

## DESCRIPTION

|                                                                                                                                                                                                         |                                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Mouse                                                                                                       |
| <b>Specificity</b>                                                                                                                                                                                      | Detects mouse Osteopontin /OPN in direct ELISAs.                                                            |
| <b>Source</b>                                                                                                                                                                                           | Monoclonal Rabbit IgG Clone # 2139B                                                                         |
| <b>Purification</b>                                                                                                                                                                                     | Protein A or G purified from cell culture supernatant                                                       |
| <b>Immunogen</b>                                                                                                                                                                                        | Mouse myeloma cell line NS0-derived recombinant mouse Osteopontin/OPN<br>Leu17-Asn294<br>Accession # Q547B5 |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 647<br>Excitation Wavelength: 650 nm<br>Emission Wavelength: 668 nm                             |
| <b>Formulation</b>                                                                                                                                                                                      | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide                                                |
| *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |                                                                                                             |

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| <b>Western Blot</b>         | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunocytochemistry</b>  | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunohistochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

## BACKGROUND

Osteopontin (OPN), previously called SPP1 (secreted phosphoprotein 1), Eta-1 (early T lymphocyte activation 1) or BSP (bone sialoprotein), is a secreted molecule in the SIBLING (small integrin-binding ligand N-linked glycoprotein) family of non-collagenous matricellular proteins (1-3). Mouse OPN is synthesized as a 294 amino acid (aa) precursor protein with a 16 aa signal peptide and a 278 aa mature protein (3). Mature mouse OPN shares 79% and 64% aa sequence identity with rat and human OPN, respectively. OPN is highly acidic and has 26 potential Ser/Thr phosphorylation sites and a C-terminal CD44 binding site (1-4). Depending on tissue-specific modification by O- and N-glycosylation, sulfation, phosphorylation and transglutamination, OPN can be detected at 45-75 kDa (5, 6). The central region of OPN contains RGD and non-RGD binding sites for multiple integrins (3, 4). Adjacent to the RGD motif is the sequence SLAYGLR (SVVYGLR in human) which serves as a cryptic binding site for additional integrins: it is masked in full length OPN but is exposed following OPN cleavage by thrombin in tumors and sites of tissue injury (6-8). OPN can also be cleaved by MMP-3, -7, -9, and -12 within the SLAYGLR motif and at sites closer to the C-terminus (8, 9). OPN is widely expressed and is prominent in mineralized tissues. It inhibits bone mineralization and kidney stone formation, and promotes inflammation and cell adhesion and migration (1, 2, 4, 6). Its expression is up-regulated during inflammation, obesity, atherosclerosis, cancer, and tissue damage, and contributes to the pathophysiology of these conditions (1, 2, 6, 9, 10).

## PRODUCT SPECIFIC NOTICES

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