10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

BMP7 Rabbit pAb

Catalog # AP100110

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	P18075
Other Accession	P18075
Reactivity	Human
Predicted	Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	49313
Physical State	Liquid
Immunogen	Recombinant human BMP7
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 TGF-beta family.
SUBUNIT	Homodimer; disulfide-linked. Interacts with SOSTDC1. Interacts with TWSG1.
Post-translational modifications	Several N-termini starting at positions 293, 300, 315 and 316 have been identified by direct sequencing resulting in secretion of different mature forms (PubMed:17977014).
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The bone morphogenetic proteins (BMPs) are a family of secreted signaling molecules that can induce ectopic bone growth. Many BMPs are part of the transforming growth factor-beta (TGFB) superfamily. BMPs were originally identified by an ability of demineralized bone extract to induce endochondral osteogenesis in vivo in an extraskeletal site. Based on its expression early in embryogenesis, the BMP encoded by this gene has a proposed role in early development and possible bone inductive activity. [provided by RefSeq].

Additional Information

Gene ID	655
Other Names	BMP-7; OP-1; OP1; BMP7_HUMAN; BMP7; Osteogenic protein 1 (OP-1); BMP7_MOUSE; bone morphogenetic protein 7; osteogenic protein 1
Dilution	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	BMP7
Synonyms	OP1
Function	Growth factor of the TGF-beta superfamily that plays important role in various biological processes, including embryogenesis, hematopoiesis, neurogenesis and skeletal morphogenesis (PubMed:31208997). Initiates the canonical BMP signaling cascade by associating with type I receptor ACVR1 and type II receptor ACVR2A (PubMed:12667445, PubMed:9748228). Once all three components are bound together in a complex at the cell surface, ACVR2A phosphorylates and activates ACVR1. In turn, ACVR1 propagates signal by phosphorylating SMAD1/5/8 that travel to the nucleus and act as activators and repressors of transcription of target genes (PubMed:12478285). For specific functions such as growth cone collapse in developing spinal neurons and chemotaxis of monocytes, also uses BMPR2 as type II receptor (PubMed:31208997). Can also signal through non-canonical pathways such as P38 MAP kinase signaling cascade that promotes brown adipocyte differentiation through activation of target genes, including members of the SOX family of transcription factors (PubMed:27923061). Promotes the expression of HAMP, this is repressed by its interaction with ERFE (PubMed:30097509).
Cellular Location	Secreted.
Tissue Location	Expressed in the kidney and bladder. Lower levels seen in the brain

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