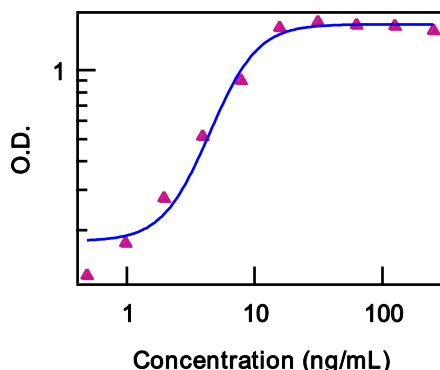


Mouse M-CSF Recombinant Protein Carrier-Free

Catalog Number: 34-8983

RUO: For Research Use Only. Not for use in diagnostic procedures.



Proliferation of the M-NFS-60 cell line in response to Mouse M-CSF Recombinant Protein Carrier-Free

Product Information

Contents: Mouse M-CSF Recombinant Protein Carrier-Free

REF

Catalog Number: 34-8983

Concentration: 0.5 mg/mL

Handling Conditions: For best recovery, always quick-spin vial prior to opening. For dilution of current stock, always include carrier protein (1% BSA or 10% FBS) in the buffered saline diluent.

Source: Insect expressed Lys33-Pro187, accession number NM_001113530

Molecular Mass: 44.5 kDa

Purity: > 98%, as determined by SDS-PAGE

Endotoxin: Less than 0.01 ng/ug cytokine as determined by the LAL assay.

Bioactivity: The ED50 of this protein, as determined by M-NFS-60 proliferation, is less than or equal to 10 ng/mL. This corresponds to a specific activity of greater than or equal to 1 x 10⁵ Units/mg.

Formulation: Sterile liquid; phosphate buffered saline, pH 7.2. 0.22 um filtered.



Temperature Limitation: For greatest stability, keep concentration of primary stock at or above 10 µg/ml. For long term storage, aliquot into polypropylene vials (volumes of 20 µl or greater) and store at or below -80°C. Avoid repeated freeze/thaw cycles.

LOT



Batch Code: Refer to vial

Use By: Refer to vial

Description

Macrophage colony-stimulating factor (M-CSF or CSF-1) is a survival factor essential for the proliferation and development of monocytes, macrophages, and osteoclast progenitor cells. M-CSF also induces VEGF (vascular endothelial growth factor) secretion by macrophages, thereby mediating mobilization of endothelial progenitor cells and neovascularization.

M-CSF is present as several bioactive isoforms that differ in potency and stability. The full-length protein is synthesized as a membrane-spanning protein that can be expressed on the cell surface or further cleaved and modified in the secretory vesicle. The secreted protein is a disulfide-bonded homodimer which is processed into one of two isoforms, a glycoprotein or a proteoglycan that has been modified by the addition of chondroitin sulfate to each subunit. Binding of M-CSF to its receptor, c-Fms (CSF-1R or CD115) induces dimerization of the receptor followed by internalization and degradation of the complex.

Applications Reported

Recombinant mouse M-CSF is biologically active.

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Applications Tested

The ED₅₀ of this protein, as determined by M-NFS-60 proliferation, is less than or equal to 10 ng/ml. This corresponds to a specific activity of greater than or equal to 1 x 10⁵ Units/mg.

References

Fancke B, Suter M, Hochrein H, O'Keeffe M. M-CSF: a novel plasmacytoid and conventional dendritic cell poietin. *Blood*. 2008 Jan 1; 111(1): 150-9.

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Jang M, Herber D, Jiang X, Nandi S, Dai X, Zeller G, Richard E, Kelley S, Kelley V. Distinct *in vivo* roles of colony-stimulating factor-1 isoforms in renal inflammation. *J Immunol*. 2006; 177: 4055-63.

Minamino K, Adachi Y, Okigaki M, Ito H, Togawa Y, Fujita K, Tomita M, Suzuki Y, Zhang Y, Iwasaki M, Nakano K, Koike Y, Matsubara H, Iwasaka T, Matsumura M, Ikehara S. Macrophage colony-stimulating factor (M-CSF), as well as granulocyte colony-stimulating factor (G-CSF), accelerates neovascularization. *Stem Cells*. 2005 Mar; 23 (3): 347-54.

Related Products

12-1152 Anti-Mouse CD115 (c-fms) PE (AFS98)
13-1152 Anti-Mouse CD115 (c-fms) Biotin (AFS98)
14-1152 Anti-Mouse CD115 (c-fms) Purified (AFS98)
14-8331 Mouse GM-CSF Recombinant Protein
14-8971 Mouse G-CSF Recombinant Protein
14-8979 Human G-CSF Recombinant Protein (Discontinued. Please refer to 14-8523)
16-1152 Anti-Mouse CD115 (c-fms) Functional Grade Purified (AFS98)
17-1152 Anti-Mouse CD115 (c-fms) APC (AFS98)
53-1152 Anti-Mouse CD115 (c-fms) Alexa Fluor® 488 (AFS98)