

100 µl
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #652
Swiss-Prot Acc. #P12644

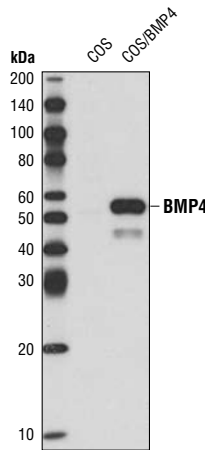
Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W Transfected	H	47 kDa	Mouse IgG1**

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).

BMP4 plays an essential role during development. Mouse embryos deficient in BMP4 die around the time of gastrulation (5). BMP4 regulates stem cell maintenance and differentiation in various systems (6-8).

Specificity/Sensitivity: BMP4 (6B7) Mouse mAb detects transfected levels of total BMP4 protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a BMP4 fusion protein.



Western blot analysis of extracts from COS cells, either mock transfected or transfected with a human BMP4 construct, using BMP4 (6B7) Mouse mAb.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

***Species cross-reactivity is determined by western blot.**

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

Recommended Antibody Dilutions:

Western blotting 1:1000

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.

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) Dunn, N.R. et al. (1997) *Dev Biol* 188, 235-47.
- (6) Nakayama, N. et al. (2000) *Blood* 95, 2275-83.
- (7) Solmesky, L.J. et al. (2009) *Stem Cells Dev*, 18, 1283-92
- (8) Goldman, O. et al. (2009) *Stem Cells*, 27, 1750-9

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 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.