

# Product Datasheet

## Osteopontin/OPN Antibody - BSA Free NB600-1043

Unit Size: 0.2 ml

Store at -20C short term. Aliquot and store at -80C long term. Avoid freeze-thaw cycles.

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**NB600-1043**

Osteopontin/OPN Antibody - BSA Free

Product Information	
Unit Size	0.2 ml
Concentration	This product is unpurified. The exact concentration of antibody is not quantifiable.
Storage	Store at -20C short term. Aliquot and store at -80C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.01% Sodium Azide
Isotype	Serum
Purity	Unpurified
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Product Description	
Description	Store vial at -20C prior to opening. Aliquot contents and freeze at -20C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4C as an undiluted liquid. Dilute only prior to immediate use.
Host	Rabbit
Gene ID	6696
Gene Symbol	SPP1
Species	Human, Mouse
Specificity/Sensitivity	Osteopontin/OPN is directed against human osteopontin. The antibody recognizes the full-length osteopontin protein (which runs at 66 kDa on westerns), as well as the C-terminal fragments of both thrombin and MMP-cleaved OPN. The 32 kDa MMP-cleaved C-fragment is recognized, but not the 40 kDa N-terminal fragment. Reactivity is reported to occur with osteopontin from swine, dog, mouse and rat.
Immunogen	This whole rabbit serum was prepared by repeated immunizations with a synthetic peptide, from the human Osteopontin/OPN protein, conjugated to KLH using maleimide. (Uniprot: P10451)
Product Application Details	
Applications	Western Blot, ELISA, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Immunoprecipitation
Recommended Dilutions	Western Blot 1:500-1:2000, ELISA 1:5000-1:20000, Immunohistochemistry 1:100-1:300, Immunocytochemistry/ Immunofluorescence, Immunoprecipitation 1:100, Immunohistochemistry-Paraffin



**Application Notes**

This product has been tested for western blotting, immunohistochemistry (formalin-fixed paraffin-embedded sections) and ELISA. The antibody exclusively recognizes C-terminal fragments of both thrombin and MMP-cleaved OPN. The antibody recognizes the full-length osteopontin protein (which runs at 66 kDa on westerns), and 32 kDa for the MMP-cleaved C-fragment, but the 40 kDa N-terminal fragment is not recognized. A 1:1000 dilution will detect strongly approximately 250 ng of OPN protein on a blot. A 1:100-1:300 dilution used for IHC on human breast tumor tissues. No pretreatment is required for IHC when formalin-fixed paraffin-embedded tissue is stained. Specific conditions for reactivity and signal detection should be optimized by the end user.

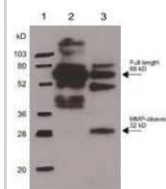
Use in Immunocytochemistry/immunofluorescence reported in scientific literature (PMID : 29506220).

Use in Immunohistochemistry-paraffin reported in scientific literature (PMID: 26963743).

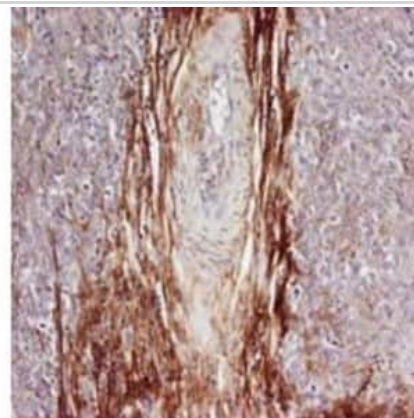


## Images

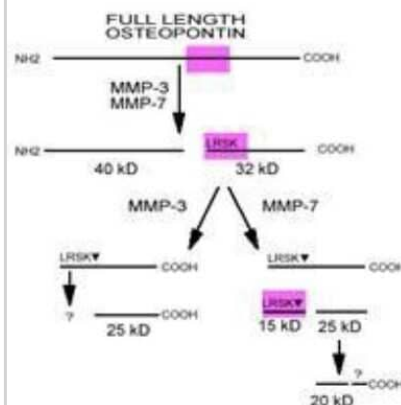
Western Blot: Osteopontin/OPN Antibody [NB600-1043] - Western Blot of Osteopontin/OPN/OPN antibody. Lane 1: Molecular Weight Marker. Lane 2: Human Osteopontin/OPN [250ng]. Lane 3: MMP-cleaved Osteopontin/OPN. Primary Antibody: Anti-Osteopontin/OPN at 1:1000 overnight at 2-8°C. Secondary Antibody: Goat Anti-Rabbit IgG HRP at 1:10,000. Observed MW: full length 66kDa, MMP-cleaved 32kDa.



