**BACKGROUND**

Tumor growth factor, or TGFβ, 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 TGFβ, the BMPs signal through a heteromeric receptor complex (TGFβ R) composed of type I (TGFβ RI) and type II (TGFβ RII) receptors. Both the type I and the type II receptors contain an intrinsic serine/threonine kinase activity. Although signaling downstream of the TGFβ R is poorly understood, several proteins have been implicated. Six TGFβ/BMP effector proteins, designated Smad 1-6, 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 TGFβ R complex and that Smad1 is translocated to the nucleus 30-60 minutes after the addition of BMP-4.

**SOURCE**

BMP-2/4 (A-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of BMP-4 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-6267 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

**APPLICATIONS**

BMP-2/4 (A-20) is recommended for detection of precursor and mature BMP-2 and BMP-4 and, to a lesser extent, BMP-8 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation (1-2 µg per 100-500 µg 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); may cross-react with BMP-9, BMP-10 and Inhibit B-B.

BMP-2/4 (A-20) is also recommended for detection of precursor and mature BMP-2 and BMP-4 and, to a lesser extent, BMP-8 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 BMP-4 precursor: 25-27 kDa.
Molecular Weight of mature BMP-4: 14 kDa.
Positive Controls: BMP-4 (m): 293T Lysate: sc-117825 or HeLa whole cell lysate: sc-2200.

**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.

**DATA**

**SELECT PRODUCT CITATIONS**


Try BMP-4 (3H2.3): sc-12721 or BMP-2/4 (H-1): sc-137087. Our highly recommended monoclonal alternatives to BMP-2/4 (A-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see BMP-4 (3H2.3): sc-12721.