Anti-Osteopontin Antibody

ER1802-16

Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Mouse
Applications:	IF-Cell, IHC-P, ELISA
Molecular Wt:	Predicted band size: 35 kDa

Description: 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.

Immunogen: Synthetic peptide within mouse Osteopontin 17-100.

Positive control: HepG2, MCF-7, human liver cancer tissue, human kidney tissue, mouse kidney tissue.

Subcellular location: Secreted.

Database links: SwissProt: P10451 Human | P10923 Mouse

Recommended Dilutions:

IF-Cell	1:50-1:200
IHC-P	1:50-1:200
ELISA	1:5,000-1:10,000

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Immunogen affinity purified.

Images

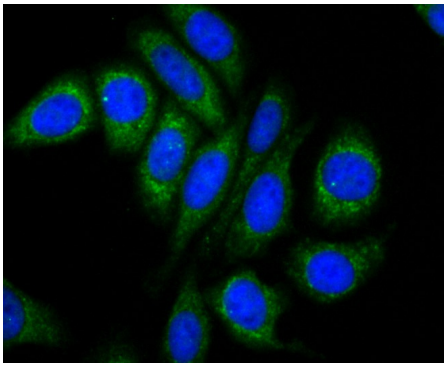

Fig1: ICC staining Osteopontin in HepG2 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

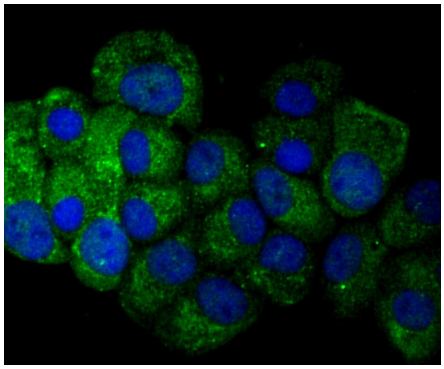

Fig2: ICC staining Osteopontin in MCF-7 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

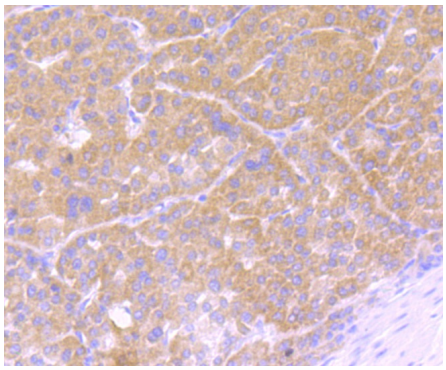

Fig3: Immunohistochemical analysis of paraffin-embedded human liver cancer tissue using anti-Osteopontin antibody. Counter stained with hematoxylin.

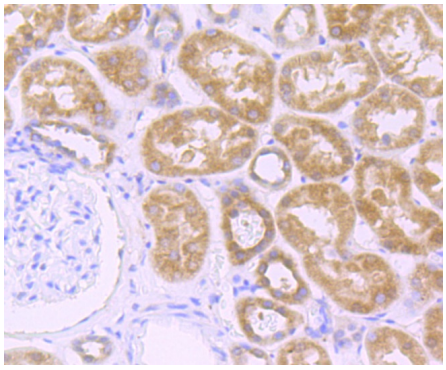

Fig4: Immunohistochemical analysis of paraffin-embedded human kidney tissue using anti-Osteopontin antibody. Counter stained with hematoxylin.

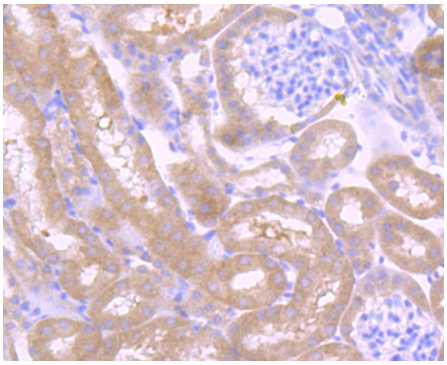

Fig5: Immunohistochemical analysis of paraffin-embedded mouse kidney tissue using anti-Osteopontin antibody. Counter stained with hematoxylin.

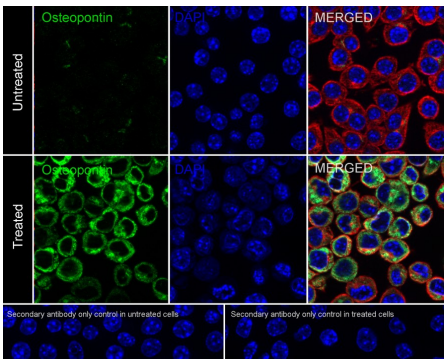

Fig6: Immunocytochemistry analysis of RAW264.7 cells treated with LPS (100 ng/ml 6h) add BFA (300 ng/ml 3h) labeling Osteopontin with Rabbit anti-Osteopontin antibody (ER1802-16) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 20 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-Osteopontin antibody (ER1802-16) at 1/100 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

Background References

1. Young MF et al. cDNA cloning, mRNA distribution and heterogeneity, chromosomal location, and RFLP analysis of human osteopontin (OPN). Genomics 7(1): 491-502 (1990).
2. Barros NM et al. Proteolytic processing of osteopontin by PHEX and accumulation of osteopontin fragments in Hyp mouse bone, the murine model of X-linked hypophosphatemia. Journal of Bone and Mineral Research 28(3): 688-99 (2013).