

# Human M-CSF/CSF-1 Protein, Ultra Low Endotoxin



Cat. No. CSF-HM001-UL

## Description

<b>Source</b>	Recombinant Human M-CSF/CSF-1 Protein is expressed from HEK293 without tag. It contains Glu33-Asn190.
<b>Accession</b>	P09603-1
<b>Molecular Weight</b>	The protein has a predicted MW of 18.40 kDa. Due to glycosylation, the protein migrates to 23-28 kDa based on Bis-Tris PAGE result.
<b>Endotoxin</b>	Less than 0.01 EU per µg by the LAL method.
<b>Purity</b>	> 95% as determined by Bis-Tris PAGE > 95% as determined by HPLC

## Formulation and Storage

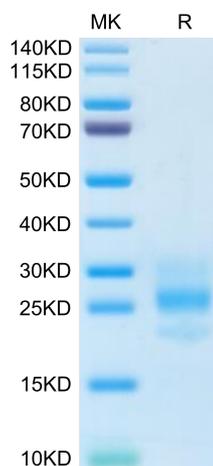
<b>Formulation</b>	Lyophilized from 0.22µm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.
<b>Reconstitution</b>	Dissolve the lyophilized protein in distilled water. Please refer to the Certificate of Analysis for detailed instructions.
<b>Storage</b>	-20 to -80°C for 12 months as supplied from date of receipt. -80°C for 3 months after reconstitution. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.

## Background

CSF-1, also known as M-CSF, is a four alpha-helical-bundle cytokine that is the primary regulator of macrophage survival, proliferation and differentiation. CSF-1 is also essential for the survival and proliferation of osteoclast progenitors. CSF-1 is a cytokine that plays an essential role in the regulation of survival, proliferation and differentiation of hematopoietic precursor cells, especially mononuclear phagocytes, such as macrophages and monocytes. Promotes the release of proinflammatory chemokines, and thereby plays an important role in innate immunity and in inflammatory processes. This mutation leads to a deletion of exons 2-7 of the EGFR gene and renders the mutant receptor incapable of binding any known ligand.

## Assay Data

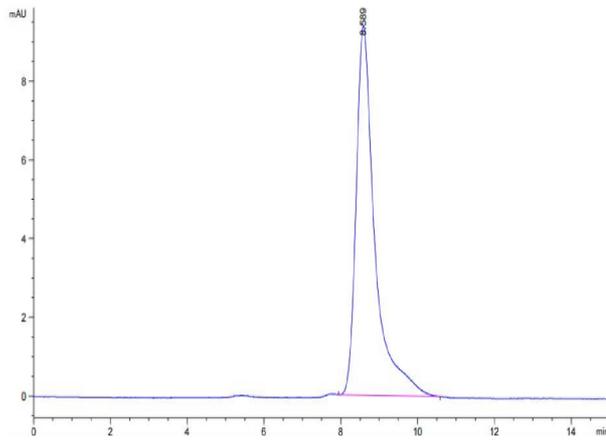
### Bis-Tris PAGE



Human M-CSF on Bis-Tris PAGE under reduced condition. The purity is greater than 95%.

### SEC-HPLC

Assay Data



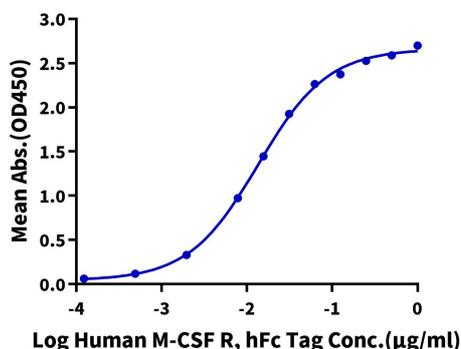
The purity of Human M-CSF is greater than 95% as determined by SEC-HPLC.

Assay Data

ELISA Data

**Human M-CSF, No Tag ELISA**

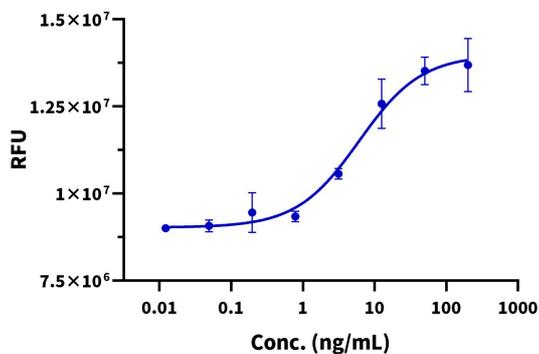
0.05µg Human M-CSF, No Tag Per Well



Immobilized Human M-CSF, No Tag at 0.5µg/ml (100µl/Well) on the plate. Dose response curve for Human M-CSF R, hFc Tag with the EC50 13.5ng/ml determined by ELISA.

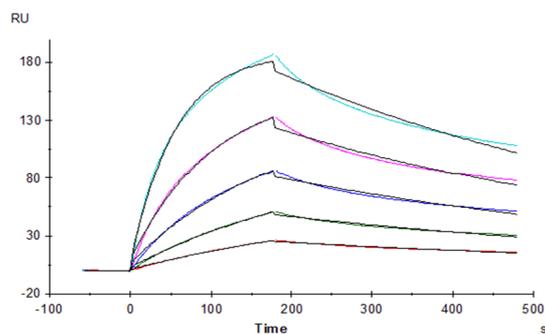
Cell Based Assay

**Recombinant Human M-CSF Bioactivity**



Measured in a cell proliferation assay using RAW264.7 cells. The ED50 for this effect is 1-10 ng/mL.

SPR Data



Human M-CSF, No Tag immobilized on CM5 Chip can bind Human M-CSF R, hFc Tag with an affinity constant of 2.06 nM as determined in SPR assay (Biacore T200).