IBL Data Sheet

Code No. 11108

Anti-
Osteopontin N-Half (34E3) Mouse IgG MoAb

Volume : 100 µg

Introduction : 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 αvβ3. OPN was also 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.
And it is reported the N-terminal OPN fragment cleaved by thrombin (OPN N-Half) binds to α4 or α9 integrin (ref. 2), and the relation with many inflammatory disease is suggested.

Antigen : Synthetic peptide of a part of Human Osteopontin (SVVYGLR)

Source : Mouse-Mouse hybridoma
(X63 - Ag 8.653 × BALB/c mouse spleen cells)

Clone : 34E3 **Subclass** : IgG_1

Purification : Affinity purified with protein A

Form : Lyophilized product from PBS containing 1 % BSA and 0.05 % NaN_3

How to use : 1.0 mL deionized water will be added to the product, then its concentration comes to 100 µg/mL

Stability : Lyophilized product, 5 years at 2 - 8 °C
: Solution, 2 years at –20 °C

Application : This antibody can be used for western blotting in concentration of 1 - 5 µg/mL

Specificity : Reacts with N-terminus of thrombin cleaved osteopontin
Reacts with both recombinant and native human osteopontin N-half
Cross-reacts with rat and mouse Osteopontin N-half
Does not cross-react with full-length Osteopontin

Reference :

1. 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.
2. 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-cleavedamino-terminal fragment of osteopontin. J Biol Chem. 1999 Dec 17;274 (51):36328-34.
3. Hasegawa M, Nakoshi Y, Iino T, Sudo A, Segawa T, Maeda M, Yoshida T, Uchida A. Thrombin-cleaved osteopontin in synovial fluid of subjects with rheumatoid arthritis. J Rheumatol. 2009 Feb;36(2):240-5.

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