

**Synonym**

CSF1R,C-FMS,CD115,CSFR,FIM2,FMS,M-CSFR

**Source**

Human M-CSF R Protein, Fc Tag(CSR-H5258) is expressed from human 293 cells (HEK293). It contains AA Ile 20 - Glu 512 (Accession # [NP\\_005202.2](#)).

Predicted N-terminus: Ile 20

**Molecular Characterization**

M-CSF R(Ile 20 - Glu 512) NP_005202.2	Fc(Pro 100 - Lys 330) P01857
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This protein carries a human IgG1 Fc tag at the C-terminus

The protein has a calculated MW of 80.6 kDa. The protein migrates as 100-150 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

**Endotoxin**

Less than 0.1 EU per µg by the LAL method.

**Purity**

>95% as determined by SDS-PAGE.

**Formulation**

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

**Reconstitution**

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

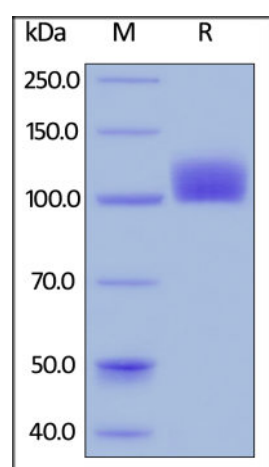
**Storage**

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

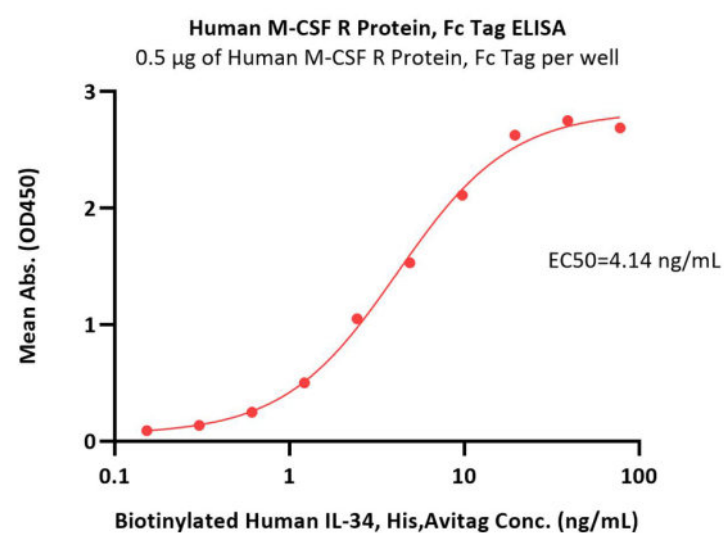
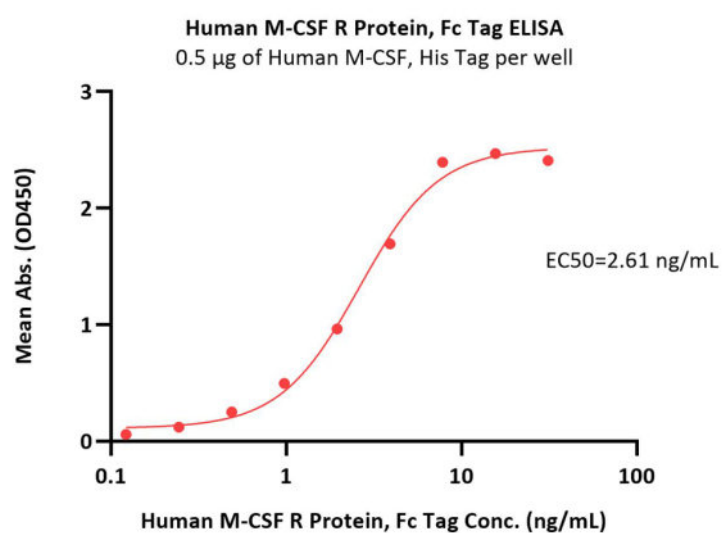
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

**SDS-PAGE**

Human M-CSF R Protein, Fc Tag on SDS-PAGE under reducing (R) condition.

