

BMP-5 (N-19): sc-7405

BACKGROUND

Bone morphogenic proteins (BMPs) are members of the TGF β 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 β 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 β family. *Annu. Rev. Cell Biol.* 6: 597-641.

SOURCE

BMP-5 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of BMP-5 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-7405 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

BMP-5 (N-19) is recommended for detection of precursor and mature BMP-5 and, to a lesser extent, BMP-6 and BMP-7 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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); may cross-react with BMP-8.

BMP-5 (N-19) is also recommended for detection of precursor and mature BMP-5 and, to a lesser extent, BMP-6 and BMP-7 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of mature BMP-5/BMP-6/BMP-7: 16 kDa.

Molecular Weight of BMP-5 precursor: 54-56 kDa.

Molecular Weight of BMP-6 precursor: 57 kDa.

Molecular Weight of BMP-7 precursor: 77 kDa.

Molecular Weight of BMP-8 precursor: 45 kDa.

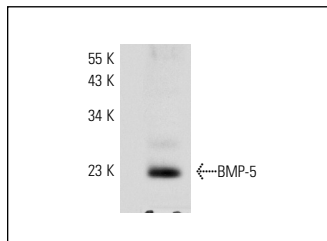
RESEARCH USE

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

STORAGE

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

DATA



BMP-5 (N-19): sc-7405. Western blot analysis of human recombinant BMP-5.

SELECT PRODUCT CITATIONS

1. Sulzbacher, I., et al. 2002. The expression of bone morphogenetic proteins in osteosarcoma and its relevance as a prognostic parameter. *J. Clin. Pathol.* 55: 381-385.
2. Zuzarte-Luis, V., et al. 2004. A new role for BMP-5 during limb development acting through the synergic activation of Smad and MAPK pathways. *Dev. Biol.* 272: 39-52.
3. Bobinac, D., et al. 2005. Expression of bone morphogenetic proteins in human metastatic prostate and breast cancer. *Croat. Med. J.* 46: 389-396.
4. 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.
5. Davies, S.R., et al. 2008. Bone morphogenetic proteins 1 to 7 in human breast cancer, expression pattern and clinical/prognostic relevance. *J. Exp. Ther. Oncol.* 7: 327-338.
6. Yu, Y.Y., et al. 2010. Immunolocalization of BMPs, BMP antagonists, receptors, and effectors during fracture repair. *Bone* 46: 841-851.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.


 MONOS
Satisfation
Guaranteed

Try **BMP-5 (L-16): sc-73747**, our highly recommended monoclonal alternative to BMP-5 (N-19).