

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.
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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: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

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.