

OPN (P-18): sc-10593

BACKGROUND

Osteopontin (OPN), also designated bone sialoprotein 1, urinary stone protein, SPP-1, ETA-1, nephropontin and uropontin, is an extracellular matrix cell adhesion phosphoglycoprotein. OPN is deposited into unmineralized matrix prior to calcification, leading to localization at various tissue interfaces including cement lines, lamina limitans and between collagen fibrils of fully matured hard tissues. While OPN is a major product of osteoblasts, it is also synthesized by brain and kidney cells. OPN isolated from or secreted by various tissues ranges in molecular weight due to posttranslational modifications. OPN functions as a substrate for transglutaminase and is involved in cell adhesion, chemoattraction and immunomodulation.

CHROMOSOMAL LOCATION

Genetic locus: SPP1 (human) mapping to 4q22.1; Spp1 (mouse) mapping to 5 E5.

SOURCE

OPN (P-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of OPN 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.

Blocking peptide available for competition studies, sc-10593 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as HRP conjugate for Western blotting, sc-10593 HRP, 200 µg/1 ml.

APPLICATIONS

OPN (P-18) is recommended for detection of OPN of mouse, rat and, to a lesser extent, human 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 OPN siRNA (h): sc-36129, OPN siRNA (m): sc-36130, OPN siRNA (r): sc-270052, OPN shRNA Plasmid (h): sc-36129-SH, OPN shRNA Plasmid (m): sc-36130-SH, OPN shRNA Plasmid (r): sc-270052-SH, OPN shRNA (h) Lentiviral Particles: sc-36129-V, OPN shRNA (m) Lentiviral Particles: sc-36130-V and OPN shRNA (r) Lentiviral Particles: sc-270052-V.

Molecular Weight of OPN precursor: 66 kDa.

Molecular Weight of OPN cleavage products: 25-55 kDa.

Positive Controls: OPN (m): 293T Lysate: sc-122246.

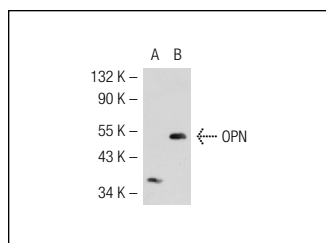
STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

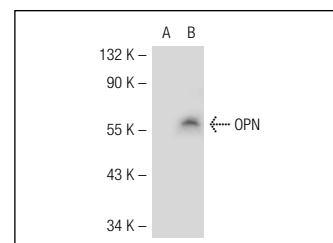
RESEARCH USE

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

DATA



OPN (P-18): sc-10593. Western blot analysis of OPN expression in non-transfected: sc-117752 (A) and mouse OPN transfected: sc-122246 (B) 293T whole cell lysates.



OPN (P-18): sc-10593. Western blot analysis of OPN expression in non-transfected: sc-117752 (A) and mouse OPN transfected: sc-122247 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Geissinger, E., et al. 2002. Autocrine stimulation by osteopontin contributes to antiapoptotic signalling of melanocytes in dermal collagen. *Cancer Res.* 62: 4820-4828.
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- Hammerick, K.E., et al. 2010. Pulsed direct current electric fields enhance osteogenesis in adipose-derived stromal cells. *Tissue Eng. Part A* 16: 917-931.
- Teutschbein, J., et al. 2010. Gene expression analysis after receptor tyrosine kinase activation reveals new potential melanoma proteins. *BMC Cancer* 10: 386.
- Uhlmann, M.E., et al. 2011. Influence of osteopontin expression on the metastatic growth of CC531 rat colorectal carcinoma cells in rat liver. *Cancer Gene Ther.* 18: 795-805.
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Try **OPN (AKm2A1): sc-21742** or **OPN (LFMb-14): sc-73631**, our highly recommended monoclonal alternatives to OPN (P-18). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **OPN (AKm2A1): sc-21742**.