

For Research Use Only

Mouse Osteopontin Recombinant antibody, PBS Only (Capture/Detector)

Catalog Number: 83413-5-PBS



Basic Information

Catalog Number: 83413-5-PBS	GenBank Accession Number: NM_001204233.1	Purification Method: Protein A purification
Size: 100ug, Concentration: 1 mg/ml by Nanodrop;	GeneID (NCBI): 20750	CloneNo.: 240250H3
Source: Rabbit	UNIPROT ID: Q547B5	
Isotype: IgG	Full Name: secreted phosphoprotein 1	
	Calculated MW: 32kd	

Applications

Tested Applications:
IF/ICC, Cytometric bead array, Sandwich ELISA, Indirect ELISA, Sample test

Species Specificity:
mouse

Product Information

83413-5-PBS targets Osteopontin as part of a matched antibody pair:

MP00400-2: 83413-5-PBS capture and 83413-4-PBS detection (validated in Cytometric bead array, Sandwich ELISA)

MP00400-3: 83413-2-PBS capture and 83413-5-PBS detection (validated in Cytometric bead array)

Unconjugated rabbit recombinant monoclonal antibody in PBS only (BSA and azide free) storage buffer at a concentration of 1 mg/mL, ready for conjugation. Created using Proteintech's proprietary in-house recombinant technology. Recombinant production enables unrivalled batch-to-batch consistency, easy scale-up, and future security of supply.

This conjugation ready format makes antibodies ideal for use in many applications including: ELISAs, multiplex assays requiring matched pairs, mass cytometry, and multiplex imaging applications. Antibody use should be optimized by the end user for each application and assay.

Background Information

Osteopontin (OPN) is also named as 2AR, minopontin, bone sialoprotein 1, Spp1, Eta-1 and Op, and belongs to the osteopontin family. Osteopontin is major non-collagenous bone protein that binds tightly to hydroxyapatite. It is a highly phosphorylated glycoprophosphoprotein having acidic characteristics and rich in aspartic acid (PMID: 30003880). And it acts as a cytokine involved in enhancing production of interferon-gamma and interleukin-12 and reducing production of interleukin-10 and is essential in the pathway that leads to type I immunity (PMID:2351930, PMID:10657301). OPN, a multifunctional protein, has important functions on cardiovascular diseases, cancer, diabetes and kidney stone diseases and in the process of inflammation, biomineralization, cell viability and wound healing (PMID: 30003880). Osteopontin (OPN) is a pleiotropic glycoprotein expressed in various cell types in animals and in humans, including bone, immune, smooth muscle, epithelial and endothelial cells. Moreover, OPN is found in kidneys (in the thick ascending limbs of the loop of Henle and in distal nephrons) and urine (PMID:30456594). Osteopontin (OPN) is an acidic 60-70 kDa glycoprotein that is cleaved by proteases to yield 45-kDa and 24-kDa fragments (PMID: 10491621, PMID: 1995615)

Storage

Storage:
Store at -80°C.
Storage Buffer:
PBS Only

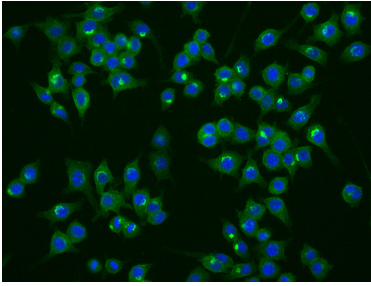
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

