

# BMP-5/6/7/8 (H-44): sc-9032

## 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.
3. Celeste, A.J., et al. 1990. Identification of transforming growth factor  $\beta$  family members present in bone-inductive protein purified from bovine bone. *Proc. Natl. Acad. Sci. USA* 87: 9843-9847.
4. Oskaynak, E., et al. 1992. Osteogenic protein-2. A new member of the transforming growth factor- $\beta$  superfamily expressed early in embryogenesis. *J. Biol. Chem.* 267: 25220-25227.
5. Gitelman, S.E., et al. 1994. Recombinant Vgr-1/BMP-6-expressing tumors induce fibrosis and endochondral bone formation *in vivo*. *J. Cell Biol.* 126: 1595-1609.
6. Liu, F., et al. 1996. A human Mad protein acting as a BMP-regulated transcriptional activator. *Nature* 381: 620-623.
7. Zhang, Y., et al. 1996. Receptor-associated Mad homologues synergize as effectors of the TGF- $\beta$  response. *Nature* 383: 168-172.
8. McPherron, A.C., et al. 1997. Regulation of skeletal muscle mass in mice by a new TGF- $\beta$  superfamily member. *Nature* 387: 83-90.

## SOURCE

BMP-5/6/7/8 (H-44) is a rabbit polyclonal antibody raised against amino acids 407-450 of BMP-5 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.

## STORAGE

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

## RESEARCH USE

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

## APPLICATIONS

BMP-5/6/7/8 (H-44) is recommended for detection of precursor and mature BMP-5, BMP-6, BMP-7 and BMP-8 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-5/6/7/8 (H-44) is also recommended for detection of precursor and mature BMP-5, BMP-6, BMP-7 and BMP-8 in additional species, including equine, canine, bovine, porcine and avian.

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

Molecular Weight of mature BMP-5: 16 kDa.

Molecular Weight of BMP-6 precursor: 57 kDa.

Molecular Weight of mature BMP-6: 16 kDa.

Molecular Weight of BMP-7 precursor: 77 kDa.

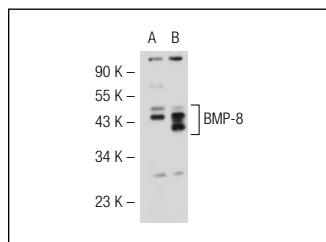
Molecular Weight of mature BMP-7: 6 kDa.

Molecular Weight of BMP-8 precursor: 45 kDa.

Molecular Weight of mature BMP-8: 45 kDa.

Positive Controls: BMP-8 (h): 293T Lysate: sc-112023.

## DATA



BMP-5/6/7/8 (H-44): sc-9032. Western blot analysis of BMP-8 expression in non-transfected: sc-117752 (A) and human BMP-8 transfected: sc-112023 (B) 293T whole cell lysates.

## PROTOCOLS

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