

Recombinant Rat CSF-1/M-CSF Protein

Catalog No.: RP01847 **Recombinant**

Sequence Information

Species	Gene ID	Swiss Prot
Rat	78965	Q8JZQ0

Tags

C-His

Synonyms

Macrophage colony-stimulating factor 1; CSF-1; MCSF; Proteoglycan macrophage colony-stimulating factor; PG-M-CSF; Cleaved into: Processed macrophage colony-stimulating factor 1; Macrophage colony-stimulating factor 1 43 kDa subunit[CSf1; Csfm

Product Information

Source	Purification
HEK293 cells	

Calculated MW	Observed MW
28.50 kDa	40-55 kDa

Endotoxin

<0.1EU/ μ g of the protein by LAL method.

Formulation

Lyophilized from a 0.22 μ m filtered solution of PBS, pH 7.4.

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 stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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Background

Macrophage colony-stimulating factor (M-CSF), also known as colony-stimulating factor-1 (CSF-1), is a hemopoietic growth factor that regulates the survival, proliferation, differentiation and function of the cells of the mononuclear phagocyte lineage. M-CSF is produced by a variety of cell types and acts both locally and humorally in an autocrine and paracrine manner. Through differential mRNA splicing and posttranslational proteolytic processing and modification, M-CSF is expressed in three biologically-active isoforms: a secreted glycoprotein; a secreted proteoglycan; and a membrane spanning cell-surface glycoprotein.

Basic Information

Description

Recombinant Rat CSF-1/M-CSF Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Met1-Ser255) of Rat CSF-1/M-CSF (Accession #NP_076471.3) fused with a His tag at the C-terminus.

Bio-Activity

Measured in a cell proliferation assay using M-NFS-60 mouse myelogenous leukemia lymphoblast cells. The ED₅₀ for this effect is 5.63-22.51 ng/mL, corresponding to a specific activity of 4.44 \times 10⁴~1.78 \times 10⁵ units/mg.

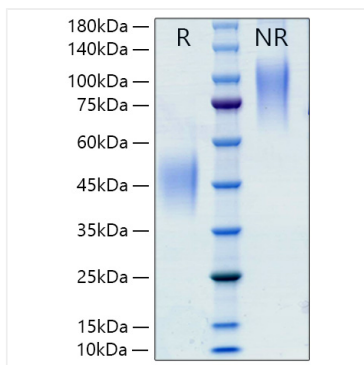
Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

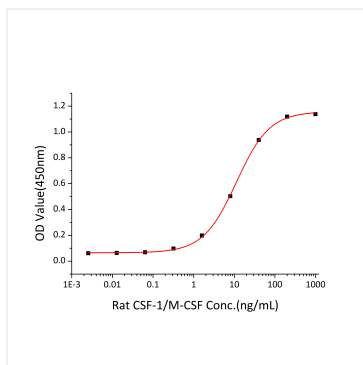
After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

Validation Data



Recombinant Rat CSF-1/M-CSF Protein was resolved with SDS PAGE under reducing (R) and non-reducing (NR) conditions, showing single bands at 40-55 kDa and 75-110 kDa, respectively.



Recombinant Rat CSF-1/M-CSF stimulates cell proliferation assay using M-NFS-60 mouse myelogenous leukemia lymphoblast cells. The ED₅₀ for this effect is 5.63-22.51 ng/mL, corresponding to a specific activity of $4.44 \times 10^4 \sim 1.78 \times 10^5$ units/mg.