

# Human M-CSF / CSF-1 Protein

Catalog Number: 11792-HNAH



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

CSF-1; M-CSF; MCSF

### Protein Construction:

A DNA sequence encoding the human CSF1 (NP\_757349.1) (Met1-Asn190) was expressed with an initial Met.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** > 85 % as determined by SDS-PAGE.

### 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 typically 1.6-6.3 ng/mL.

### Endotoxin:

< 1.0 EU per µg protein as determined by the LAL method.

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Glu 37

### Molecular Mass:

The recombinant human CSF1 consists 158 amino acids and predicts a molecular mass of 18.4 kDa.

### Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

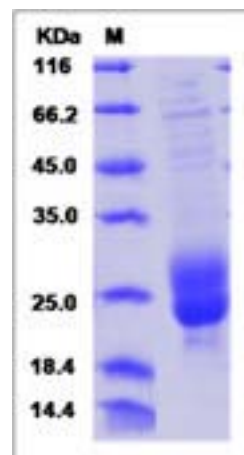
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

Macrophage colony-stimulating factor 1, also known as CSF-1, M-CSF, Lanimostim and CSF1, 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.

## References

1. Pandit J. et al., 1992, Science. 258: 1358-62.
2. Tokai M. et al., 2000, J Bacteriol. 182 (10): 2865-8.
3. Fan X. et al., 2001, Am J Physiol Endocrinol Metab. 280 (1): E103-11.

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