

Description: Recombinant human Macrophage-Colony Stimulating Factor (M-CSF), is a disulfide-linked homodimeric protein consisting of two 149 amino acids residue subunits, and migrates as an approximately 42 kDa protein under non-reducing and as a 20-21 kDa protein under reducing conditions.

Source: Optimized DNA sequence encoding human M-CSF extracellular domain was expressed in *E. coli*.

Formulation: Recombinant CSF1 lyophilized from a 0.2 µm filtered PBS solution pH 7.4

Reconstitution: A quick spin of the vial followed by reconstitution in distilled water to a concentration not less than 0.1 mg/ml. This solution can then be diluted into other buffers.

Storage: The lyophilized protein is stable for at least 2 years from date of receipt when stored at -20°C. Upon reconstitution, store in working aliquots at 2 - 8° C for up to one month, or at -20°C for up to six months, in the presence of a carrier protein. Avoid repeated freeze/thaw cycles.

Purity: >95%, as determined by SDS-PAGE and HPLC.

Endotoxin Level: Endotoxin level was found to be < 0.1 ng/µg (1EU/µg), using the LAL gel clot method.

Biological Activity: The ED(50) is < 1.0 ng/ml and was measured by the dose-dependent stimulation of the proliferation of M-NFS-60 cells, which corresponds to a specific activity of > 1 x 10⁶ units/mg.

Protein Sequence:

EEVSEYCSHMIGSGHLQSLQRLIDSQ
METSCQITFEFVDQEQLKDPVCYLKKA
FLLVQDIMEDTMRFRDNTPNIAIVQL
QELSLRLKSCFTKDYEEDKACVRTFY
ETPLQLLEKVKNVFNETKNLLDKDWN
FSKNCNNSFAECSS

References:

1. *Blood*, Sep 2009; **10.1182**/blood-2009-04-215020.
2. *J. Leukoc. Biol.*, Aug 2009; **86**: 411 - 421.