

## **BMP-7 Antibody**

Rabbit Polyclonal Antibody Catalog # ABV11044

# **Specification**

# **BMP-7 Antibody - Product Information**

Application WB
Primary Accession P18075
Other Accession NP\_001710
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.

**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**

 $100 \mu g$  (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**

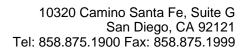
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- 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 thro µghout the animal kingdom and have been implicated in a variety of developmental processes. Proteins of the TGF-beta superfamily are disulfide-linked dimmers 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.