Human M-CSF R / CSF1R / CD115 Protein, His Tag (MALS verified)

Catalog # CSR-H5228

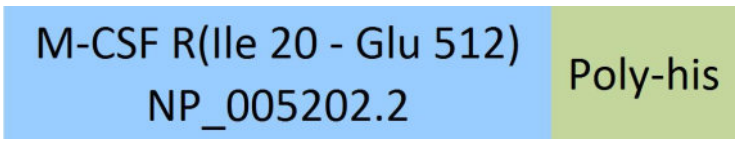
Synonym

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

Source

Human M-CSF R, His Tag(CSR-H5228) 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



This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 55.3 kDa. The protein migrates as 80-95 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per μg by the LAL method / rFC method.

Purity

>96% 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

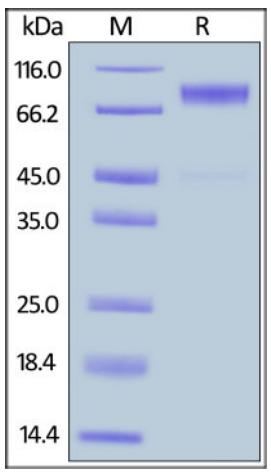
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

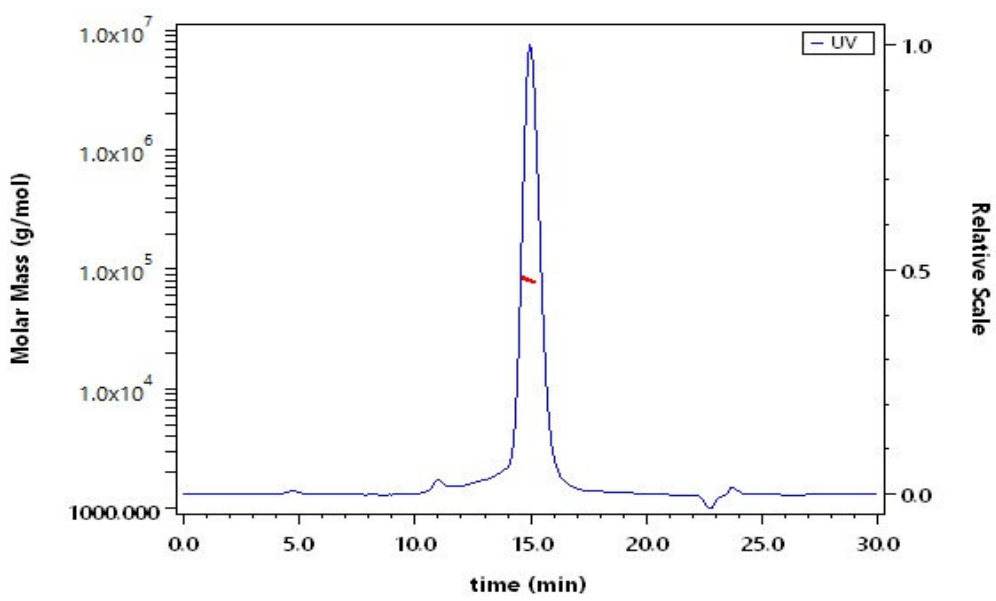
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



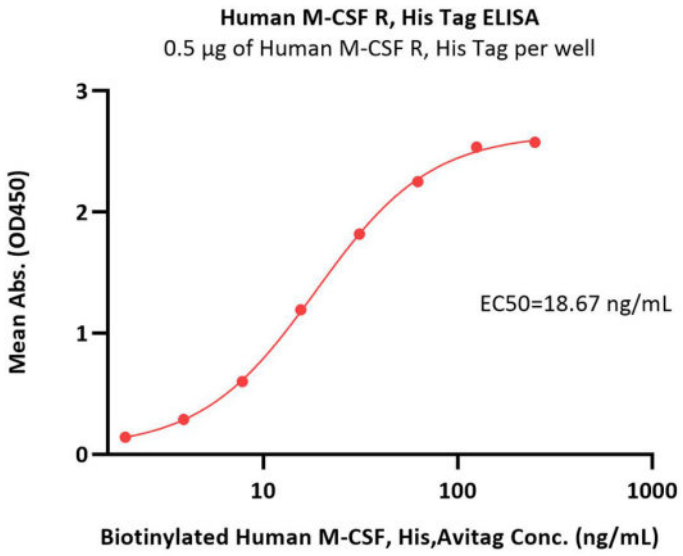
Human M-CSF R, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 96%.

