

BMP-2 (N-14): sc-6895

BACKGROUND

BMP-2 (bone morphogenetic protein 2), also known as BMP-2A (bone morphogenetic protein 2A), is a 396 amino acid secreted protein that belongs to the TGF- β family. As a disulfide-linked homodimer that induces cartilage and bone formation, BMP-2 interacts with SOSTDC1, gremlin-2, Asporin, RGMa, RGMb and RGMc. BMP-2 is highly expressed in lung, spleen and colon, with low levels of expression in heart, brain, placenta, liver, skeletal muscle, kidney, pancreas, prostate, ovary and small intestine. The gene that encodes BMP-2 maps to human chromosome 20p12.3. Comprising approximately 2% of the human genome, chromosome 20 contains nearly 63 million bases that encode over 600 genes, some of which are associated with Creutzfeldt-Jakob disease, amyotrophic lateral sclerosis, spinal muscular atrophy, RING chromosome 20 epilepsy syndrome and Alagille syndrome.

CHROMOSOMAL LOCATION

Genetic locus: BMP2 (human) mapping to 20p12.3; Bmp2 (mouse) mapping to 2 F2.

SOURCE

BMP-2 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of the mature chain of BMP-2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-6895 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

BMP-2 (N-14) is recommended for detection of precursor and mature BMP-2 of mouse, rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

BMP-2 (N-14) is also recommended for detection of precursor and mature BMP-2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for BMP-2 siRNA (h): sc-39738, BMP-2 siRNA (m): sc-39739, BMP-2 shRNA Plasmid (h): sc-39738-SH, BMP-2 shRNA Plasmid (m): sc-39739-SH, BMP-2 shRNA (h) Lentiviral Particles: sc-39738-V and BMP-2 shRNA (m) Lentiviral Particles: sc-39739-V.

Molecular Weight of BMP-2 precursor: 60 kDa.

Molecular Weight of BMP-2 homodimer: 30 kDa.

Molecular Weight of BMP-2 monomer: 18 kDa.

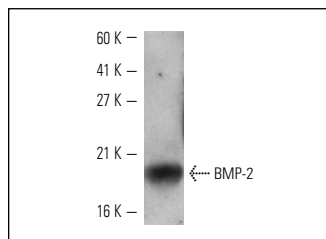
RESEARCH USE

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-2 (N-14): sc-6895. Western blot analysis of mature human recombinant BMP-2.

SELECT PRODUCT CITATIONS

1. Dhore, C.R., et al. 2001. Differential expression of bone matrix regulatory proteins in human atherosclerotic plaques. *Arterioscler. Thromb. Vasc. Biol.* 21: 1998-2003.
2. Shimizu, T., et al. 2011. Notch signaling pathway enhances bone morphogenetic protein 2 (BMP2) responsiveness of Msx2 gene to induce osteogenic differentiation and mineralization of vascular smooth muscle cells. *J. Biol. Chem.* 286: 19138-19148.
3. Ono, M., et al. 2011. WISP-1/CCN4 regulates osteogenesis by enhancing BMP-2 activity. *J. Bone Miner. Res.* 26: 193-208.
4. Honoré, S.M., et al. 2011. Neuronal loss and abnormal BMP/Smad signaling in the myenteric plexus of diabetic rats. *Auton. Neurosci.* 164: 51-61.
5. Karaöz, E., et al. 2011. Human dental pulp stem cells demonstrate better neural and epithelial stem cell properties than bone marrow-derived mesenchymal stem cells. *Histochem. Cell Biol.* 136: 455-473.
6. Karaoz, E., et al. 2011. Bone marrow-derived mesenchymal stem cells co-cultured with pancreatic islets display β cell plasticity. *J. Tissue Eng. Regen. Med.* 5: 491-500.
7. Adas, G., et al. 2011. Mesenchymal stem cells improve the healing of ischemic colonic anastomoses (experimental study). *Langenbecks Arch. Surg.* 396: 115-126.
8. Li, K.L., et al. 2012. p53 negatively regulates the osteogenic differentiation of vascular smooth muscle cells in mice with chronic kidney disease. *Cardiovasc. J. Afr.* 23: e1-e9.

MONOS
Satisfaction
Guaranteed

Try **BMP-2/4 (H-1): sc-137087**, our highly recommended monoclonal alternative to BMP-2 (N-14).