

## M-CSF/CSF1 Protein, Mouse, Recombinant (CHO)

### General Information

Synonyms:	MGI-IM;MGC31930;CSF-1;colony stimulating factor 1;Lanimostim;MCSF;Macrophage Colony Stimulating Factor;CSF1
Protein Construction:	Lys33-Pro187
Species:	Mouse
Expression Host:	CHO Cells
Accession:	P07141
Molecular Weight:	35~44 kDa (Non-reducing conditions)

### QC Testing

Biological Activity:	ED 50 < 3.0 ng/ml, measured in a cell proliferation assay using Murine M-NFS-60 cells, corresponding to a specific activity of $> 3.3 \times 10^5$ units/mg.
Purity:	> 95% as determined by SDS-PAGE; > 95% as determined by HPLC
Endotoxin:	< 0.2 EU/ $\mu$ g of protein as determined by the LAL method.
Formulation:	Lyophilized from a 0.2 $\mu$ m filtered solution in PBS.

### Preparation and Storage

#### Reconstitution:

Reconstitute the lyophilized protein in sterile deionized water. The product concentration should not be less than 100  $\mu$ g/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

#### Stability & Storage:

Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

#### Shipping:

In general, Lyophilized powders are shipping with blue ice. Solutions are shipping with dry ice.

### Protein Background

Macrophage-Colony Stimulating Factor (M-CSF), also known as Colony Stimulating Factor-1 (CSF-1), is a hematopoietic growth factor. It can stimulate the survival, proliferation and differentiation of mononuclear phagocytes, in addition to the spreading and motility of macrophages. In mammals, it exists three isoforms, which invariably share an N-terminal 32-aa signal peptide, a 149-residue growth factor domain, a 21-residue transmembrane region and a 37-aa cytoplasmic tail. M-CSF is mainly produced by monocytes, macrophages, fibroblasts, and endothelial cells. M-CSF interaction with its receptor, c-fms, has been implicated in the growth, invasion, and metastasis of several diseases, including breast and endometrial cancers. The biological activity

of human M-CSF is maintained within the 149-aa growth factor domain, and it is only active in the disulfide-linked dimeric form, which is bonded at Cys63.

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