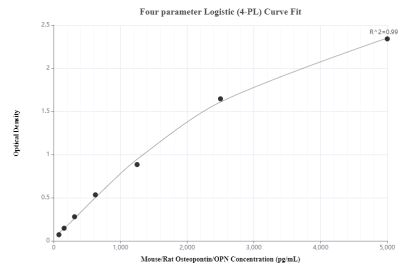
E: proteintech@ptglab.com
W: ptglab.com

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

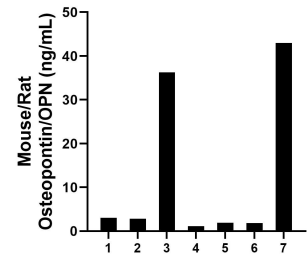
Selected Validation Data



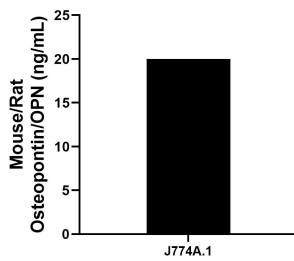
Immunofluorescent analysis of (4% PFA) fixed RAW 264.7 cells using Osteopontin antibody (83413-5-RR, Clone: 240250H3) at dilution of 1:250 and CoraLite@488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) (SA00013-2). This data was developed using the same antibody clone with 83413-5-PBS in a different storage buffer formulation.



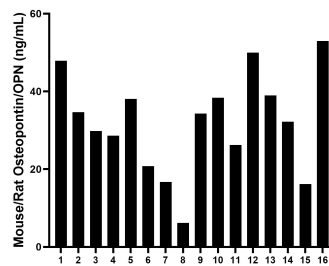
Sandwich ELISA standard curve of MP00400-2, mouse/rat Osteopontin Recombinant Matched Antibody Pair - PBS only. 83413-5-PBS was coated to a plate as the capture antibody and incubated with serial dilutions of standard Eg0317. 83413-4-PBS was HRP conjugated as the detection antibody. Range: 78.1-5000 pg/mL



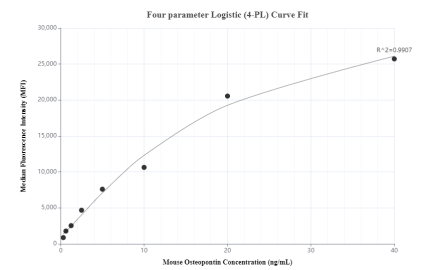
Serum of seven rats was measured. The Osteopontin concentration of detected samples was determined to be 12.8 ng/mL with a range of 1.1 - 43.0 ng/mL.



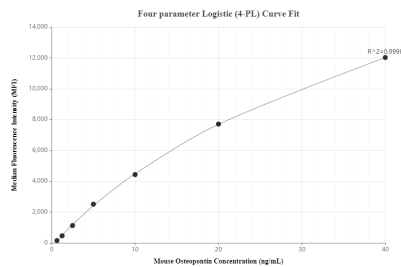
J774A.1 mouse reticulum cell sarcoma macrophage cells were cultured in DMEM supplemented with 10% fetal bovine serum, 2.5 mM L-glutamine, 100 U/mL penicillin and 100 µg/mL streptomycin sulfate. An aliquot of the cell culture supernatant was removed, assayed for mouse/rat Osteopontin and measured 20.0 ng/mL



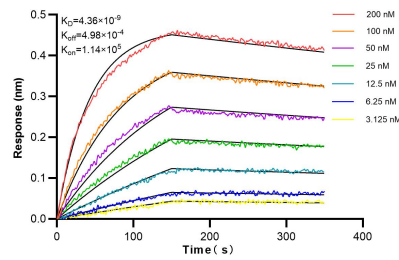
Serum of sixteen mice was measured. The Osteopontin concentration of detected samples was determined to be 32.0 ng/mL with a range of 6.2 - 53.0 ng/mL.



Cytometric bead array standard curve of MP00400-2, MOUSE Osteopontin Recombinant Matched Antibody Pair, PBS Only. Capture antibody: 83413-5-PBS. Detection antibody: 83413-4-PBS. Standard: Eg0317. Range: 0.313-40 ng/mL



Cytometric bead array standard curve of MP00400-3, MOUSE Osteopontin Recombinant Matched Antibody Pair, PBS Only. Capture antibody: 83413-2-PBS. Detection antibody: 83413-5-PBS. Standard: Eg0317. Range: 0.625-40 ng/mL



Biolayer interferometry (BLI) kinetic assays of 83413-5-RR against Mouse Osteopontin were performed. The affinity constant is 4.36 nM.