

# BMP7 Antibody

Purified Mouse Monoclonal Antibody

Catalog # AO2133a

## Product Information

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<b>Application</b>	WB, IHC, FC, E
<b>Primary Accession</b>	<a href="#">P18075</a>
<b>Reactivity</b>	Human, Mouse
<b>Host</b>	Mouse
<b>Clonality</b>	Monoclonal
<b>Clone Names</b>	6E5D12
<b>Isotype</b>	IgG1
<b>Calculated MW</b>	49313
<b>Description</b>	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.
<b>Immunogen</b>	Purified recombinant fragment of human BMP7 (AA: 239-431) expressed in E. Coli.
<b>Formulation</b>	Purified antibody in PBS with 0.05% sodium azide

## Additional Information

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<b>Gene ID</b>	655
<b>Other Names</b>	Bone morphogenetic protein 7, BMP-7, Osteogenic protein 1, OP-1, Eptoterminalfa, BMP7, OP1
<b>Dilution</b>	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 E~~1/10000
<b>Storage</b>	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
<b>Precautions</b>	BMP7 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	BMP7
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## 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

## References

1.Immunol Cell Biol. 2014 May-Jun;92(5):427-35.2.J Exp Med. 2013 Nov 18;210(12):2597-610.

## Images

