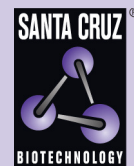


BMP-2/4 (H-51): sc-9003



The Power to Question

BACKGROUND

Tumor growth factor, or TGF β , is the prototypic member of a family of secreted proteins that regulate cellular proliferation and differentiation. Related proteins include the activins and the bone morphogenic proteins or BMPs. Like TGF β , the BMPs signal through a heteromeric receptor complex (TGF β R) composed of type I (TGF β RI) and type II (TGF β RII) receptors. Both the type I and the type II receptors contain an intrinsic serine/threonine kinase activity. Although signaling downstream of the TGF β R is poorly understood, several proteins have been implicated. Six TGF β /BMP effector proteins, designated Smad1-6, may function as tumor suppressors. Smad proteins have been suggested to be transcription factors, acting similarly to the Stat family which associates directly with activated receptors and then translocates to the nucleus. Evidence supporting this assertion is drawn from the observation that Smad3 physically associates with the TGF β R complex and that Smad1 is translocated to the nucleus 30-60 minutes after the addition of BMP-4.

CHROMOSOMAL LOCATION

Genetic locus: BMP2 (human) mapping to 20p12.3, BMP4 (human) mapping to 14q22.2; Bmp2 (mouse) mapping to 2 F2, Bmp4 (mouse) mapping to 14 C1.

SOURCE

BMP-2/4 (H-51) is a rabbit polyclonal antibody raised against amino acids 300-350 of BMP-2/4 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.

APPLICATIONS

BMP-2/4 (H-51) is recommended for detection of precursor and mature BMP-2 and BMP-4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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-2/4 (H-51) is also recommended for detection of precursor and mature BMP-2 and BMP-4 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of mature BMP-2: 54-56 kDa.

Molecular Weight of BMP-2 precursor: 14 kDa.

Molecular Weight of mature BMP-4: 14 kDa.

Molecular Weight of BMP-4 precursor: 25-27 kDa.

Positive Controls: BMP-4 (m2): 293T Lysate: sc-118826, HeLa whole cell lysate: sc-2200 or BMP-2 (h2): 293 Lysate: sc-128103.

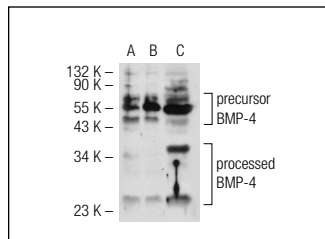
RESEARCH USE

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

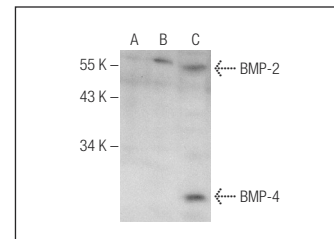
STORAGE

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

DATA



BMP-2/4 (H-51): sc-9003. Western blot analysis of BMP-4 expression in non-transfected 293T: sc-117752 (A), mouse BMP-4 transfected 293T: sc-118826 (B) and HeLa (C) whole cell lysates.



BMP-2/4 (H-51): sc-9003. Western blot analysis of BMP-2 expression in non-transfected 293: sc-110760 (A), human BMP-2 transfected 293: sc-128103 (B) and THP-1 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

- Boström, K., et al. 2001. Matrix GLA protein modulates differentiation induced by bone morphogenetic protein-2 in C3H10T1/2 cells. *J. Biol. Chem.* 276: 14044-14052.
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- Kloss, F.R., et al. 2008. The role of oxygen termination of nanocrystalline diamond on immobilisation of BMP-2 and subsequent bone formation. *Biomaterials* 29: 2433-2442.
- Watanuki, M., et al. 2009. Effect of low-intensity pulsed ultrasound on scaffold-free ectopic bone formation in skeletal muscle. *Ups. J. Med. Sci.* 114: 242-248.
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- Wehrhan, F., et al. 2012. PEG matrix enables cell-mediated local BMP-2 gene delivery and increased bone formation in a porcine critical size defect model of craniofacial bone regeneration. *Clin. Oral Implants Res.* 23: 805-813.



Try **BMP-4 (3H2.3): sc-12721** or **BMP-2/4 (H-1): sc-137087**, our highly recommended monoclonal alternatives to BMP-2/4 (H-51). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **BMP-4 (3H2.3): sc-12721**.