

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Osteopontin /OPN in direct ELISAs.
Source	Monoclonal Rabbit IgG Clone # 2139B
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Osteopontin/OPN Leu17-Asn294 Accession # Q547B5
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 nm
Formulation	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.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	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

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.