

BMP-9 (H-3): sc-514211

BACKGROUND

Bone morphogenic protein-9 (BMP-9), like other members of the TGF β growth factor superfamily, plays an important role in tissue morphogenesis, particularly in bone and connective tissue. Additionally, liver cells such as Hep G2 express receptors to BMP-9, through which it stimulates cell proliferation and regulates blood glucose concentration, an effect not observed in treatment with TGF- β . These *in vivo* activities appear to be exploitable in novel therapies; research shows that addition of BMP-9 or BMP-9 encoding adenoviral vectors promote bone formation *ex vivo* and in immune deficient animals.

CHROMOSOMAL LOCATION

Genetic locus: GDF2 (human) mapping to 10q11.22; Gdf2 (mouse) mapping to 14 B.

SOURCE

BMP-9 (H-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 406-425 at the C-terminus of BMP-9 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

BMP-9 (H-3) is available conjugated to agarose (sc-514211 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514211 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514211 PE), fluorescein (sc-514211 FITC), Alexa Fluor[®] 488 (sc-514211 AF488), Alexa Fluor[®] 546 (sc-514211 AF546), Alexa Fluor[®] 594 (sc-514211 AF594) or Alexa Fluor[®] 647 (sc-514211 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-514211 AF680) or Alexa Fluor[®] 790 (sc-514211 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514211 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

BMP-9 (H-3) is recommended for detection of precursor and mature BMP-9 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for BMP-9 siRNA (h): sc-39756, BMP-9 siRNA (m): sc-39757, BMP-9 shRNA Plasmid (h): sc-39756-SH, BMP-9 shRNA Plasmid (m): sc-39757-SH, BMP-9 shRNA (h) Lentiviral Particles: sc-39756-V and BMP-9 shRNA (m) Lentiviral Particles: sc-39757-V.

Positive Controls: BMP-9 (h2): 293T Lysate: sc-370246.

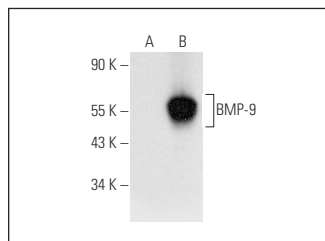
RESEARCH USE

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-9 (H-3): sc-514211. Western blot analysis of BMP-9 expression in non-transfected: sc-117752 (A) and human BMP-9 transfected: sc-370246 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Wang, X., et al. 2017. Bone morphogenetic protein 9 stimulates callus formation in osteoporotic rats during fracture healing. *Mol. Med. Rep.* 15: 2537-2545.
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- Li, F.S., et al. 2020. BMP9 mediates the anticancer activity of evodiamine through HIF-1 α /p53 in human colon cancer cells. *Oncol. Rep.* 43: 415-426.
- Jiang, H.T., et al. 2021. The role of Serpina3n in the reversal effect of ATRA on dexamethasone-inhibited osteogenic differentiation in mesenchymal stem cells. *Stem Cell Res. Ther.* 12: 291.
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- Hodgson, J., et al. 2021. Homozygous GDF2 nonsense mutations result in a loss of circulating BMP9 and BMP10 and are associated with either PAH or an "HHT-like" syndrome in children. *Mol. Genet. Genomic Med.* 9: e1685.
- Wei, T., et al. 2022. Extracranial arteriovenous malformations demonstrate dysregulated TGF- β /BMP signaling and increased circulating TGF- β 1. *Sci. Rep.* 12: 16612.
- Song, T., et al. 2023. The effect of BMP9 on inflammation in the early stage of pulpitis. *J. Appl. Oral Sci.* 31: e20220313.
- Zhang, J., et al. 2023. Lysyl oxidase inhibits BMP9-induced osteoblastic differentiation through reducing Wnt/ β -catenin via HIF-1 α repression in 3T3-L1 cells. *J. Orthop. Surg. Res.* 18: 911.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.