

BMP-7 (T-12): sc-34766

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 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

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3. Celeste, A.J., et al. 1990. Identification of TGF- 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 TGF- 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.
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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: BMP7 (human) mapping to 20q13.31, BMP6 (human) mapping to 6p24.3; Bmp7 (mouse) mapping to 2 H3, Bmp6 (mouse) mapping to 13 A3.3.

SOURCE

BMP-7 (T-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of BMP-7 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-34766 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

BMP-7 (T-12) is recommended for detection of precursor and mature BMP-7, and to a lesser extent 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-7 (T-12) is also recommended for detection of precursor and mature BMP-7 and to a lesser extent BMP-6 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of BMP-7: 55 kDa.

Positive Controls: F9 cell lysate: sc-2245, MIA PaCa-2 cell lysate: sc-2285 or NTERA-2 cl.D1 whole cell lysate: sc-364181.

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.

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.

MONOS
Satisfaction
Guaranteed

Try **BMP-7 (4E7): sc-53917**, our highly recommended monoclonal alternative to BMP-7 (T-12).