

MEPE (M-300): sc-68924

BACKGROUND

MEPE (matrix extracellular phosphoglycoprotein), also known as OF45 (osteoblast/osteocyte factor 45), is a 525 amino acid extracellular matrix protein. Expressed in osteocytes and brain, MEPE is a regulator of bone metabolism that is thought to mediate mineralization and demineralization within the osteocyte microenvironment. MEPE contains an RGD cell-attachment motif and shares molecular similarities with several dentin-bone extracellular matrix RGD-containing phosphoglycoproteins, including OPN (osteopontin) and DSP (dentin sialophosphoprotein). Via its ability to control bone mineralization, MEPE is associated with various developmental events such as skeletogenesis, bone regeneration and odontogenesis. MEPE is secreted in hypophosphatemic osteomalacia tumors, suggesting a possible role in the pathophysiology of bone-related cancers. Defects in the gene encoding MEPE may be associated with osteomalacia, an adult form of the childhood disease known as rickets that is caused by inadequate bone mineralization.

REFERENCES

- MacDougall, M., et al. 2002. MEPE/OF45, a new dentin/bone matrix protein and candidate gene for dentin diseases mapping to chromosome 4q21. *Connect. Tissue Res.* 43: 320-330.
- Bresler, D., et al. 2004. Serum MEPE-ASARM-peptides are elevated in X-linked rickets (HYP): implications for phosphaturia and rickets. *J. Endocrinol.* 183: R1-R9.
- Lu, C., et al. 2004. Mepe is expressed during skeletal development and regeneration. *Histochem. Cell Biol.* 121: 493-499.
- Nampei, A., et al. 2004. Matrix extracellular phosphoglycoprotein (MEPE) is highly expressed in osteocytes in human bone. *J. Bone Miner. Metab.* 22: 176-184.
- Martin, A., et al. 2007. Degradation of MEPE, DMP1, and release of SIBLING ASARM-peptides (minhibins): ASARM-peptide(s) are directly responsible for defective mineralization in HYP. *Endocrinology* 149: 1757-1772.
- Six, N., et al. 2007. Dentonin, a MEPE fragment, initiates pulp-healing response to injury. *J. Dent. Res.* 86: 780-785.

CHROMOSOMAL LOCATION

Genetic locus: MEPE (human) mapping to 4q22.1; Mepe (mouse) mapping to 5 E5.

SOURCE

MEPE (M-300) is a rabbit polyclonal antibody raised against amino acids 11-310 mapping near the N-terminus of MEPE of mouse origin.

PRODUCT

Each vial contains 200 µg IgG 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.

APPLICATIONS

MEPE (M-300) is recommended for detection of MEPE of mouse and, to a lesser extent, human and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 MEPE siRNA (h): sc-75773, MEPE siRNA (m): sc-75774, MEPE shRNA Plasmid (h): sc-75773-SH, MEPE shRNA Plasmid (m): sc-75774-SH, MEPE shRNA (h) Lentiviral Particles: sc-75773-V and MEPE shRNA (m) Lentiviral Particles: sc-75774-V.

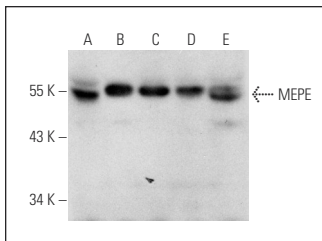
Molecular Weight of MEPE: 57 kDa.

Positive Controls: c4 whole cell lysate: sc-364186.

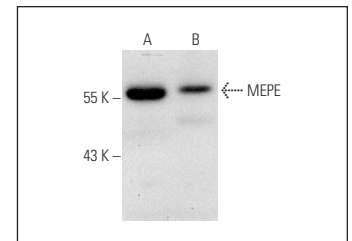
RECOMMENDED SECONDARY REAGENTS

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.

DATA



MEPE (M-300): sc-68924. Western blot analysis of MEPE expression in Hep G2 (A), SK-N-SH (B), HeLa (C), A2058 (D) and A-375 (E) whole cell lysates.



MEPE (M-300): sc-68924. Western blot analysis of MEPE expression in c4 (A) and KNRK (B) whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

MONOS
Satisfaction
Guaranteed

Try **MEPE (C-4): sc-377035** or **MEPE (B-6): sc-390608**, our highly recommended monoclonal alternatives to MEPE (M-300).