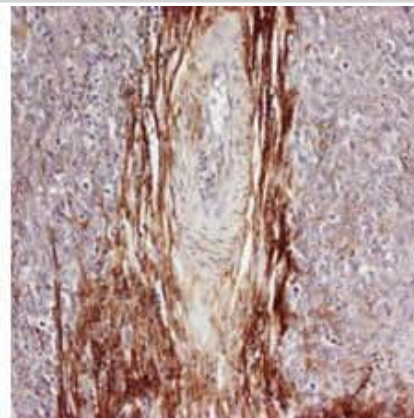
Immunohistochemistry: Osteopontin/OPN Antibody [NB600-1043] - Osteopontin/OPN/OPN antibody was used at a 1:100-1:300 dilution to detect osteopontin by immunohistochemistry. Osteopontin/OPN is a normal component of elastic fibers in the breast (shown heavily stained in this section of human breast tumor cells). There is also weak staining of the extracellular matrix. Osteopontin/OPN is not expressed in breast tumor cells, and there is no staining of the breast cells in this section. No antigen retrieval is required.



Osteopontin/OPN Antibody [NB600-1043]



Rabbit anti-Osteopontin was used at a 1:100-1:300 dilution to detect osteopontin by immunohistochemistry. Osteopontin is a normal component of elastic fibers in the breast (shown heavily stained in this section of human breast tumor cells). There is also weak staining of the extracellular matrix. Osteopontin is not expressed in breast tumor cells, and there is no staining of the breast cells in this section. No antigen retrieval is required.



## Publications

Ballester-Servera C, Alonso J, Cañes L et al. Lysyl oxidase-dependent extracellular matrix crosslinking modulates calcification in atherosclerosis and aortic valve disease *Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie* 2023-09-18 [PMID: 37729730] (WB, Human)

Ballester-Servera C, Cañes L, Alonso J et al. Upregulation of NOR-1 in calcified human vascular tissues: impact on osteogenic differentiation and calcification *Translational research : the journal of laboratory and clinical medicine* 2023-09-09 [PMID: 37690706] (WB, Human)

Voicu G, Rebleanu D, Constantinescu CA et al. Nano-Polyplexes Mediated Transfection of Runx2-shRNA Mitigates the Osteodifferentiation of Human Valvular Interstitial Cells *Pharmaceutics* 2020-06-02 [PMID: 32498305] (WB, Human)

Gershon E, Hadas R, Elbaz M et al. Identification of Trophectoderm-Derived Cripto as an Essential Mediator of Embryo Implantation. *Endocrinology*. 2018-04-01 [PMID: 29506220] (ICC/IF, Mouse)

Sakamuri SSVP, Takawale A, Basu R, Fedak PWM et al. Differential Impact of Mechanical Unloading on Structural and Non-Structural Components of the Extracellular Matrix in Advanced Human Heart Failure *Translational Research* 2016-02-23 [PMID: 26963743] (WB, IHC-P, Human)

Robertson BW, Bonsal L, Chellaiah MA. Regulation of Erk1/2 activation by osteopontin in PC3 human prostate cancer cells. *Mol Cancer* 2010-09-01 [PMID: 20868520]

Robertson BW, Chellaiah MA. Osteopontin induces beta-catenin signaling through activation of Akt in prostate cancer cells. *Exp Cell Res* 2010-01-01 [PMID: 19850036]

Kim S, Shin T, et al. Immunohistochemical study of osteopontin in boar testis. *J Vet Sci* 2007-06-01 [PMID: 17519561]





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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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