Recombinant Mouse CSF-1/M-CSF Protein

Catalog No.: RP01216

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Sequence Information

Species
Mouse

Gene ID
12977

Swiss Prot
P07141-1

Tags
C-His

Synonyms
MCSF,M-CSF,CSF-1,Lanimostim, CSF1

Product Information

Source
HEK293 cells

Purification
≥ 95 % as determined by SDS-PAGE.

Calculated MW
30.19 kDa

Observed MW
40-55 kDa

Endotoxin
< 0.01 EU/μg of the protein by LAL method.

Formulation
Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.Contact us for customized product form or formulation.

Reconstitution
Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Background

Macrophage colony-stimulating factor 1, also known as CSF-1, M-CSF, is a single-pass membrane protein which is disulfide-linked as a homodimer or heterodimer. Granulocyte / macrophage colony-stimulating factors are cytokines that act in hematopoiesis by controlling the production, differentiation, and function of 2 related white cell populations of the blood, the granulocytes and the monocytes-macrophages. M-CSF/CSF-1 is known to facilitate monocyte survival, monocyte-to-macrophage conversion, and macrophage proliferation. M-CSF/CSF-1 is a secreted cytokine which influences hemopoietic stem cells to differentiate into macrophages or other related cell types. It binds to the Colony stimulating factor 1 receptor. M-CSF /CSF-1 may also be involved in development of the placenta. The active form of M-CSF/CSF-1 is found extracellularly as a disulfide-linked homodimer, and is thought to be produced by proteolytic cleavage of membrane-bound precursors. M-CSF/CSF-1 induces cells of the monocyte/macrophage lineage. It also plays a role in immunological defenses, bone metabolism, lipoproteins clearance, fertility and pregnancy. Upregulation of M-CSF/CSF-1 in the infarcted myocardium may have an active role in healing not only through its effects on cells of monocyte/macrophage lineage, but also by regulating endothelial cell chemokine expression.

Basic Information

Description
Recombinant Mouse CSF-1/M-CSF Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Met1-Glu262) of mouse M-CSF/CSF-1 (Accession #NP_031804.3.) fused with a 6×His tag at the C-terminus.

Activity
1.Measured in a cell proliferation assay using mouse bone marrow cells. The ED_{50} for this effect is 7.5-30.1 ng/mL, corresponding to a specific activity of 3.32×10^4~1.33×10^5 units/mg.
2.Measured in a cell proliferation assay using M-NFS-60 mouse myelogenous leukemia lymphoblast cells.The ED_{50} for this effect is 8.31-33.24 ng/mL, corresponding to a specific activity of 3.01×10^4~1.20×10^5 units/mg.

Shipping
Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage
Store at -20℃

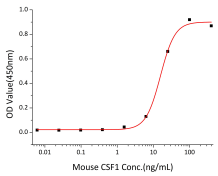
Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

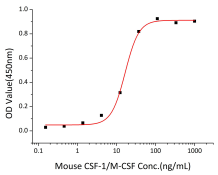
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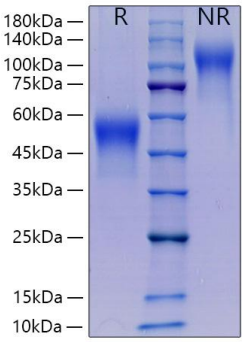
Validation Data



Recombinant Mouse CSF-1/M-CSF stimulates cell proliferation of the mouse bone marrow cells. The ED_{50} for this effect is 7.5-30.1 ng/mL, corresponding to a specific activity of 3.32×10^4~1.33×10^5 units/mg.



Recombinant Mouse CSF-1/M-CSF stimulates cell proliferation of the M-NFS-60 mouse myelogenous leukemia lymphoblast cells. The ED_{50} for this effect is 8.31-33.24 ng/mL, corresponding to a specific activity of 3.01×10^4~1.20×10^5 units/mg.



Recombinant Mouse CSF-1/M-CSF Protein was determined by SDS-PAGE under reducing (R) and non-reducing (NR) conditions.