

#4680 Store at -20C

BMP4 (6B7) Mouse mAb



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB	H	Transfected Only	47	Mouse IgG1	#P12644	652

Product Usage Information

Application

Western Blotting

Dilution

1:1000

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.

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.

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).

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).

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.

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting

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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