Biotinylated Human M-CSF / CSF-1 Protein, His,Avitag™

Catalog # MCF-H82E6

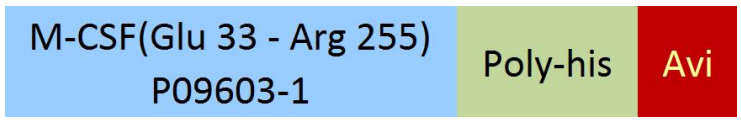
Synonym

M-CSF,CSF-1,Lanimostim

Source

Biotinylated Human M-CSF, His,Avitag(MCF-H82E6) is expressed from human 293 cells (HEK293). It contains AA Glu 33 - Arg 255 (Accession # P09603-1). Predicted N-terminus: Glu 33

Molecular Characterization



This protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 28.8 kDa. The protein migrates as 35-48 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Labeling

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

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

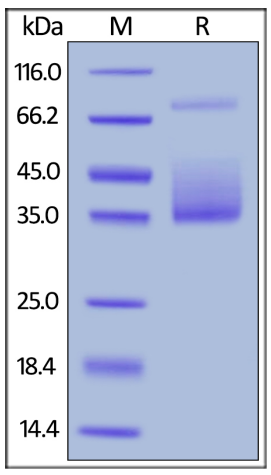
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

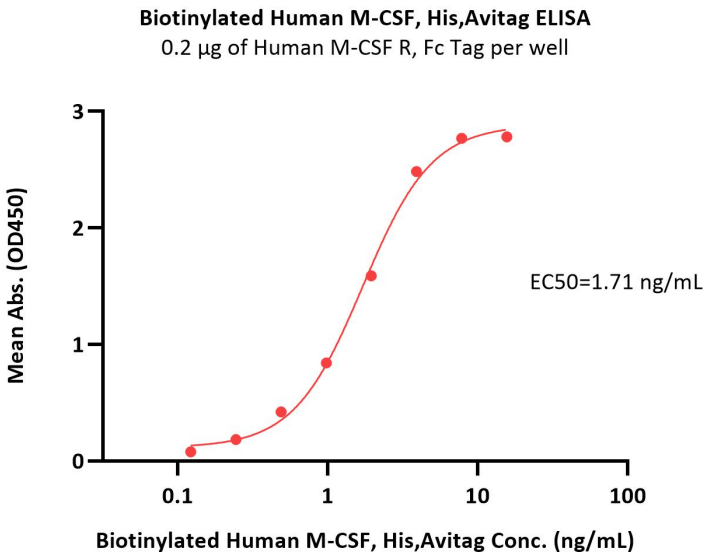
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

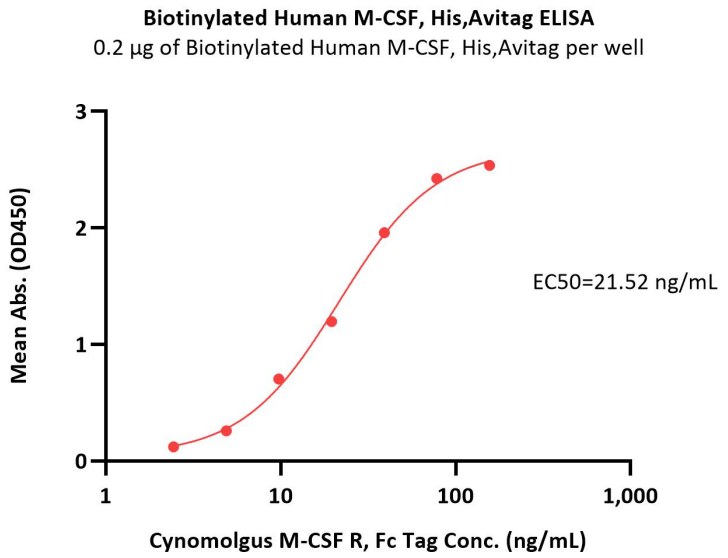


Biotinylated Human M-CSF, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90%.

