

# **BMP-7 Polyclonal Antibody**

Catalog # AP68686

# **Specification**

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

**Application** WB **Primary Accession** P18075 Reactivity Human, Mouse, Rat

Host Rabbit Clonality **Polyclonal** 

# **BMP-7 Polyclonal Antibody - Additional Information**

Gene ID 655

#### **Other Names**

BMP7; OP1; Bone morphogenetic protein 7; BMP-7; Osteogenic protein 1; OP-1; Eptotermin alfa

#### Dilution

WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/40000. Not yet tested in other applications.

## **Format**

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

## **Storage Conditions** -20°C

## **BMP-7 Polyclonal 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**

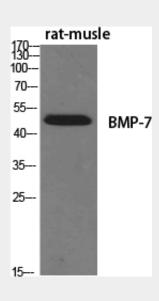
Expressed in the kidney and bladder. Lower levels seen in the brain

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

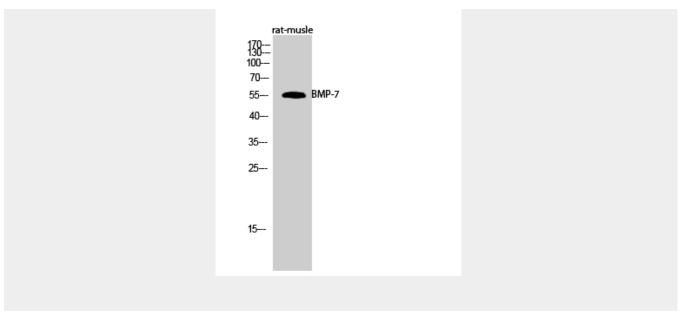
Provided below are standard protocols that you may find useful for product applications.

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

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







**BMP-7 Polyclonal Antibody - Background** 

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.