

# BMP-8 (H-4): sc-515399

## 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 is thought to be involved in early development, as detectable expression has not been found in adult organs. Two BMP-8 proteins exist, namely BMP-8A and BMP-8B (also designated OP-2), and are encoded by two distinct genes.

## 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- $\beta$  family. *Annu. Rev. Cell Biol.* 6: 597-641.
3. Celeste, A.J., et al. 1990. Identification of transforming growth factor  $\beta$  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- $\beta$  superfamily expressed early in embryogenesis. *J. Biol. Chem.* 267: 25220-25227.

## CHROMOSOMAL LOCATION

Genetic locus: BMP8A (human) mapping to 1p34.3, BMP8B (human) mapping to 1p34.2; Bmp8a/Bmp8b (mouse) mapping to 4 D2.2.

## SOURCE

BMP-8 (H-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 265-287 at the N-terminus of BMP-8B of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

BMP-8 (H-4) is available conjugated to agarose (sc-515399 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515399 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515399 PE), fluorescein (sc-515399 FITC), Alexa Fluor® 488 (sc-515399 AF488), Alexa Fluor® 546 (sc-515399 AF546), Alexa Fluor® 594 (sc-515399 AF594) or Alexa Fluor® 647 (sc-515399 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515399 AF680) or Alexa Fluor® 790 (sc-515399 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515399 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

BMP-8 (H-4) is recommended for detection of precursor and mature BMP-8A and BMP-8B of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

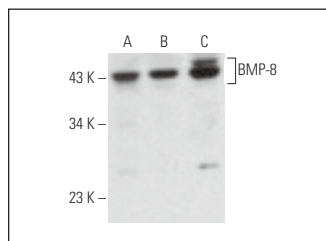
Molecular Weight of BMP-8: 45 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Raji whole cell lysate: sc-364236 or NCI-H1299 whole cell lysate: sc-364234.

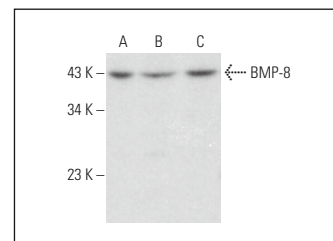
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



BMP-8 (H-4): sc-515399. Western blot analysis of BMP-8 expression in HeLa (A), NCI-H1299 (B) and Raji (C) whole cell lysates.



BMP-8 (H-4): sc-515399. Western blot analysis of BMP-8 expression in c4 (A), Neuro-2A (B) and BW5147 (C) whole cell lysates.

## 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](http://www.scbt.com) for detailed protocols and support products.