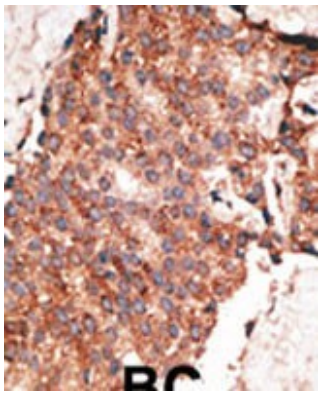
Background

The BMP1 locus encodes a protein that is capable of inducing formation of cartilage in vivo. Although other bone morphogenetic proteins are members of the TGF-beta superfamily, BMP1 encodes a protein that is not closely related to other known growth factors. BMP1 protein and procollagen C proteinase (PCP), a secreted metalloprotease requiring calcium and needed for cartilage and bone formation, are identical. PCP or BMP1 protein cleaves the C-terminal propeptides of procollagen I, II, and III and its activity is increased by the procollagen C-endopeptidase enhancer protein. The BMP1 gene is expressed as alternatively spliced variants that share an N-terminal protease domain but differ in their C-terminal region.

References

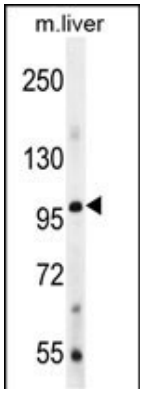
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Images



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

Bmp1 Antibody (R972) (Cat. #AP1712a) western blot analysis in mouse liver tissue lysates (35ug/lane).This demonstrates the Bmp1 antibody detected the Bmp1 protein (arrow).



Citations

- Secretomes reveal several novel proteins as well as TGF-β1 as the top upstream regulator of metastatic process in breast cancer.

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