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Bmp3 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1714a

Product Information

Application	WB, IHC-P, E
Primary Accession	P12645
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB1855-1856
Calculated MW	53372
Antigen Region	8-36

Additional Information

Gene ID	651
Other Names	Bone morphogenetic protein 3, BMP-3, Bone morphogenetic protein 3A, BMP-3A, Osteogenin, BMP3, BMP3A
Target/Specificity	This Bmp3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 8-36 amino acids from the N-terminal region of human Bmp3.
Dilution	WB~~1:1000 IHC-P~~1:100~500 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	Bmp3 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	BMP3
Synonyms	BMP3A
Function	Growth factor of the TGF-beta superfamily that plays an essential role in developmental process by inducing and patterning early skeletal formation

and by negatively regulating bone density. Antagonizes the ability of certain osteogenic BMPs to induce osteoprogenitor differentiation and ossification (PubMed:11138004, PubMed:15269709). Initiates signaling cascades by associating with type II receptor ACVR2B to activate SMAD2-dependent and SMAD-independent signaling cascades including TAK1 and JNK pathways (PubMed:31665064).

Cellular Location Secreted.

Tissue Location Expressed in adult and fetal cartilage.

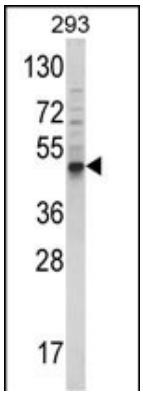
Background

The BMPs belong to the TGF-Beta superfamilyBMPs stimulate the production of bone matrix proteins and thereby alter stromal cell and osteoclast proliferation, a key step in bone marrow development. In addition to promoting ectopic bone and cartilage development, BMPs regulate the growth, differentiation, chemotaxis, proliferation, and apoptosis of various cell types, including mesenchymal cells, epithelial cells, hematopoietic cells, and neuronal cells. BMPs also play a role in dorsal/ventral patterning. BMP3, highly expressed in lung, ovary and small intestine, participates in cartilage and bone formation. BMP3 and BMP2 genes map to conserved regions between human and mouse.

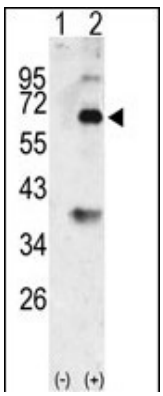
References

Jin, Y., et al., Histol. Histopathol. 16(4):1013-1019 (2001).
Tabas, J.A., et al., Genomics 9(2):283-289 (1991).
Dickinson, M.E., et al., Genomics 6(3):505-520 (1990).
Wozney, J.M., et al., Science 242(4885):1528-1534 (1988).

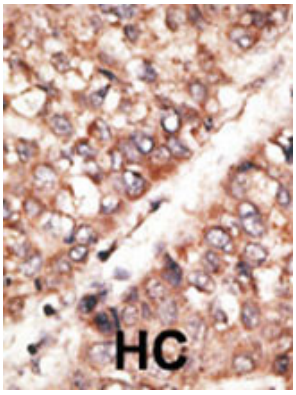
Images



Western blot analysis of hBmp3-E23 (Cat. #AP1714a) in 293 cell line lysates (35ug/lane). BMP3 (arrow) was detected using the purified Pab.



Western blot analysis of Bmp3 (arrow) using rabbit polyclonal Bmp3 Antibody (N-term) (Cat.#AP1714a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the Bmp3 gene (Lane 2) (Origene Technologies).



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.