

BMP7 Antibody

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rev. 01/25/16

For Research Use Only. Not For Use In Diagnostic Procedures.

Applications W, IP Transfected	Species Cross-Reactivity* M	Molecular Wt. 49 kDa	Source Rabbit**
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Background: Bone morphogenetic proteins (BMPs) were first identified as molecules that can induce ectopic bone and cartilage formation (1,2). BMPs belongs 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 the translocation of Smad into the nucleus. BMP was also reported to activate MAPK pathways in some systems (3,4).

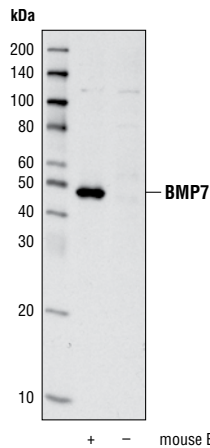
BMP7, also known as osteogenic protein-1 (OP-1), is found to be upregulated in some cancer cells (5-7), and may play a role in cancer metastasis (7-9).

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 from (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 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) Alarmo, 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.



Western blot analysis of extracts from COS cells, mock transfected or transfected with mouse BMP7, using BMP7 Antibody.

Entrez-Gene ID #655
Swiss-Prot Acc. #P18075

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

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody..

Recommended Antibody Dilutions:

Western Blotting	1:1000
Immunoprecipitation	1:50

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey 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 All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.