



## Synonym

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

## Source

Alexa Fluor 647-Labeled Human M-CSF R Protein, His Tag (CSR-HA2H4) is produced via conjugation of AF647 to Human M-CSF R, His Tag with a new generation site-specific technology under Star Staining labeling platform. Human M-CSF R, His Tag is expressed from human 293 cells (HEK293). It contains AA Ile 20 - Glu 512 (Accession # [P07333](#)).

Predicted N-terminus: Ile 20

## Molecular Characterization

M-CSF R(Ile 20 - Glu 512) P07333	Poly-his
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This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 71.4 kDa. The protein migrates as 80-120 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

## Conjugate

AF647

Excitation Wavelength: 640 nm

Emission Wavelength: 672 nm

## Protein Ratio

The AF647 to protein molar ratio is **0.5-1**.

## Purity

>90% 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 protect from light and avoid repeated freeze-thaw cycles.**

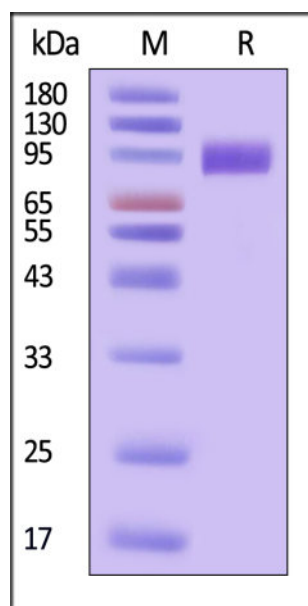
This product is stable after storage at:

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

## ACRO Quality Management System

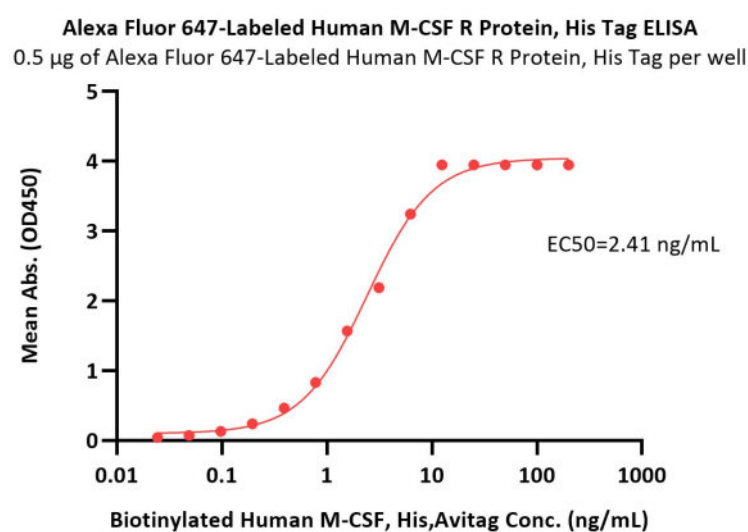
- [QMS\(ISO, GMP\)](#)
- [Quality Advantages](#)
- [Quality Control Process](#)

## SDS-PAGE



Alexa Fluor 647-Labeled Human M-CSF R Protein, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

## Bioactivity-ELISA



Immobilized Alexa Fluor 647-Labeled Human M-CSF R Protein, His Tag (Cat. No. CSR-HA2H4) at 5 µg/mL (100 µL/well) can bind Biotinylated Human M-CSF, His, Avitag (Cat. No. MCF-H82E6) with a linear range of 0.02-13 ng/mL (QC tested).

## Background

M-CSF receptor (CSF1R) is a tyrosine kinase receptor expressed almost exclusively on monocytes and macrophages, where it regulates survival, proliferation, and differentiation. Its highly restricted expression pattern—absent on most other immune cells including lymphocytes and granulocytes—makes CSF1R a reliable lineage-specific marker for macrophages. Upon binding its ligand M-CSF, CSF1R dimerizes and activates downstream signaling cascades essential for macrophage homeostasis. This macrophage-restricted expression profile has established CSF1R as an attractive targeting moiety for in vivo macrophage-directed therapies, including CAR-M platforms, where receptor-specific antibodies enable selective recognition and engagement of macrophages.

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