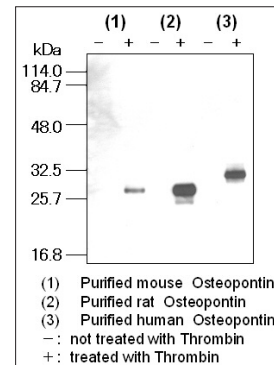


Osteopontin N-Half

Osteopontin N-Half Antibodies

Code No.	Name			Volume	IHC	W/B	Remarks	
11108	Anti-	Osteopontin N-Half	(34E3)	Mouse IgG MoAb	100 µg	Not Tested	○ 5 µg/mL	Specifically react with the C-terminal end of N-Half Osteopontin fragment cleaved by Thrombin

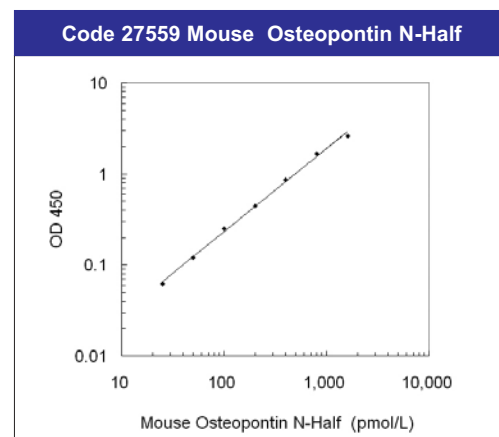
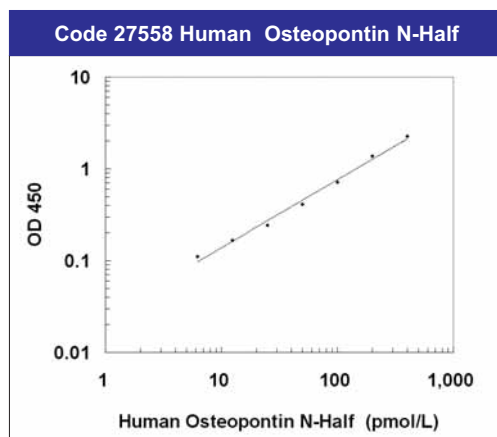
- The antibody specifically reacts with the C-terminal end of N-Half Osteopontin fragment cleaved by Thrombin
- The antibody hardly reacts with full length Osteopontin. (Cross reactivity is 0.35%)
- In addition to human, the antibody can detect mouse and rat OPN N-Half fragment
- The epitope of the antibody is YGLR sequence and the antibody can be used for detection or affinity purification of gene product which has an insertion of the sequence at C-terminal as a tag



Osteopontin N-Half ELISA Kits

Code No.	Name		Volume	Assay Range	Reaction Time	Application	
27258	Human	Osteopontin N-Half	Assay Kit - IBL	96 well	6.25 ~ 400 pmol/L	1st Reaction, 37°C, 1Hr 2nd Reaction, 4°C, 30min	Urine, EDTA-Plasma, Synovial fluid, Supernatant of cell lines. (Can assay both native and recombinant forms)
27259	Mouse	Osteopontin N-Half	Assay Kit - IBL	96 well	25 ~ 1,600 pmol/L	1st Reaction, 37°C, 1Hr 2nd Reaction, 4°C, 30min	Urine, EDTA-Plasma, Supernatant of cell lines. (Can assay both native and recombinant forms)

- The kit specifically measures the human Osteopontin N-Half fragment cleaved by Thrombin
- In addition to cell culture media, the kit can measure the human Osteopontin N-Half fragment in the human body fluid.
- By measuring the sample with the kit and the Human Osteopontin Assay kit (Code No. 27158) simultaneously, the molar ratio of OPN N-Half against full length OPN can be determined.
- Both recombinant and native forms of human OPN N-Half can be measured.



Manufacturer :

Immuno-Biological Laboratories Co., Ltd.

