Recombinant Osteopontin/SPP1/ETA-1 Monoclonal Antibody

catalog number: AN300326P

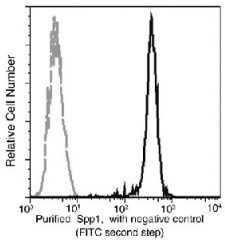
Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

Description

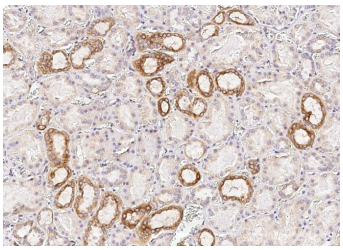
Reactivity	Human
Immunogen	Recombinant Human Osteopontin/SPP1/ETA-1 protein
Host	Rabbit
Isotype	IgG
Clone	B248
Purification	Protein A
Buffer	0.2 μm filtered solution in PBS

Applications	Recommended Dilution
IHC-P	1:1000-1:4000
FCM	1:25-1:100

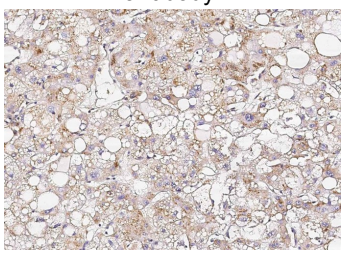
Data



Flow cytometric analysis of purified anti-human Spp1 on U937 cells. U937 cells were treated according to manufacturer's manual, and stained with Purified Rabbit anti-Spp1 (Bold line hisgram), To demonstrate specificity of staining the binding of anti-human Spp1 was blocked by the preincubation of the purified antibody with molar excess of recombinant human Spp1 (5 μg) for 1 hour (dashed line hisgram), then stained with a FITC-conjugated second step antibody.



Immunohistochemistry of paraffin-embedded human kidney using Osteopontin/SPP1/ETA-1 Monoclonal Antibody at dilution of 1:2000.



Immunohistochemistry of paraffin-embedded human hepatoma using Osteopontin/SPP1/ETA-1 Monoclonal Antibody at dilution of 1:2000.

Preparation & Storage

Storage	This antibody can be stored at 2°C-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20°C to -80°C. Preservative-Free. Avoid repeated freeze-thaw cycles.
Shipping	Ice bag

Background

Osteopontin (OPN, previously also referred to as transformation-associated secreted phosphoprotein, bone sialoprotein I, 2ar, 2B7, early T lymphocyte activation 1 protein, minopotin, calcium oxalate crystal growth inhibitor protein), is a secreted, highly acidic, calcium-binding, RGD-containing, phosphorylated glycoprotein originally isolated from bone matrix. Subsequently, OPN has been found in kidney, placenta, blood vessels and various tumor tissues. Many cell types (including macrophages, osteoclasts, activated T-cells, fibroblasts, epithelial cells, vascular smooth muscle cells, and natural killer cells) can express OPN in response to activation by cytokines, growth factors or inflammatory mediators. Elevated expression of OPN has also been associated with numerous pathobiological conditions such as atherosclerotic plaques, renal tubulointerstitial fibrosis, granuloma formations in tuberculosis and silicosis, neointimal formation associated with balloon catheterization, metastasizing tumors, and cerebral ischemia. Human OPN cDNA encodes a 314 amino acid (aa) residue precursor protein with a 16 aa residue predicted signal peptide that is cleaved to yield a 298 aa residue mature protein with an integrin binding sequence (RGD), and N- and O-glycosylation sites. By alternative splicing, at least three human OPN isoforms exist. OPN has been shown to bind to different cell types through RGD-mediated interaction with the integrins alpha v beta 1, alpha v beta 3, alpha v beta 5, and non-RGD-mediated interaction with CD44 and the integrins alpha 8 beta 1 or alpha 9 beta 1. OPN exists both as a component of extracellular matrix and as a soluble molecule. Functionally, OPN is chemotactic for macrophage s, smooth muscle cells, endothelial cells and glial cells. OPN has also been shown to inhibit nitric oxide production and cytotoxicity by activated macrophages. Human, mouse, rat, pig and bovine OPN share from approximately 40% - 80% amino acid sequence identity. Osteopontin is a substrate for proteolytic cleavage by thrombin, enterokinase, MMP-3 and MMP-7. The functions of OPN in a variety of cell types were shown to be modified as a result of proteolytic cleavage.

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