SANTA CRUZ BIOTECHNOLOGY, INC.

BMP-6 (D-19): sc-27409

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 TGF 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 TGFβ response. Nature 383: 168-172.
8. McPherron, A.C., et al. 1997. Regulation of skeletal muscle mass in mice by a new TGFβ superfamily member. Nature 387: 83-90.

CHROMOSOMAL LOCATION

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

SOURCE

BMP-6 (D-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of BMP-6 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-27409 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

BMP-6 (D-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), 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 (D-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.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Pederson, L., et al. 2008. Regulation of bone formation by osteoclasts involves Wnt/BMP signaling and the chemokine sphingosine-1-phosphate. Proc. Natl. Acad. Sci. USA 105: 20764-20769.

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.

PROTOCOLS

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