5-1 Aramachi, Takasaki-shi, Gunma 370-0831, JAPAN

TEL: 027-310-8040

FAX: 027-310-8045

E-mail: do-ibl@ibl-japan.co.jp

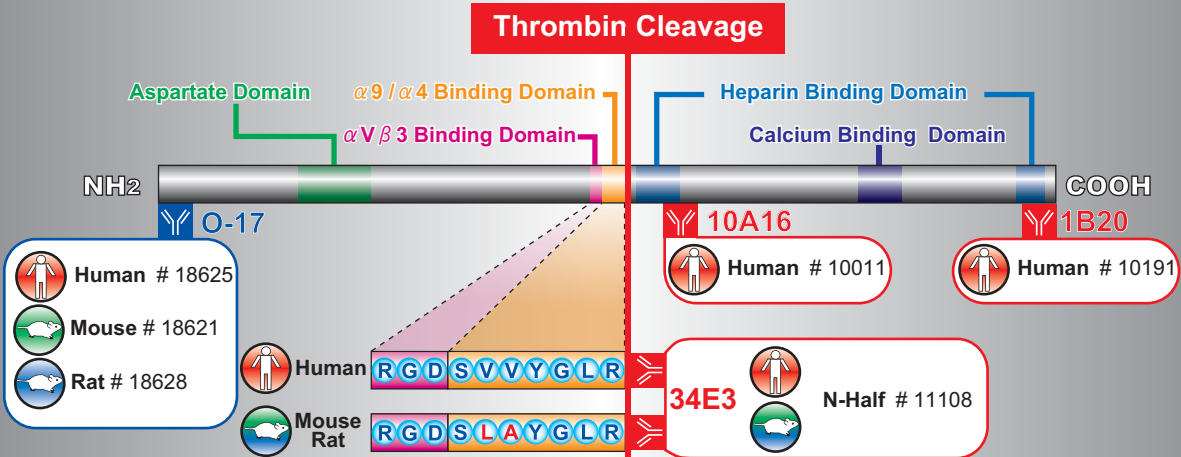
URL: <http://www.ibl-japan.co.jp>



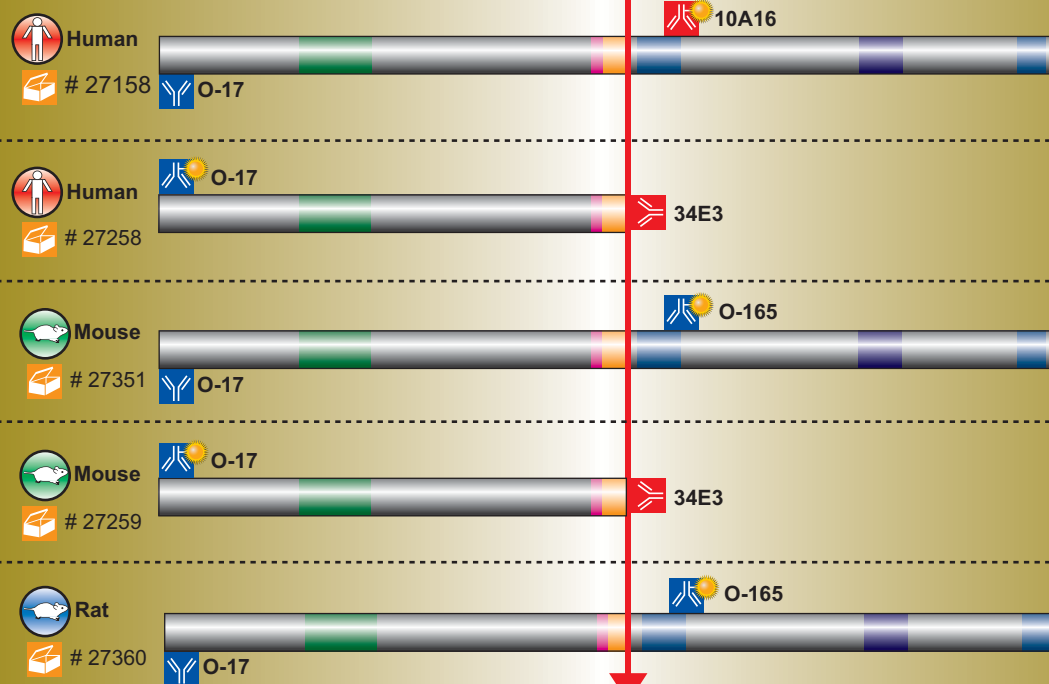
Osteopontin

Polyclonal Antibody
 Monoclonal Antibody
 Assay Kit

Antibodies



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 reumatoid 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 debriement 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.

