

MONOCLONAL ANTIBODIES TO OSTEOPONTIN

Osteopontin (OPN) is a phosphorylated glycoprotein secreted by activated macrophages, leukocytes, and activated T lymphocytes. It is present in extracellular fluids, at sites of inflammation, and in the extracellular matrix of mineralized tissues. Mineralized tissues are biological tissues that incorporate minerals into soft matrices. Typically these tissues form a protective shield or structural support. Bone, tendon, cartilage, tooth enamel and dentin are some examples where mineralized tissues are found.

OPN is a tumor-associated antigen that is highly expressed in multiple human cancers including lung cancer, breast cancer, colorectal cancer, stomach cancer, ovarian cancer, melanoma and mesothelioma. Since it is a secreted protein that can be found in human urine and blood, it has been suggested that OPN may have potential as a biomarker to detect or diagnose cancer, or that levels of circulating OPN may be indicative of cancer progression, metastasis, or be helpful in prognosis.¹

TESTING IN ELISA...

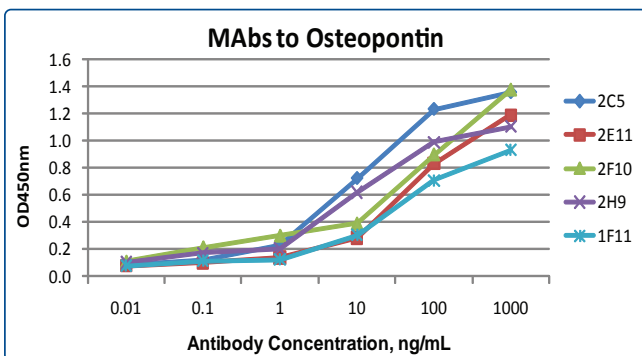
A Titration Curve of each of the clones was performed in indirect ELISA.

Antigen:

Recombinant full length Osteopontin, coated at 1 µg/mL

Antibody:

Dilution series of the antibody, incubated 2 hours at room temperature followed by Goat anti-Mouse IgG:HRP conjugate and TMB substrate.



MABS TO OSTEOPONTIN AVAILABLE FROM MERIDIAN LIFE SCIENCE, INC.

CATALOG #	CLONE #	SPECIFICITY
M66101M	2E11	OPN N-terminal (a.a. 1-166)
M66102M	2C5	OPN N-terminal (a.a. 1-166)
M66103M	2F10	OPN N-terminal (a.a. 1-166)
M66104M	2H9	OPN N-terminal (a.a. 1-166)
M66105M	1F11	OPN N-terminal (a.a. 167-314)

Host Animal: Mouse

Source: Ascites

Immunogen: Recombinant Full-length OPN

Format: Purified by Protein A

Purity: >90%

Buffer: 10mM Sodium Phosphate, 150 mM Sodium Chloride, pH 7.4 ± 0.2

Concentration: Lot Specific

Preservative: 0.05% Sodium azide

RECOMMENDED PAIR FOR SANDWICH IMMUNOASSAY:

Capture: M66103M

Detection: M66105M

DEVELOPMENT:

The development of the fragment - specific OPN antibodies and the ELISA protocol used for quantifying OPN in human metastatic breast cancer can be found in the January 2008 publication of BioMed Central (BMC) Cancer. The research article is entitled: "Development of fragment-specific Osteopontin antibodies and ELISA for quantification in human metastatic breast cancer."

USE OF OPN:

The use of OPN as an early detection of new and recurring cases of breast cancer by Dr. Lucy Liaw may be viewed in an October 2009 interview on New England Cable News (NECN).

<http://www.necn.com/Boston/Health/2009/10/20/Breast-cancer-may-be-able-to/1256073734.html>

¹"Development of fragment-specific Osteopontin antibodies and ELISA for quantification in human metastatic breast cancer."

Alicia Plumer, Hongyi Duan, Sripriya Subramaniam, F Lee Lucas, Susan Miesfeldt, Ah-Kau Ng and Lucy Liaw

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