

## BMP-3 (C-20): sc-7404

### 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.

### CHROMOSOMAL LOCATION

Genetic locus: BMP3 (human) mapping to 4q21.21; Bmp3 (mouse) mapping to 5 E3.

### SOURCE

BMP-3 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of BMP-3 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.

Blocking peptide available for competition studies, sc-7404 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### 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-3 (C-20) is recommended for detection of precursor and mature BMP-3 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), immunohistochemistry (including paraffin-embedded sections) (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 GDF-10, also designated BMP-3b.

BMP-3 (C-20) is also recommended for detection of precursor and mature BMP-3 in additional species, including canine, bovine, porcine and avian.

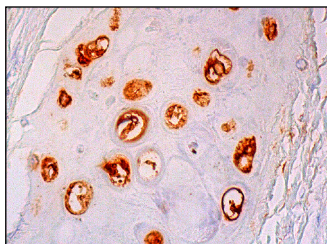
Suitable for use as control antibody for BMP-3 siRNA (h): sc-39740, BMP-3 siRNA (m): sc-39741, BMP-3 shRNA Plasmid (h): sc-39740-SH, BMP-3 shRNA Plasmid (m): sc-39741-SH, BMP-3 shRNA (h) Lentiviral Particles: sc-39740-V and BMP-3 shRNA (m) Lentiviral Particles: sc-39741-V.

Molecular Weight of BMP-3: 53/12 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

### DATA



BMP-3 (C-20): sc-7404. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cartilage tissue showing cytoplasmic staining of chondrocytes.

### SELECT PRODUCT CITATIONS

1. Bobinac, D., et al. 2005. Expression of bone morphogenetic proteins in human metastatic prostate and breast cancer. *Croat. Med. J.* 46: 389-396.
2. 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.
3. 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

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