

# Recombinant Human CSF-1/M-CSF Protein

Catalog No.: RP01689 **Recombinant**

## Sequence Information

Species	Gene ID	Swiss Prot
Human	1435	P09603-1

**Tags**  
NO-tag

**Synonyms**  
MCSF; CSF-1□CSF1

## Product Information

Source	Purification
HEK293 cells	> 97% by SDS-PAGE.

**Endotoxin**  
□1EU/μg

**Formulation**  
Lyophilized from a 0.22 μm 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.

## Contact

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## Background

The colony stimulating factor 1 (CSF1), also known as macrophage colony-stimulating factor (M-CSF), is a secreted cytokine which influences hematopoietic stem cells to differentiate into macrophages or other related cell types. Eukaryotic cells also produce M-CSF in order to combat intercellular viral infection. It is one of the three experimentally described colony-stimulating factors. M-CSF binds to the colony stimulating factor 1 receptor. Macrophage colony-stimulating factor has been shown to interact with PIK3R2. M-CSF (or CSF-1) is a hematopoietic growth factor that is involved in the proliferation, differentiation, and survival of monocytes, macrophages, and bone marrow progenitor cells. Locally produced M-CSF in the vessel wall contributes to the development and progression of atherosclerosis.

## Basic Information

### Description

Recombinant Human CSF-1/M-CSF Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Glu33-Arg255) of human CSF-1/M-CSF (Accession #NP\_000748.3) fused with no additional amino acid.

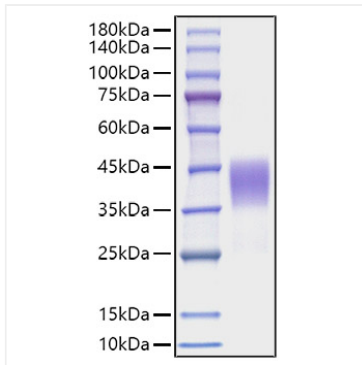
### Bio-Activity

Measured in a cell proliferation assay using M-NFS-60 mouse myelogenous leukemia lymphoblast cells. The ED<sub>50</sub> for this effect is 3.8-15.2 ng/mL, corresponding to a specific activity of 6.58×10<sup>4</sup>~2.63×10<sup>5</sup> units/mg.

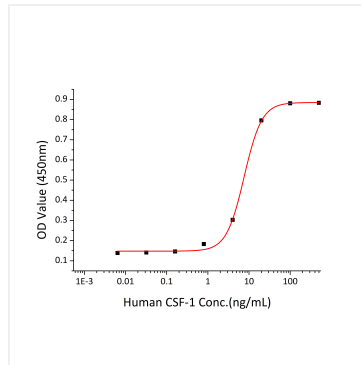
### Storage

Store the lyophilized protein at -20°C to -80°C for 12 months. 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 Human CSF-1/M-CSF Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 36-45 kDa.



Recombinant Human CSF-1 stimulates cell proliferation of the M-NFS-60 mouse myelogenous leukemia lymphoblast cells. The ED<sub>50</sub> for this effect is 3.8-15.2 ng/mL, corresponding to a specific activity of  $6.58 \times 10^4 \sim 2.63 \times 10^5$  units/mg.