

**BACKGROUND**

Macrophage colony stimulating factor (M-CSF) is hematopoietic growth factor produced by a wide variety of cells. M-CSF is known to stimulate differentiation of hematopoietic stem cells to monocyte-macrophage cell populations in culture. M-CSF acts through the CSF receptor 1. Although human M-CSF shows activity on mouse cells, mouse CSF shows no activity on human cells.

Recombinant human M-CSF is a disulfide linked homodimer, containing two 159 amino acids and having a total molecular mass of 36.8 kDa.

**Alternative Names:**

MGI-IM, CSF-1

**Amino Acid Sequence:**

MEEVSEYCSH MIGSGHLQSL QRLIDSQMET SCQITFEFVD  
QEQLKDPVCY LKKAFLLVQD IMEDTMRFRD NTPNAIAIVQ  
LQELSLRLKS CFTKDYEEHD KACVRTFYET PLQLLEKVKV  
VFNETKNLLD KDWNIFSKNC NNSFAECSSQ GHERQSEGS

**TECHNICAL INFORMATION**

**Source:** *E.coli*

**Physical Appearance:**

Sterile Filtered white lyophilized (freeze-dried) powder.

**Formulation:**

Recombinant human M-CSF is lyophilized in 10 mM Na<sub>2</sub>PO<sub>4</sub>, 8.0 + 50 mM NaCl, at a concentration of 1 mg/ml.

**Stability:**

Lyophilized product is very stable at -20°C. Reconstituted material should be aliquoted and frozen at -20°C. It is recommended that a carrier protein (0.1% HSA or BSA) is added for long term storage.

**Reconstitution:**

Centrifuge vial before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile water at a concentration of 0.1 mg/ml, which can be further diluted into other aqueous solutions.

**Protein Content and Purity determined by:**

- UV spectroscopy at 280 nm
- RP-HPLC calibrated against a known standard
- Quantitation against a known standard via reducing and non-reducing SDS-PAGE gels.

**Endotoxin Level:**

Endotoxin level, as measured by LAL analysis, is <0.01ng/ug or <0.1EU/ug.

**Biological Activity:**

The activity is calculated by the dose-dependent proliferation of mouse NFS-60 cells and is typically less than 2.0 ng/mL.

*Products are for research use only. They are not intended for human, animal, or diagnostic applications.*

