SANTA CRUZ BIOTECHNOLOGY, INC.

BMP-5 (MM0117-9G27): sc-517459

BACKGROUND

Bone morphogenic proteins (BMPs) are members of the TGFβ 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 TGFβ 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.
3. Celeste, A.J., et al. 1990. Identification of transforming growth factor β 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-β 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-β response. Nature 383: 168-172.
8. McPherron, A.C., et al. 1997. Regulation of skeletal muscle mass in mice by a new TGF-β superfamily member. Nature 387: 83-90.

CHROMOSOMAL LOCATION

Genetic locus: BMP5 (human) mapping to 6p12.1; Bmp5 (mouse) mapping to 9 D.

SOURCE

BMP-5 (MM0117-9G27) is a mouse monoclonal antibody raised against a recombinant protein corresponding to BMP-5 of human origin.

PRODUCT

Each vial contains 100 µg IgG_2 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

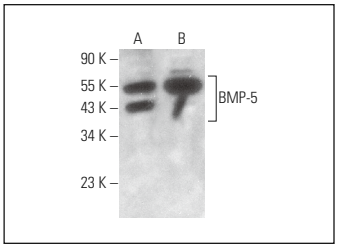
BMP-5 (MM0117-9G27) is recommended for detection of BMP-5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for BMP-5 siRNA (h): sc-39746, BMP-5 siRNA (m): sc-39747, BMP-5 shRNA Plasmid (h): sc-39746-SH, BMP-5 shRNA Plasmid (m): sc-39747-SH, BMP-5 shRNA (h) Lentiviral Particles: sc-39746-V and BMP-5 shRNA (m) Lentiviral Particles: sc-39747-V.

Molecular Weight of BMP-5: 52 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

DATA



BMP-5 (MM0117-9G27): sc-517459. Western blot analysis of BMP-5 expression in 293T (**A**) and NIH/3T3 (**B**) whole cell lysates.

STORAGE

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

PROTOCOLS

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