

#4693 Store at -20C

BMP7 Antibody


Cell Signaling
TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IP	M	Transfected Only	49	Rabbit	#P18075	655

Product Usage Information

Application

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

BMP7 Antibody detects transfected levels of total mouse BMP7 protein. It only recognizes the BMP7 precursor protein (49 kDa), not the mature secreted form (16 kDa).

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly99 of mouse BMP7. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Bone morphogenetic proteins (BMPs) were first identified as molecules that can induce ectopic bone and cartilage formation (1,2). BMPs belong to the TGF-β superfamily, playing many diverse functions during development (3). BMPs are synthesized as precursor proteins and then processed by cleavage to release the C-terminal mature BMP. BMPs initiate signaling by binding to a receptor complex containing type I and type II serine/threonine receptor kinases that then phosphorylate Smad (mainly Smad1, 5, and 8), resulting in the translocation of Smad into the nucleus. BMP was also reported to activate MAPK pathways in some systems (3,4). BMP7, also known as osteogenic protein-1 (OP-1), is found to be upregulated in some cancer cells (5-7), and may play a role in cancer metastasis (7-9).

Background References

1. Wang, E.A. et al. (1988) *Proc Natl Acad Sci USA* 85, 9484-8.
2. Wozney, J.M. et al. (1988) *Science* 242, 1528-34.
3. Kawabata, M. et al. (1998) *Cytokine Growth Factor Rev* 9, 49-61.
4. Nohe, A. et al. (2004) *Cell Signal* 16, 291-9.
5. Yang, S. et al. (2005) *Cancer Res* 65, 5769-77.
6. Alarino, E.L. et al. (2006) *Genes Chromosomes Cancer* 45, 411-9.
7. Motoyama, K. et al. (2008) *Ann Surg Oncol* 15, 1530-7.
8. Buijs, J.T. et al. (2007) *Cancer Res* 67, 8742-51.
9. Buijs, J.T. et al. (2007) *Am J Pathol* 171, 1047-57.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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