The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

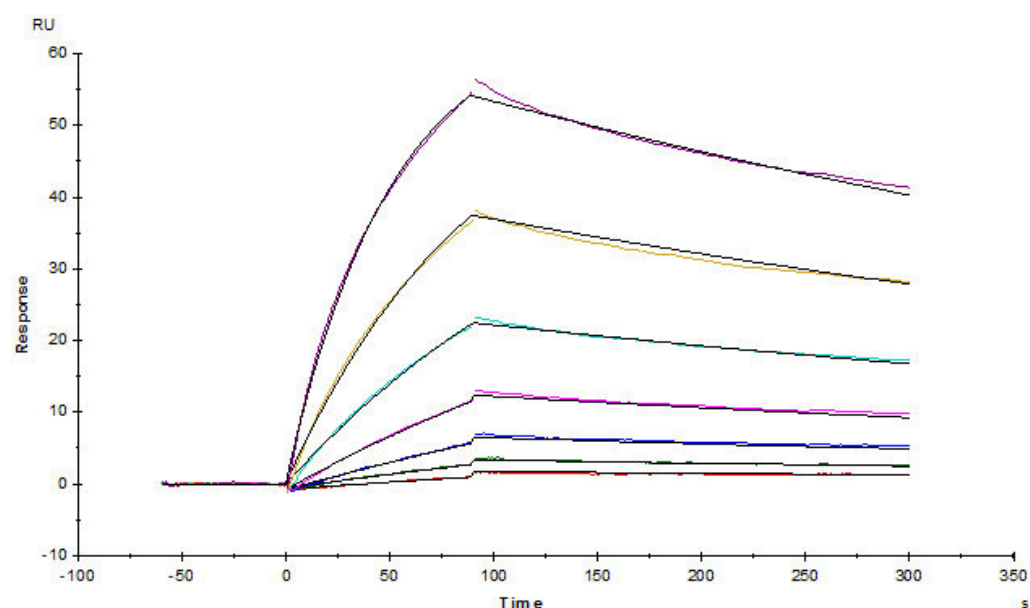
**Bioactivity-ELISA**



Immobilized Human M-CSF Protein, His Tag (Cat. No. MCF-H5247) at 5 µg/mL (100 µL/well) can bind Human M-CSF R Protein, Fc Tag (Cat. No. CSR-H5258) with a linear range of 0.1-4 ng/mL (QC tested).

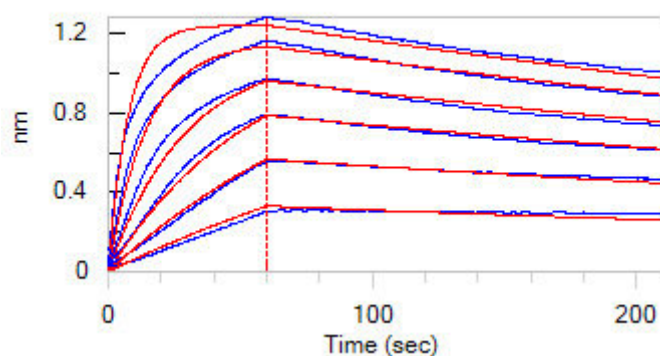
Immobilized Human M-CSF R Protein, Fc Tag (Cat. No. CSR-H5258) at 5 µg/mL (100 µL/well) can bind Biotinylated Human IL-34 Protein, His,Avitag (Cat. No. IL4-H82E5) with a linear range of 0.2-10 ng/mL (Routinely tested).

**Bioactivity-SPR**

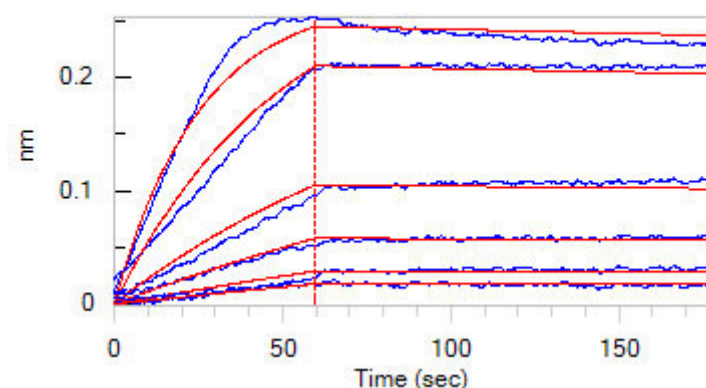


Human M-CSF Protein, His Tag (Cat. No. MCF-H5247) captured on CM5 Chip via anti-His antibody can bind Human M-CSF R Protein, Fc Tag (Cat. No. CSR-H5258) with an affinity constant of 1.9 nM as determined in SPR assay (Biacore T200) (Routinely tested).

**Bioactivity-BLI**



Loaded Biotinylated Human M-CSF Protein, His,Avitag (Cat. No. MCF-H82E6) on SA Biosensor, can bind Human M-CSF R Protein, Fc Tag (Cat. No. CSR-H5258) with an affinity constant of 24.5 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).



Loaded Human M-CSF R Protein, Fc Tag (Cat. No. CSR-H5258) on Protein A Biosensor, can bind Human M-CSF Protein, His Tag (Cat. No. MCF-H5247) with an affinity constant of 0.365 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

## Background

Colony stimulating factor 1 receptor (CSF1R) is also known as macrophage colony-stimulating factor receptor (M-CSFR), CD115 Cluster of Differentiation 115 (CD115), C-FMS, CSFR, FIM2, FMS, and is a member of the typeIII subfamily of receptor tyrosine kinases (RTKs). CSF1R is a receptor for a cytokine called colony stimulating factor 1, The protein encoded by the CSFR1 gene is the receptor for colony stimulating factor 1, a cytokine which controls the production, differentiation, and function of macrophages. This receptor mediates most, if not all, of the biological effects of this cytokine. Ligand binding activates CSFR1 through a process of oligomerization and transphosphorylation . Mutations in CSF1R are associated with chronic myelomonocytic leukemia and type M4 acute myeloblastic leukemia. Increased levels of CSF1R1 are found in microglia in Alzheimer's disease and after brain injuries. The increased receptor expression causes microglia to become more active. Both CSF1R, and its ligand colony stimulating factor 1 play an important role in the development of the mammary gland and may be involved in the process of mammary gland carcinogenesis.

## Clinical and Translational Updates

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.