

## **BMP7 Antibody**

Rabbit mAb Catalog # AP91170

## **Specification**

## **BMP7 Antibody - Product Information**

Application WB, IP
Primary Accession P18075
Reactivity Rat

Clonality Monoclonal

**Other Names** 

Bmp7; Bone morphogenetic protein 7; Eptotermin alfa; OP 1; Osteogenic protein 1;

Isotype Rabbit IgG
Host Rabbit
Calculated MW 49313 Da

# **BMP7 Antibody - Additional Information**

Purification Affinity-chromatography

Immunogen A synthesized peptide derived from human

BMP7

Description Induces cartilage and bone formation. May

be the osteoinductive factor responsible

for the phenomenon of epithelial osteogenesis. Plays a role in calcium regulation and bone homeostasis.

Storage Condition and Buffer Rabbit IgG in phosphate buffered saline,

pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid

freeze / thaw cycle.

#### **BMP7 Antibody - 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:<a href="http://www.uniprot.org/citations/31208997" target="\_blank">31208997</a>). Initiates the canonical BMP signaling cascade by associating with type I receptor ACVR1 and type II receptor ACVR2A (PubMed:<a href="http://www.uniprot.org/citations/12667445" target="\_blank">12667445</a>, PubMed:<a href="http://www.uniprot.org/citations/9748228" target="\_blank">9748228</a>). 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:<a href="http://www.uniprot.org/citations/12478285" target="\_blank">12478285</a>). For specific functions such as growth cone collapse in developing spinal neurons and chemotaxis of monocytes, uses also BMPR2 as type II receptor (PubMed:<a href="http://www.uniprot.org/citations/31208997" target="\_blank">31208997</a>). 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:<a

href="http://www.uniprot.org/citations/27923061" target="\_blank">27923061</a>). Promotes the expression of HAMP, this is repressed by its interaction with ERFE (PubMed:<a href="http://www.uniprot.org/citations/30097509" target="blank">30097509</a>).

**Cellular Location** Secreted.

#### **Tissue Location**

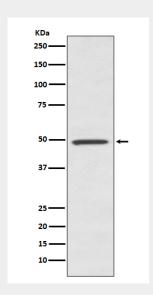
Expressed in the kidney and bladder. Lower levels seen in the brain

## **BMP7 Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

## **BMP7 Antibody - Images**



Western blot analysis of BMP7 expression in human fetal kidney lysate.