

Human M-CSF/CSF-1 Protein

Cat. No. CSF-HM001

Description

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

Formulation and Storage

Formulation	Lyophilized from 0.22 μm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.
Reconstitution	Centrifuge the tube before opening. Reconstituting to a concentration more than 100 $\mu\text{g}/\text{ml}$ is recommended. Dissolve the lyophilized protein in distilled water.
Storage	-20 to -80°C for 12 months as supplied from date of receipt. -80°C for 3-6 months after reconstitution. 2-8°C for 2-7 days 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 α -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 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

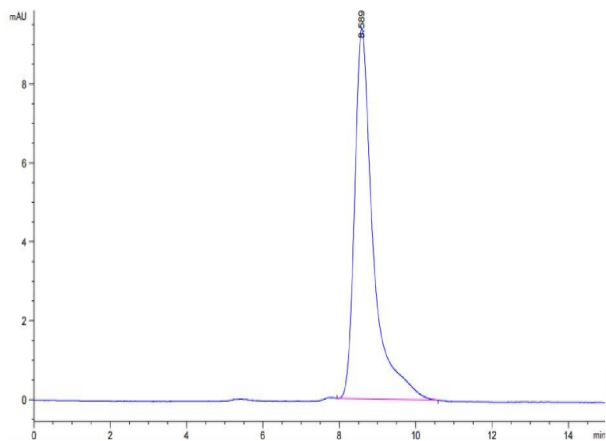
Tris-Bis PAGE



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

SEC-HPLC

Assay Data

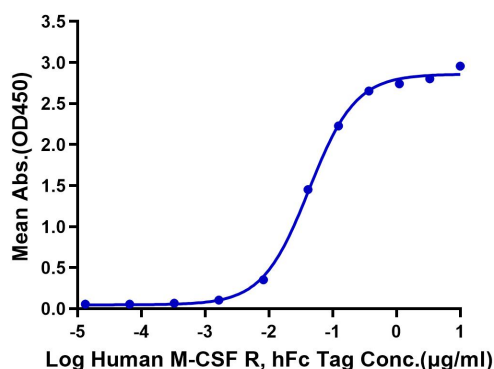


The purity of Human M-CSF is greater than 95% as determined by SEC-HPLC.

Assay Data

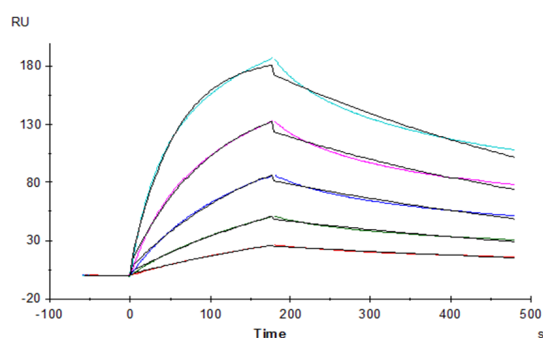
ELISA Data

Human M-CSF, No Tag ELISA
0.05µg Human M-CSF, No Tag Per Well



Immobilized Human M-CSF at 0.5µg/ml (100µl/Well) on the plate. Dose response curve for Human M-CSF R, hFc Tag with the EC50 42.8ng/ml determined by ELISA (QC Test).

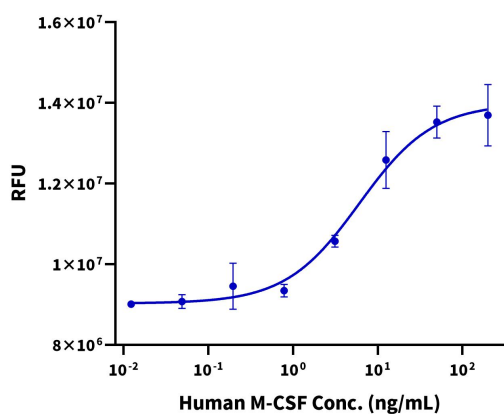
SPR Data



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).

Cell Based Assay

Recombinant Human M-CSF Bioactivity



Measured in a cell proliferation assay using RAW264.7 cells. The ED50 for this effect is 2.5 - 7.0 ng/mL (QC Test).