

BMP-9 (G-23): sc-130703

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., et al. 1995. Bone morphogenetic protein-9 binds to liver cells and stimulates proliferation. *Endocrinology* 136: 4293-4297.
2. Majumdar, M.K., et al. 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., 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., et al. 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., et al. 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 (G-23) is a purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of BMP-9 of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

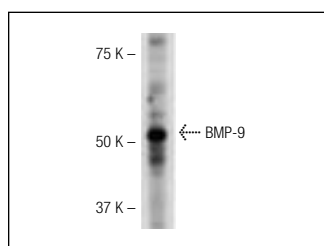
BMP-9 (G-23) is recommended for detection of BMP-9 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



BMP-9 (G-23): sc-130703. Western blot analysis of BMP-9 expression in mouse liver tissue extract.

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 or our catalog for detailed protocols and support products.