

**BMP-7 Antibody**  
**Rabbit Polyclonal Antibody**  
**Catalog # ABV11044****Specification**

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**BMP-7 Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P18075</a>
Other Accession	<a href="#">NP_001710</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	49313

**BMP-7 Antibody - Additional Information****Gene ID** 655

Application & Usage	Western blotting (1-4 µg/ml). However, the optimal conditions should be determined individually.
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**Other Names**

BMP7, BMP-7, BMP 7, bone morphogenetic protein 7, Osteogenic protein 1, OP-1

**Target/Specificity**

BMP-7

**Antibody Form**

Liquid

**Appearance**

Colorless liquid

**Formulation**

100 µg (0.5 mg/ml) affinity purified rabbit anti-human BMP-7 polyclonal antibody in phosphate buffered saline (PBS), pH 7.2, containing 30% glycerol and 0.01% thimerosal.

**Handling**

The antibody solution should be gently mixed before use.

**Reconstitution & Storage**

-20 °C

**Background Descriptions****Precautions**

BMP-7 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## **BMP-7 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/9748228" target="\_blank">9748228</a>, PubMed:<a href="http://www.uniprot.org/citations/12667445" target="\_blank">12667445</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

## **BMP-7 Antibody - Protocols**

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## **BMP-7 Antibody - Images**

## **BMP-7 Antibody - Background**

BMPs (bone morphogenetic proteins) belong to the TGF-beta superfamily of structurally related signaling proteins. Members of this superfamily are widely represented throughout the animal kingdom and have been implicated in a variety of developmental processes. Proteins of the TGF-beta superfamily are disulfide-linked dimers composed of two 12-15 kDa polypeptide chains.

As implied by their name, BMPs initiate, promote and regulate bone development, growth, remodeling and repair. BMP-7 has been indicated to induce cartilage formation.