Leinco Technologies, Inc.
excellence in early discovery research™

Anti-Mouse Osteopontin [Clone 100D3] — Purified *in vivo* PLATINUM™ Functional Grade

Hybridoma Monoclonal Antibody

Product Information

Product No.:	O141
Clone:	100D3
Isotype:	Mouse Mouse IgG2c κ

Product Description

Specificity:
100D3 activity is directed against mouse and human osteopontin, also known as secreted phosphoprotein 1 (SPP1).

Antigen Distribution:
Osteopontin is a secreted protein found in bone that is also expressed intracellularly in other tissues, including cardiac fibroblasts, dendritic cells, macrophages, smooth muscle, endothelial cells, kidney, and brain. In cancer, osteopontin can also be expressed in tumor cells, myeloid cells, and innate lymphoid cells. Additionally, osteopontin is elevated in human cancer patient peripheral blood.

Background:
Osteopontin is a phosphorylated glycoprotein[1] that regulates bone formation, bone tissue remodeling, and promotes osteogenic differentiation of mesenchymal stem cells[2]. Osteopontin also inhibits adipogenic differentiation, can induce angiogenesis, and promotes leukocyte adhesion. Osteopontin performs its regulatory roles by interacting with integrins to activate downstream signaling pathways. In cancer, increased levels of osteopontin are associated with migration, invasion, and poor prognosis. Osteopontin promotes tumor development by activating the PI3K/pAkt/NF-κB pathway when interacting with the αvβ3 integrin and can promote cancer invasion when interacting with CD44. Osteopontin is thus a target for the development of cancer treatments, including transcription and translation inhibitors as well as blockade by immunotherapy.

100D3 was generated by immunizing C57BL/6 mice with recombinant osteopontin protein[1]. Mice with the highest osteopontin antibody titer, as determined by ELISA, were selected for spleen cell electro-fusion with SP2/0 myeloma cells. Fused cells were screen by ELISA with osteopontin protein and then by T cell proliferation rescue assay in anti-CD3/CD28/osteopontin- coated plates.

100D3 is a neutralizing antibody that inhibits colonic tumor growth in vivo and increases tumor-specific cytotoxic T lymphocyte effector function[1].

Products are for research use only. Not for use in diagnostic or therapeutic procedures.

Product Datasheet

www.leinco.com

Known Reactivity Species:
Human, Mouse

Format:
Purified in vivo Functional Grade, in vivo PLATINUM™

Immunogen:
Recombinant mouse OPN protein

Formulation
This monoclonal antibody is aseptically packaged and formulated in 0.01 M phosphate buffered saline (150 mM NaCl) PBS pH 7.2 - 7.4 with no carrier protein, potassium, calcium or preservatives added. Due to inherent biochemical properties of antibodies, certain products may be prone to precipitation over time. Precipitation may be removed by aseptic centrifugation and/or filtration.

Purity
≥98% monomer by analytical SEC, >95% by SDS Page

Endotoxin
<0.5 EU/mg as determined by the LAL method

Storage and Stability
Functional grade preclinical antibodies may be stored sterile as received at 2-8°C for up to one month. For longer term storage, aseptically aliquot in working volumes without diluting and store at ≤ -70°C. **Avoid Repeated Freeze Thaw Cycles.**

Product Preparation
Functional grade preclinical antibodies are manufactured in an animal free facility using *in vitro* cell culture techniques and are purified by a multi-step process including the use of protein A or G to assure extremely low levels of endotoxins, leachable protein A or aggregates.

Pathogen Testing
To protect mouse colonies from infection by pathogens and to assure that experimental preclinical data is not affected by such pathogens, all of Leinco's Purified Functional PLATINUM™ antibodies are tested and guaranteed to be negative for all pathogens in the IDEXX IMPACT I Mouse Profile.

Applications
Applications and Recommended Usage (Quality Tested By Leinco):

ELISA

Other Applications Reported in Literature:

In Vitro and In Vivo Neutralization

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Country of Origin
USA

References
1 Klement JD, Poschel DB, Lu C, et al. Cancers (Basel). 13(5):1006. 2021.
2 Xu W, Bi Z, Lu L, et al. Oncol Rep. 54(5):136. 2025.

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