

**OPN-a/b Antibody (N-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP11567a**

**Specification**

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**OPN-a/b Antibody (N-term) - Product Information**

Application	IF, WB, IHC-P,E
Primary Accession	<a href="#">P10451</a>
Other Accession	<a href="#">NP_000573.1</a> , <a href="#">NP_001035147.1</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	14-40

**OPN-a/b Antibody (N-term) - Additional Information**

**Gene ID** 6696

**Other Names**

Osteopontin, Bone sialoprotein 1, Nephropontin, Secreted phosphoprotein 1, SPP-1, Urinary stone protein, Uropontin, SPP1, BNSP, OPN

**Target/Specificity**

This OPN-a/b antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 14-40 amino acids from the N-terminal region of human OPN-a/b.

**Dilution**

IF~~1:25  
WB~~1:2000  
IHC-P~~1:50~100

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

OPN-a/b Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**OPN-a/b Antibody (N-term) - Protein Information**

**Name** SPP1

### Synonyms BNSP, OPN

**Function** Major non-collagenous bone protein that binds tightly to hydroxyapatite. Appears to form an integral part of the mineralized matrix. Probably important to cell-matrix interaction.

### Cellular Location

Secreted

### Tissue Location

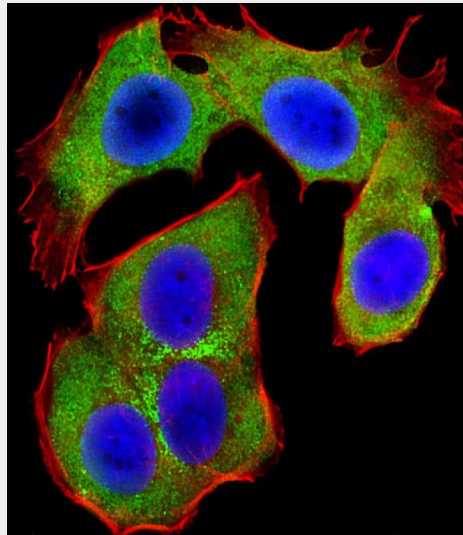
Detected in cerebrospinal fluid and urine (at protein level) (PubMed:25326458, PubMed:36213313, PubMed:37453717) Bone. Found in plasma.

### OPN-a/b Antibody (N-term) - Protocols

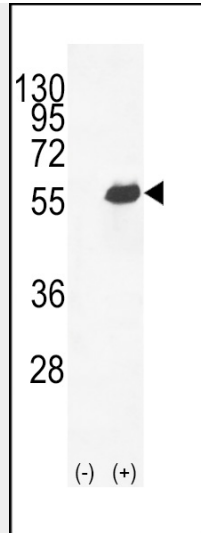
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

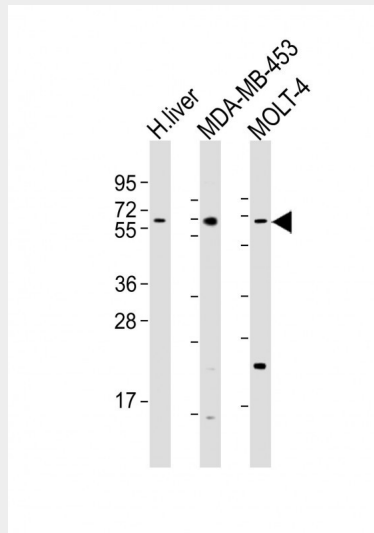
### OPN-a/b Antibody (N-term) - Images



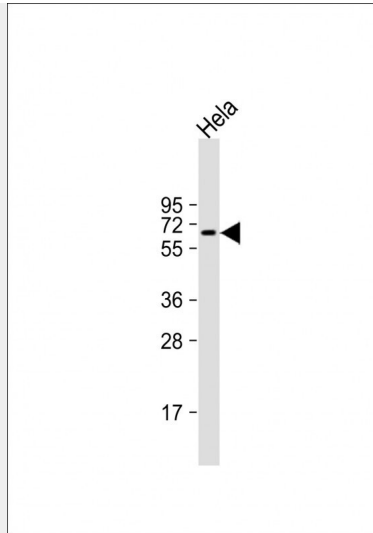
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized MCF-7 (human breast cancer cell line) cells labeling OPN-a/b with AP11567a at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-rabbit IgG (NK179883) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing cytoplasm staining on MCF-7 cell line. Cytoplasmic actin is detected with Dylight® 554 Phalloidin (PD18466410) at 1/100 dilution (red).The nuclear counter stain is DAPI (blue).



