

# BMP-6 (N-19): sc-7406

## BACKGROUND

Bone morphogenic proteins (BMPs) are members of the TGF $\beta$  superfamily. BMPs are involved in the induction of cartilage and bone formation. *In vivo* studies have shown that BMP-2 (also designated BMP-2A) and BMP-3 can independently induce cartilage formation. Smad3 association with the TGF $\beta$  receptor complex and Smad1 translocation to the nucleus are observed after the addition of BMP-4 (also designated BMP-2B), suggesting that BMP-4 may play a role in activation of the Smad pathway. BMP-5, BMP-6 and BMP-7 all share high sequence homology with BMP-2, indicating that they each may be able to induce cartilage formation. BMP-8 (also designated OP-2) is thought to be involved in early development, as detectable expression has not been found in adult organs.

## REFERENCES

1. Wozney, J.M., et al. 1988. Novel regulators of bone formation: molecular clones and activities. *Science* 242: 1528-1534.
2. Massague, J. 1990. The transforming growth factor- $\beta$  family. *Annu. Rev. Cell Biol.* 6: 597-641.

## CHROMOSOMAL LOCATION

Genetic locus: BMP6 (human) mapping to 6p24.3; Bmp6 (mouse) mapping to 13 A3.3.

## SOURCE

BMP-6 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of BMP-6 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7406 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

BMP-6 (N-19) is recommended for detection of precursor and mature BMP-6 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

BMP-6 (N-19) is also recommended for detection of precursor and mature BMP-6 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for BMP-6 siRNA (h): sc-37066, BMP-6 siRNA (m): sc-37067, BMP-6 shRNA Plasmid (h): sc-37066-SH, BMP-6 shRNA Plasmid (m): sc-37067-SH, BMP-6 shRNA (h) Lentiviral Particles: sc-37066-V and BMP-6 shRNA (m) Lentiviral Particles: sc-37067-V.

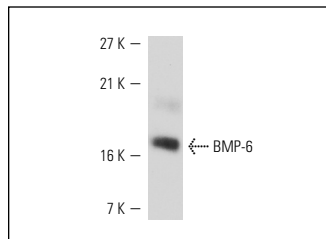
Molecular Weight of BMP-6 precursor: 90 kDa.

Molecular Weight of mature BMP-6: 23 kDa.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



BMP-6 (N-19): sc-7406. Western blot analysis of human recombinant BMP-6.

## SELECT PRODUCT CITATIONS

1. Tateyama, S., et al. 2001. Expression of bone morphogenetic protein-6 (BMP-6) in myoepithelial cells in canine mammary gland tumors. *Vet. Pathol.* 38: 703-709.
2. Ng, C.M., et al. 2004. TGF- $\beta$ -dependent pathogenesis of mitral valve prolapse in a mouse model of Marfan syndrome. *J. Clin. Invest.* 114: 1586-1592.
3. Akiyoshi, T., et al. 2004. Expression of bone morphogenetic protein-6 and bone morphogenetic protein receptors in myoepithelial cells of canine mammary gland tumors. *Vet. Pathol.* 41: 154-163.
4. Bobinac, D., et al. 2005. Expression of bone morphogenetic proteins in human metastatic prostate and breast cancer. *Croat. Med. J.* 46: 389-396.
5. Ulmanen, M.S., et al. 2005. Osteoinductivity of partially purified native ostrich (*Struthio camelus*) bone morphogenetic protein: comparison with mammalian species. *Life Sci.* 77: 2425-2437.
6. Wang, P.Y., et al. 2007. BMP-6 is axonally transported by motoneurons and supports their survival *in vitro*. *Mol. Cell. Neurosci.* 34: 653-661.
7. Waris, V., et al. 2010. BMPs in periprosthetic tissues around aseptically loosened total hip implants. *Acta Orthop.* 81: 420-426.
8. Yu, Y.Y., et al. 2010. Immunolocalization of BMPs, BMP antagonists, receptors, and effectors during fracture repair. *Bone* 46: 841-851.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

**MONOS**  
Satisfaction  
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Try **BMP-6 (74219.11): sc-57042**, our highly recommended monoclonal alternative to BMP-6 (N-19).