



Osteopontin related Assay Kits (96Well) /Antibodies

Comprehensive product lineup!

- Research Use Only -

Assay Kits

【Host】H: Human M: Mouse R: Rat

Product No.	Host	Product name	Measurement range	Measuring samples				
				Serum	EDTA-plasma	Urine	Joint fluid	Super-natant
27158	H	Human Osteopontin Assay Kit - IBL	5-320 ng/mL (76.9-4920pmol/L)	/	○	○	/	○
27258	H	Human Osteopontin N-Half Assay Kit - IBL	6.25-400 pmol/L	/	○	○	○	○
27351	M	Mouse Osteopontin Assay Kit - IBL	1-64 ng/mL (15.4-985 pmol/L)	/	○	○	/	○
27259	M	Mouse Osteopontin N-Half Assay Kit - IBL	25-1600 pmol/L	/	○	○	/	○
27360	R	Rat Osteopontin Assay Kit - IBL	0.07-4.75 ng/mL	/	○	○	/	○

Antibodies

Product No.	Host	Product name	Application	Size	Small size
10191	H	Anti-Human Osteopontin (1B20) Mouse IgG MoAb	IHC, WB	100μG	10μG
10011	H	Anti-Human Osteopontin (10A16) Mouse IgG MoAb	IHC, WB	200μG	/
18625	H	Anti-Human Osteopontin (O-17) Rabbit IgG Affinity Purify	IHC, WB	100μG	10μG
18621	M	Anti-Mouse Osteopontin (O-17) Rabbit IgG Affinity Purify	IHC, WB	100μG	10μG
18628	R	Anti-Rat Osteopontin (O-17) Rabbit IgG Affinity Purify	IHC, WB	100μG	10μG
11108	H	Anti-Osteopontin N-Half (34E3) Mouse IgG MoAb	WB	100μG	10μG

References

1. Takahashi F, Takahashi K, Okazaki T, Maeda K, Ienaga H, Maeda M, Kon S, Uede T, Fukuchi Y. : Role of osteopontin in the pathogenesis of bleomycin-induced pulmonary fibrosis. *Am J Respir Cell Mol Biol.* 2001 ; 24(3):264-71.
2. Gang X, Ueki K, Kon S, Maeda M, Naruse T, Nojima Y. : Reduced urinary excretion of intact osteopontin in patients with IgA nephropathy. *Am J Kidney Dis.* 2001 ; 37(2):374-9.
3. Shijubo N, Uede T, Kon S, Nagata M, Abe S. : Vascular endothelial growth factor and osteopontin in tumor biology. *Crit Rev Oncog.* 2000 ; 11(2):135-46. Review.
4. Chiba S, Rashid MM, Okamoto H, Shiraiwa H, Kon S, Maeda M, Murakami M, Inobe M, Kitabatake A, Chambers AF, Uede T. : The role of osteopontin in the development of granulomatous lesions in lung. *Microbiol Immunol.* 2000 ; 44(4):319-32.
5. Kon S, Maeda M, Segawa T, Hagiwara Y, Horikoshi Y, Chikuma S, Tanaka K, Rashid MM, Inobe M, Chambers AF, Uede T. : Antibodies to different peptides in osteopontin reveal complexities in the various secreted forms. *J Cell Biochem.* 2000 ; 77(3):487-98.
6. Takemoto M, Yokote K, Nishimura M, Shigematsu T, Hasegawa T, Kon S, Uede T, Matsumoto T, Saito Y, Mori S. : Enhanced expression of osteopontin in human diabetic artery and analysis of its functional role in accelerated atherogenesis. *Arterioscler Thromb Vasc Biol.* 2000 ; 20(3):624-8.
7. Shijubo N, Uede T, Kon S, Maeda M, Segawa T, Imada A, Hirasawa M, Abe S. : Vascular endothelial growth factor and osteopontin in stage I lung adenocarcinoma. *Am J Respir Crit Care Med.* 1999 ; 160(4):1269-73.
8. Yasui T, Fujita K, Hayashi Y, Ueda K, Kon S, Maeda M, Uede T, Kohri K. : Quantification of osteopontin in the urine of healthy and stone-forming men. *Urol Res.* 1999 ; 27(4):225-30.
9. Hotta H, Kon S, Katagiri YU, Tosa N, Tsukamoto T, Chambers AF, Uede T. : Detection of various epitopes of murine osteopontin by monoclonal antibodies. *Biochem Biophys Res Commun.* 1999 ; 257(1):6-11.
10. Murakami M, Takahashi Y, Isashi Y, Kon S, Jia WY, Inobe M, Abe R, Uede T. : Identification and characterization of an alternative cytotoxic T lymphocyte-associated protein 4 binding molecule on B cells. *Proc Natl Acad Sci U S A.* 1996 ; 93(15):7838-42.
11. Kenji Yumoto, Muneaki Ishijima, Susan R. Rittling, Kunikazu Tsuji, Yoko Tsuchiya, Shigeyuki Kon, Akira Nifuji, Toshimitsu Uede, David T. Denhardt, and Masaki Noda: Osteopontin deficiency protects joints against destruction in anti-type II collagen antibody-induced arthritis in mice *Proc Natl Acad Sci U S A.* 2002 ; 99: 4556-4561
12. Kim JH, Skates SJ, Uede T, Wong Kk KK, Schorge JO, Feltmate CM, Berkowitz RS, Cramer DW, Mok SC.: Osteopontin as a potential diagnostic biomarker for ovarian cancer. *JAMA* 2002 Apr 3;287(13):1671-9.
13. Kon S, Yokosaki Y, Maeda M, Segawa T, Horikoshi Y, Tsukagoshi H, Rashid MM, Morimoto J, Inobe M, Shijubo N, Chambers AF, Uede T. Mapping of functional epitopes of osteopontin by monoclonal antibodies raised against defined internal sequences. *J Cell Biochem.* 2002;84(2):420-32.
14. Yokosaki Y, Matsuura N, Sasaki T, Murakami I, Schneider H, Higashiyama S, Saitoh Y, Yamakido M, Taooka Y, Sheppard D. The integrin alpha(9)beta(1) binds to a novel recognition sequence (SVVYGLR) in the thrombin-cleaved amino-terminal fragment of osteopontin. *J Biol Chem.* 1999 Dec 17;274(51):36328-34.

