

OPN Polyclonal Antibody

catalog number: **AN005950L**

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

Description

Reactivity	Human; Rat
Immunogen	Recombinant Mouse OPN protein expressed by Mammalian
Host	Rabbit
Isotype	IgG
Purification	Antigen Affinity Purification
Buffer	PBS with 0.05% Proclin300, 1% protective protein and 50% glycerol, pH7.4

Applications

Applications	Recommended Dilution
WB	1:1000-1:2000
IHC	1:500-1:1000

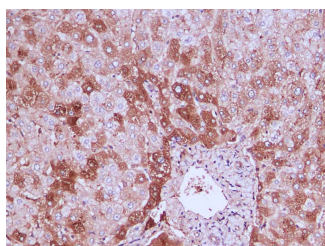
Data



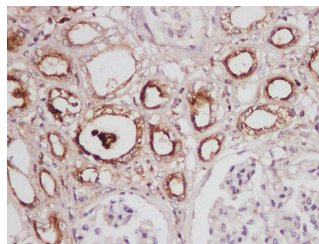
Western blot with Anti OPN Polyclonal antibody at dilution of 1:1000. Lane 1: Rat kidney tissue lysate.

Observed-MW:60 kDa

Calculated-MW:35 kDa



Immunohistochemistry of paraffin-embedded Human liver using OPN Polyclonal Antibody at dilution of 1:600.



Immunohistochemistry of paraffin-embedded Human kidney using OPN Polyclonal Antibody at dilution of 1:600.

Preparation & Storage

Storage	Store at -20°C Valid for 12 months. Avoid freeze / thaw cycles.
Shipping	The product is shipped with ice pack, upon receipt, store it immediately at the temperature recommended.

Background

For Research Use Only

Osteopontin (OPN, previously also referred to as transformation-associated secreted phosphoprotein, bone sialoprotein I, 2ar, 2B7, early T lymphocyte activation 1 protein, minopontin, 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. Mouse OPN cDNA encodes a 294 amino acid (aa) residue precursor protein with a 16 aa residue predicted signal peptide that is cleaved to yield a 278 aa residue mature protein with an integrin binding sequence (RGD), and N- and O-glycosylation sites. 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. Functionally, OPN is chemotactic for macrophages, 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.