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ProductInformation

Anti-Osteopontin
Produced in Rabbit, Affinity Isolated Antibody

Product Number **O 7264**

Product Description

Anti-Osteopontin is developed in rabbit using as immunogen a synthetic peptide corresponding to amino acid residues 249-267 of human osteopontin, conjugated to KLH. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Osteopontin recognizes human osteopontin. Applications include immunoblotting (~50 kDa) and immunohistochemistry. Detection of the osteopontin band by immunoblotting is specifically inhibited with the immunizing peptide.

Osteopontin (OPN), also termed Secreted PhosphoProtein 1 (SPP1), Bone Sialoprotein 1, Urinary Stone Protein, Early T Lymphocyte Activation protein 1 (ETA1), and Uropontin, is a phosphorylated acidic RGD-containing glycoprotein that binds integrin and CD44 receptors. Binding of osteopontin to these cell surface receptors induces signaling events that promote cell adhesion and migration.[1] Osteopontin is also involved in cell survival, bone remodeling and regulation of immune cell function. Osteopontin acts both as chemokine and cytokine.[2]

Although osteopontin is the most abundant product of osteoblast and kidney cells, it is also expressed in lung, liver, bladder, pancreas, breast, vascular smooth muscle cells and macrophages.[1] Osteopontin exists as an immobilized extracellular matrix (ECM) component and as a soluble molecule.[3] It is implicated in a number of physiologic and pathologic events including angiogenesis, apoptosis, inflammation, wound healing, and tumor metastasis.[4] Osteopontin expression is upregulated in many kinds of cancer including hepatocellular carcinoma, breast cancer, prostate cancer, ovarian cancer, brain cancer, and lung cancer. Elevated transcription of osteopontin is associated with tumor progression and metastasis.[5]

Reagent

The antibody is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 1% bovine serum albumin and15 mM sodium azide.

Antibody Concentration: ~0.7 mg/mL

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in “frost-free” freezers is also not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

By immunoblotting, a working antibody concentration of 0.5-1 µg/mL is recommended using a whole extract of human embryonal kidney 293T cells and a chemiluminescent detection reagent.

By indirect immunofluorescence, a working antibody concentration of 2.5-5 µg/mL is recommended using formalin-fixed, paraffin-embedded section of human kidney.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

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4. Standal, T., et al., Exp. Oncol., **26**, 179-184 (2004).
5. Zhang, G., et al., World J. Gastroenterol., **10**, 205-208 (2004).
6. Agnihotri, R., et al., J. Biol. Chem., **276**, 28261-28267 (2001).

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