

BMP-9 (H-6): sc-515256

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.

REFERENCES

1. Song, J.J., Celeste, A.J., Kong, F.M., Jirtle, R.L., Rosen, V. and Thies, R.S. 1995. Bone morphogenetic protein-9 binds to liver cells and stimulates proliferation. *Endocrinology* 136: 4293-4297.
2. Majumdar, M.K., Wang, E. and Morris, E.A. 2001. BMP-2 and BMP-9 promotes chondrogenic differentiation of human multipotential mesenchymal cells and overcomes the inhibitory effect of IL-1. *J. Cell. Physiol.* 189: 275-284.
3. Chen, C., Grzegorzewski, K.J., Barash, S., Zhao, Q., Schneider, H., Wang, Q., Singh, M., Pukac, L., Bell, A.C., Duan, R., et al. 2003. An integrated functional genomics screening program reveals a role for BMP-9 in glucose homeostasis. *Nat. Biotechnol.* 21: 294-301.
4. Dayoub, H., Dumont, R.J., Li, J.Z., Dumont, A.S., Hankins, G.R., Kallmes, D.F. and Helm, G.A. 2003. Human mesenchymal stem cells transduced with recombinant bone morphogenetic protein-9 adenovirus promote osteogenesis in rodents. *Tissue Eng.* 9: 347-356.
5. Li, J.Z., Li, H., Sasaki, T., Holman, D., Beres, B., Dumont, R.J., Pittman, D.D., Hankins, G.R. and Helm, G.A. 2003. Osteogenic potential of five different recombinant human bone morphogenetic protein adenoviral vectors in the rat. *Gene Ther.* 10: 1735-1743.

CHROMOSOMAL LOCATION

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

SOURCE

BMP-9 (H-6) is a mouse monoclonal antibody raised against amino acids 71-149 mapping within an internal region of BMP-9 of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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-9 (H-6) is recommended for detection of 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).

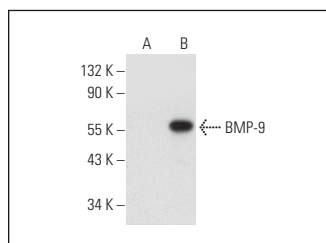
Suitable for use as control antibody for BMP-9 siRNA (h): sc-39756, BMP-9 siRNA (m): sc-39757, BMP-9 shRNA Plasmid (h): sc-39756-SH, BMP-9 shRNA Plasmid (m): sc-39757-SH, BMP-9 shRNA (h) Lentiviral Particles: sc-39756-V and BMP-9 shRNA (m) Lentiviral Particles: sc-39757-V.

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

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 κ BP-FITC: sc-516140 or m-IgG κ 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-9 (H-6): sc-515256. 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.

PROTOCOLS

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