



**Orders:** 877-616-CELL (2355)  
orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com  
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

Store at -20C  
#4680

## BMP4 (6B7) Mouse mAb

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	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

**W:** Western Blotting

### Cross-Reactivity Key

**H:** Human

### Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit [cellsignal.com/trademarks](http://cellsignal.com/trademarks) for more information.

### Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in

any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.