

BMP7 Antibody (C-term) Blocking peptide
Synthetic peptide
Catalog # BP13859b**Specification**

BMP7 Antibody (C-term) Blocking peptide - Product InformationPrimary Accession [P18075](#)**BMP7 Antibody (C-term) Blocking peptide - Additional Information****Gene ID** 655**Other Names**

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

Target/Specificity

The synthetic peptide sequence used to generate the antibody AP13859b was selected from the C-term region of BMP7. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

BMP7 Antibody (C-term) Blocking peptide - 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:9748228, PubMed:12667445). 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, uses also 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

BMP7 Antibody (C-term) Blocking peptide - Protocols

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

- [Blocking Peptides](#)

BMP7 Antibody (C-term) Blocking peptide - Images**BMP7 Antibody (C-term) Blocking peptide - Background**

The bone morphogenetic proteins (BMPs) are a family of secreted signaling molecules that can induce ectopic bone growth. Many BMPs are part of the transforming growth factor-beta (TGFB) superfamily. BMPs were originally identified by an ability of demineralized bone extract to induce endochondral osteogenesis *in vivo* in an extraskeletal site. Based on its expression early in embryogenesis, the BMP encoded by this gene has a proposed role in early development and possible bone inductive activity. [provided by RefSeq].

BMP7 Antibody (C-term) Blocking peptide - References

Hwang, C.J., et al. J Neurosurg Spine 13(4):484-493(2010) Shimada, M., et al. Hum. Genet. 128(4):433-441(2010) Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010) Jonigk, D., et al. Virchows Arch. 457(3):369-380(2010) Pegorier, S., et al. Respir. Res. 11, 85 (2010) :