Manufacturer :

Immuno-Biological Laboratories Co., Ltd.
 5-1 Aramachi, Takasaki-shi, Gunma 370-0831, JAPAN
 TEL: 027-310-8040
 FAX: 027-310-8045
 E-mail: do-ibl@ibl-japan.co.jp
 URL: <http://www.ibl-japan.co.jp>

Osteopontin

Osteopontin Antibodies

Code No.	Name			Volume	IHC F/P	W/B	Remarks	
10011	Anti-Human	Osteopontin	(10A16)	Mouse IgG MoAb	200 µg	○ (※ MW) 0.5 µg/mL	○ 0.5 ~ 1 µg/mL	Human Osteopontin specific. Non-cross react to mouse and rat Osteopontin.
10191	Anti-Human	Osteopontin	(1B20)	Mouse IgG MoAb	100 µg	○ (※ MW) 1 ~ 2 µg/mL	○ 2 µg/mL	The antibody, interestingly, can stain with rat osteopontin. Can react with human osteopontin, but unknown staining is observed in erythrocytes. (This reaction cannot be seen in rat.) Cross react to rabbit plasma osteopontin.
11108	Anti-	Osteopontin N-Half	(34E3)	Mouse IgG MoAb	100 µg	Not Tested	○ 5 µg/mL	Specific to C-terminal of OPN N-Half (N-terminal Osteopontin fragment cleaved by thrombin). React to Human, Mouse, Rat OPN N-Half.
18625	Anti-Human	Osteopontin	(O-17)	Rabbit IgG Affinity purify	100 µg	○ (※ MW) 1 ~ 2 µg/mL	○ 2 ~ 5 µg/mL	Cross react to both recombinant and native human Osteopontin. Can react with thrombin digested form of human Osteopontin. Non-Cross react to mouse Osteopontin
18621	Anti-Mouse	Osteopontin	(O-17)	Rabbit IgG Affinity purify	100 µg	○ (※ MW) 1 ~ 2 µg/mL	○ 2 ~ 5 µg/mL	Cross react to both recombinant and native mouse Osteopontin. Cross react to Rat Osteopontin and non-cross react to Human Osteopontin.
18628	Anti-Rat	Osteopontin	(O-17)	Rabbit IgG Affinity purify	100 µg	○ (※ MW) 1 ~ 2 µg/mL	○ 2 µg/mL	Cross react to both recombinant and native rat Osteopontin. Can react with Rat Osteopontin thrombin digested form. Non-cross react to Human and mouse Osteopontin

※ IHC: Immunohistochemistry, *F/P: Formalin fixed paraffin embedded tissue, *W/B: Western Blotting, *MW: Microwave pre-treatment is necessary

Osteopontin ELISA Kits

Code No.	Name			Volume	Assay Range	Reaction Time	Application
27158	Human	Osteopontin	Assay Kit - IBL	96 well	5 ~ 320 ng/mL	1st Reaction, 37°C, 1Hr 2nd Reaction, 4°C, 30min	Urine, EDTA-Plasma, Supernatant of cell lines. (Can assay both native and recombinant forms)
27258	Human	Osteopontin N-Half	Assay Kit - IBL	96 well	6.25 ~ 400 pmol/L	1st Reaction, 37°C, 1Hr 2nd Reaction, 4°C, 30min	Urine, EDTA-Plasma, Synovial fluid, Supernatant of cell lines. (Can assay both native and recombinant forms)
27351	Mouse	Osteopontin	Assay Kit - IBL	96 well	1 ~ 64 ng/mL	1st Reaction, 37°C, 1Hr 2nd Reaction, 4°C, 30min	Urine, EDTA-Plasma, Supernatant of cell lines. (Can assay both native and recombinant forms)
27259	Mouse	Osteopontin N-Half	Assay Kit - IBL	96 well	25 ~ 1,600 pmol/L	1st Reaction, 37°C, 1Hr 2nd Reaction, 4°C, 30min	Urine, EDTA-Plasma, Supernatant of cell lines. (Can assay both native and recombinant forms)
27360	Rat	Osteopontin	Assay Kit - IBL	96 well	0.07 ~ 4.75 ng/mL	1st Reaction, 37°C, 1Hr 2nd Reaction, 4°C, 30min	Urine, EDTA-Plasma, Supernatant of cell lines. (Can assay both native and recombinant forms)

Reference:

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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
- Kim JH, Skates SJ, Uede T, Wong Kk KK, Schorge JO, Feltnate CM, Berkowitz RS, Cramer DW, Mok SC.: Osteopontin as a potential diagnostic biomarker for ovarian cancer. *JAMA* 2002 Apr 3;287(13):1671-9.
- 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.
- 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.