SEC-MALS



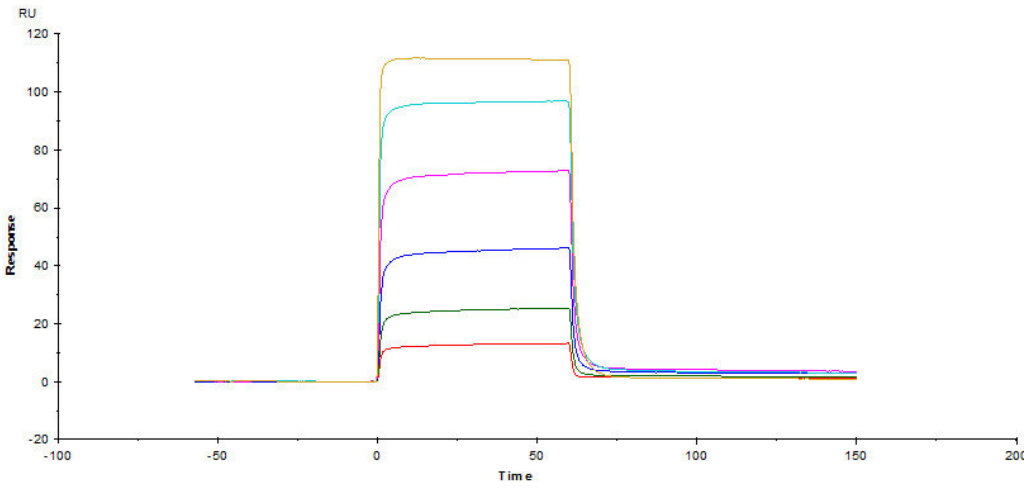
The purity of Human M-CSF R, His Tag (Cat. No. CSR-H5228) is more than 85% and the molecular weight of this protein is around 70-95 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA



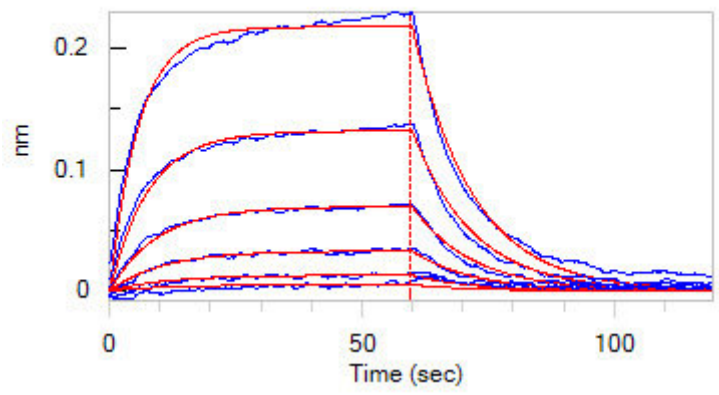
Immobilized Human M-CSF R, His Tag (Cat. No. CSR-H5228) at 5 μg/mL (100 μL/well) can bind Biotinylated Human M-CSF, His,Avitag (Cat. No. MCF-H82E6) with a linear range of 2-31 ng/mL (QC tested).

Bioactivity-SPR



Biotinylated Human M-CSF, His,Avitag (Cat. No. MCF-H82E6) immobilized on SA Chip can bind Human M-CSF R, His Tag (Cat. No. CSR-H5228) with an affinity constant of 0.309 μM as determined in a SPR assay (Biacore T200) (Routinely tested).

Bioactivity-BLI



Loaded Biotinylated Human M-CSF, His,Avitag (Cat. No. MCF-H82E6) on SA Biosensor, can bind Human M-CSF R, His Tag (Cat. No. CSR-H5228) with an affinity constant of 378 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.