Distributed by:



Immuno-Biological Laboratories, Inc.
8201 Central Ave NE, Suite P
Minneapolis, MN 55432

Toll-Free: 888-523-1246
Email: info@IBL-America.com
Web: www.IBL-America.com

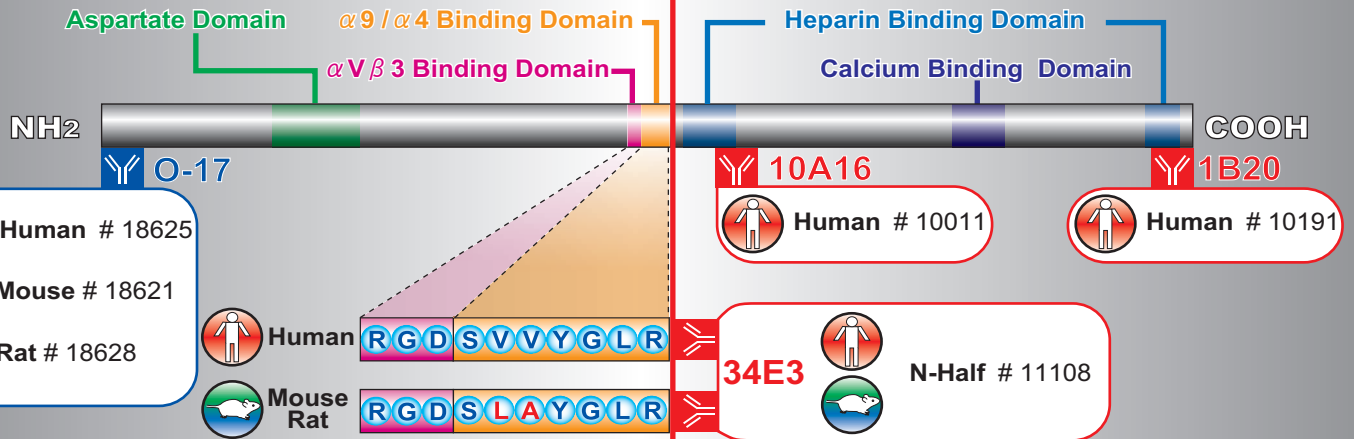
Polyclonal Antibody

Monoclonal Antibody

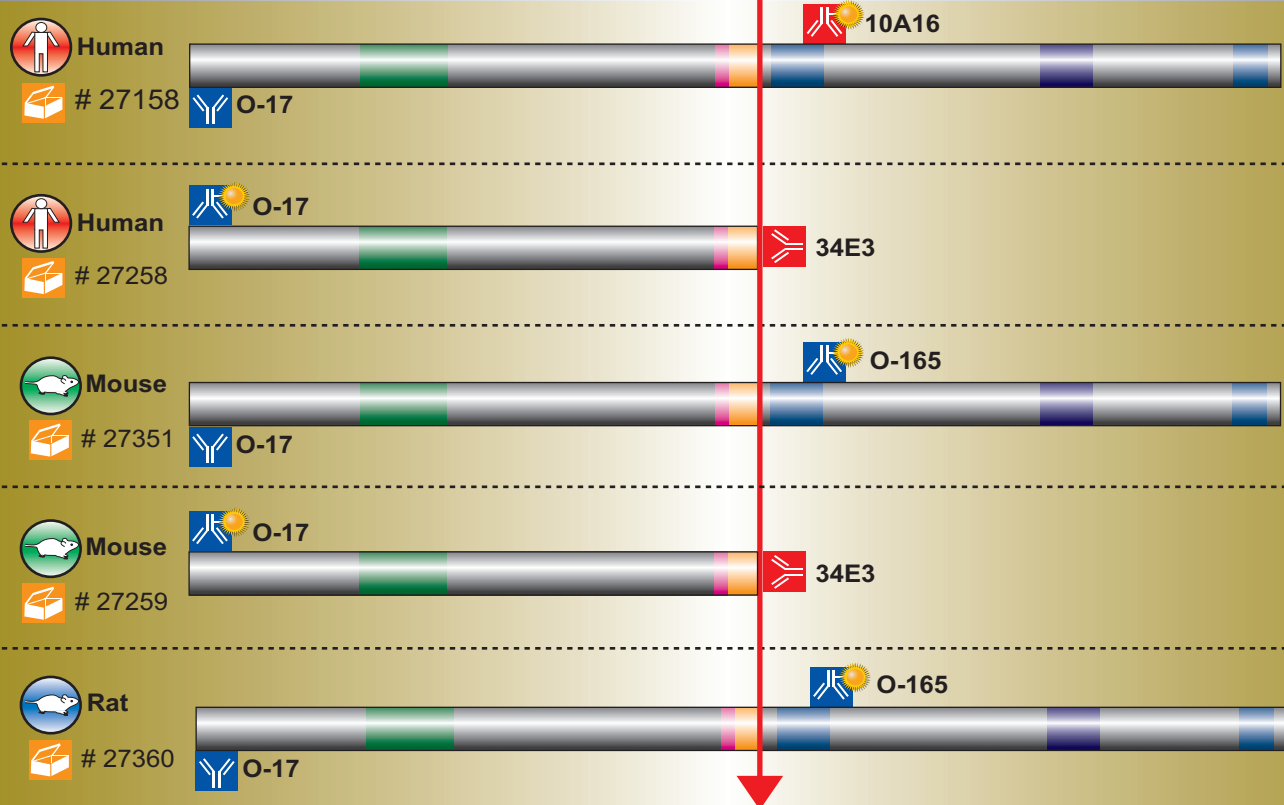
Assay Kit

Antibodies

Thrombin Cleavage



ELISA Kits



Osteopontin (OPN) is a secreted glycoprotein that was originally isolated from bone. Its molecular weights have been reported in the range of 66 kDa to 44 kDa depending on glycosylation and phosphorylation. OPN is also known to be expressed in other fluids and tissues including milk, urine, activated T cells, smooth muscle cells, kidney and some tumor cells. OPN contains an Arg-Gly-Asp (RGD) amino acid sequence.

This motif is present in fibronectin, vitronectin and a variety of other extra-cellular proteins that bind members of the integrin family of cell surface receptors such as $\alpha v \beta 3$, $\alpha 5 \beta 1$, $\alpha 8 \beta 1$ and $\alpha v \beta 5$, and further, it is reported that the motif is involved in cell adherence, migration, growth, cancer metastasis, angiogenesis and bone resorption. It is reported that the motif which is present at N-terminal-side from thrombin-clavage site of OPN (Human; SVVYGLR) binds to $\alpha 4$ and $\alpha 9$ integrin family, and that the motif is involved in neutrophil erosion of inflammatory cell and neutrophilic migration.

Recently OPN is proving to be involved in rheumatoid arthritis. It is reported that the N-terminal fragment of thrombin-clavage OPN (OPN N-half) has increased percentage of all OPN in reumathoid patients. And further, OPN was identified as a ligand for CD44, which levels correlate with aggressiveness of lymphoid tumors and invasiveness of bladder carcinoma. Its interaction does not require RGD motif of OPN. In OPN knockout mice, it has been reported that a significantly decreased level of debridement was shown. Although the distribution and expression pattern of OPN in the human body have suggested the multiple function of OPN, its function under different situations remain obscure.