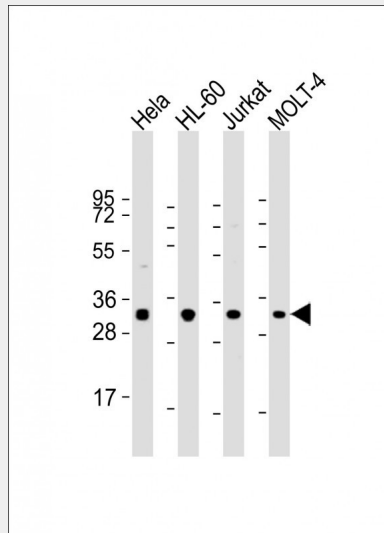
Western blot analysis of OPN-a/b (arrow) using rabbit polyclonal OPN-a/b Antibody (N-term) (Cat. #AP11567a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the OPN-a/b gene.



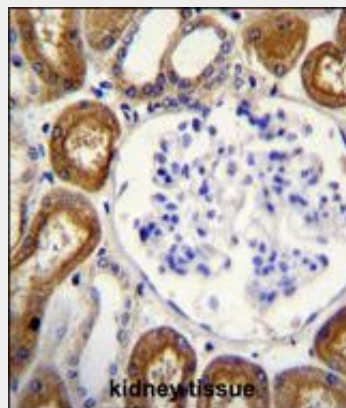
All lanes : Anti-OPN-a/b Antibody (N-term) at 1:1000 dilution Lane 1: human liver lysates Lane 2: MDA-MB-453 whole cell lysates Lane 3: MOLT-4 whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 35 kDa Blocking/Dilution buffer: 5% NFDm/TBST.



Anti-OPN-a/b Antibody (N-term) at 1:2000 dilution + HeLa whole cell lysate Lysates/proteins at 20  $\mu$ g per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 35 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



All lanes : Anti-OPN-a/b Antibody (N-term) at 1:2000 dilution Lane 1: HeLa whole cell lysate Lane 2: HL-60 whole cell lysate Lane 3: Jurkat whole cell lysate Lane 4: MOLT-4 whole cell lysate Lysates/proteins at 20  $\mu$ g per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 35 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



OPN-a/b Antibody (N-term) (Cat. #AP11567a) immunohistochemistry analysis in formalin fixed and paraffin embedded human kidney tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of OPN-a/b Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.

#### **OPN-a/b Antibody (N-term) - Background**

Binds tightly to hydroxyapatite. Appears to form an integral part of the mineralized matrix. Probably important to cell-matrix interaction.

Acts as a cytokine involved in enhancing production of interferon-gamma and interleukin-12 and reducing production of interleukin-10 and is essential in the pathway that leads to type I immunity (By similarity).

#### **OPN-a/b Antibody (N-term) - References**

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)

Weber, G.F., et al. Br. J. Cancer 103(6):861-869(2010)

Chen, R.X., et al. J. Gastroenterol. Hepatol. 25(8):1435-1442(2010)

Jugessur, A., et al. PLoS ONE 5 (7), E11493 (2010) :

Johnatty, S.E., et al. PLoS Genet. 6 (7), E1001016 (2010) :

#### **OPN-a/b Antibody (N-term) - Citations**

- [AGEs-Induced Calcification and Apoptosis in Human Vascular Smooth Muscle Cells Is Reversed by Inhibition of Autophagy](#)
- [Avian eggshell thinning caused by transovarian exposure to o,p'-DDT: changes in histology and calcium-binding protein production in the oviduct uterus](#)
- [MALAT1/miR-127-5p regulates osteopontin \(OPN\)-mediated proliferation of human chondrocytes through PI3K/Akt pathway](#)
- [NEAT1/miR-181c regulates osteopontin \(OPN\)-mediated synoviocyte proliferation in osteoarthritis](#)
- [MicroRNA-127-5p regulates osteopontin expression and osteopontin-mediated proliferation of human chondrocytes](#)
- [Osteopontin Promotes Expression of Matrix Metalloproteinase 13 through NF-κB Signaling in Osteoarthritis](#)