

Ultra-LEAF™ Purified anti-mouse M-CSF Antibody

Catalog# / Size	699103 / 100 µg 699104 / 1 mg
Clone	A16063L
Regulatory Status	RUO
Other Names	Macrophage Colony-Stimulating Factor 1, MCSF, CSF-1
Isotype	Rat IgG2b, κ
Description	<p>M-CSF was first characterized as a glycoprotein that induces monocyte and macrophage colony formation from precursors in murine bone marrow cultures. M-CSF is constitutively present at biologically active concentrations in human serum. It binds CD14⁺ monocytes and promotes the survival/proliferation of human peripheral blood monocytes. In addition, M-CSF enhances inducible monocyte functions including phagocytic activity, microbial killing, cytotoxicity for tumor cells as well as synthesis of inflammatory cytokines such as IL-1, TNFα, and INFγ in monocytes. M-CSF induces RANKL production in mature human osteoclasts; consequently, M-CSF is a potent stimulator of mature osteoclast resorbing activity. Also, M-CSF induces VEGF in human monocytes in human tumors; high levels of M-CSF, mononuclear phagocytes, and VEGF are associated with poor prognosis in patients with cancer. High levels of M-CSF have been associated with different pathologies such as pulmonary fibrosis and atherosclerosis. M-CSF binds to its receptor M-CSFR, and this receptor is shared by a second ligand, IL-34. Human M-CSF and IL-34 exhibit cross-species specificity, both bind to human and mouse M-CSF receptors.</p>

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Recombinant mouse M-CSF
Formulation	0.2 µm filtered in phosphate-buffered solution, pH 7.2, containing no preservative. Endotoxin level is <0.01 EU/µg of the protein (<0.001 ng/µg of the protein) as determined by the LAL test.
Preparation	The Ultra-LEAF™ (Low Endotoxin, Azide-Free) antibody was purified by affinity chromatography.
Concentration	The antibody is bottled at the concentration indicated on the vial, typically between 2 mg/mL and 3 mg/mL. Older lots may have also been bottled at 1 mg/mL. To obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. This Ultra-LEAF™ solution contains no preservative; handle under aseptic conditions.
Application	Neut - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by neutralizing activity. The ND ₅₀ is 0.1-0.5 µg/mL. It is recommended that the reagent be titrated for optimal performance for each application.
RRID	AB_2715878 (BioLegend Cat. No. 699103) AB_2715879 (BioLegend Cat. No. 699104)

Antigen Details

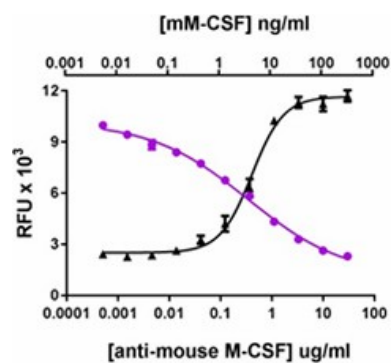
Structure	Disulfide-linked glycosylated homodimer
Distribution	M-CSF is released by fibroblasts, breast cancer cell lines, alveolar macrophages, stromal bone marrow cells, endothelial cells, and mesenchymal cells.

Function	Key regulator of the survival, proliferation, and differentiation of mononuclear phagocytes and plays a central role in the regulation of osteoclastogenesis. Regulates the development of Paneth cells, Langerhans cells, lamina propria dendritic cells, and microglia.
Interaction	Monocytes, macrophages, mononuclear phagocyte precursors, microglia, proliferating smooth muscle cells, umbilical vein endothelial cells, and breast cancer cell lines.
Ligand/Receptor	M-CSFR or CSF1R (CD115)
Biology Area	Cell Biology, Cell Proliferation and Viability, Immunology
Molecular Family	Cytokines/Chemokines, Growth Factors
Antigen References	<ol style="list-style-type: none"> 1. Kawasaki ES, <i>et al.</i> 1985. <i>Science</i> 230:291. 2. Wei S, <i>et al.</i> 2010. <i>J. Leuko. Biol.</i> 88:495. 3. Hodge JM, <i>et al.</i> 2011. <i>PLoS One</i> 6:e21462. 4. Morandi A, <i>et al.</i> 2011. <i>PLoS One</i> 6:e27450. 5. Erlich B, <i>et al.</i> 2011. <i>PLoS One</i> 6:e26317. 6. MacDonald KP, <i>et al.</i> 2010. <i>Blood</i> 116:3955.
Gene ID	12977

Other Formats

Ultra-LEAF™ Purified anti-mouse M-CSF

Product Data



Recombinant mouse M-CSF induces the proliferation of mouse myelogenous leukemia lymphoblast M-NFS-60 cells in a dose dependent manner (black triangles). Anti-mouse M-CSF monoclonal antibody (clone A16063L, purple circles) neutralizes the proliferation of M-NFS-60 cells induced by recombinant mouse M-CSF (10 ng/ml). The ND₅₀ = 0.1 - 0.5 µg/ml.

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