Bioactivity-ELISA

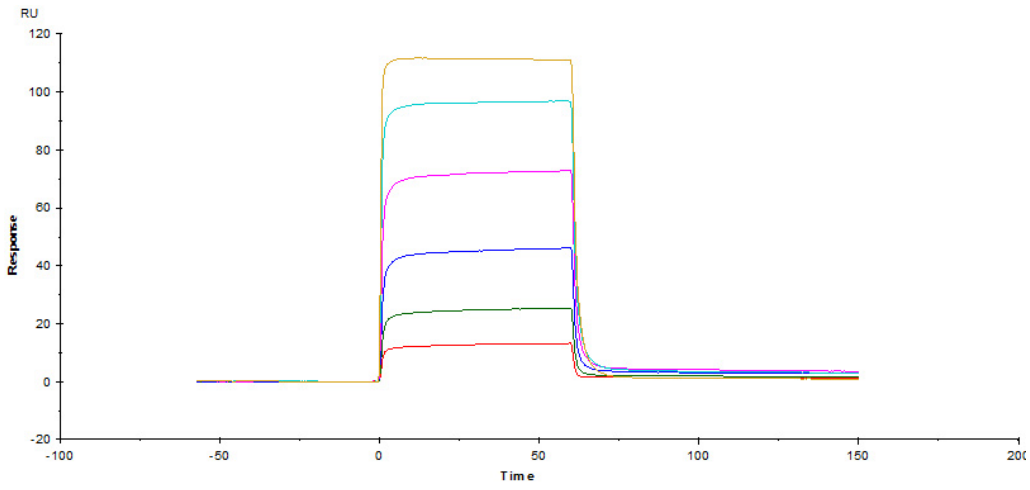


Immobilized Human M-CSF R, Fc Tag (Cat. No. CSR-H5258) at 2 μg/mL (100 μL/well) can bind Biotinylated Human M-CSF, His,Avitag (Cat. No. MCF-H82E6) with a linear range of 0.1-2 ng/mL (QC tested).



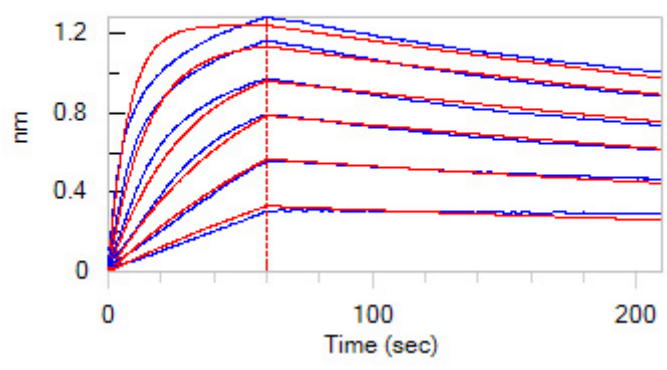
Immobilized Biotinylated Human M-CSF, His,Avitag (Cat. No. MCF-H82E6) at 2 μg/mL (100 μL/well) on streptavidin precoated (0.2 μg/well) plate, can bind Cynomolgus M-CSF R, Fc Tag (Cat. No. CSR-C5252) with a linear range of 1-39 ng/mL (Routinely tested).

Bioactivity-SPR



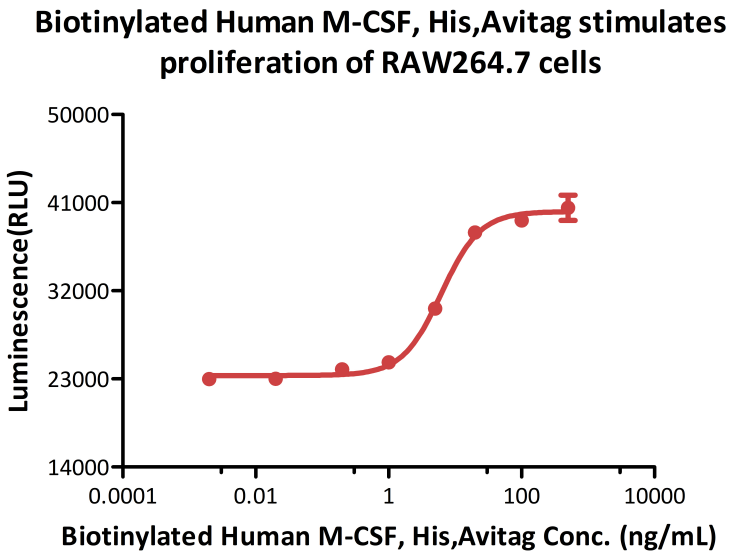
Biotinylated Human M-CSF, His,Avitag (Cat. No. MCF-H82E6) immobilized on SA Chip can bind Human M-CSF R, His Tag (Cat. No. CSR-H5228) with an affinity constant of 0.309 μM as determined in a SPR assay (Biacore T200) (Routinely tested).

Bioactivity-BLI

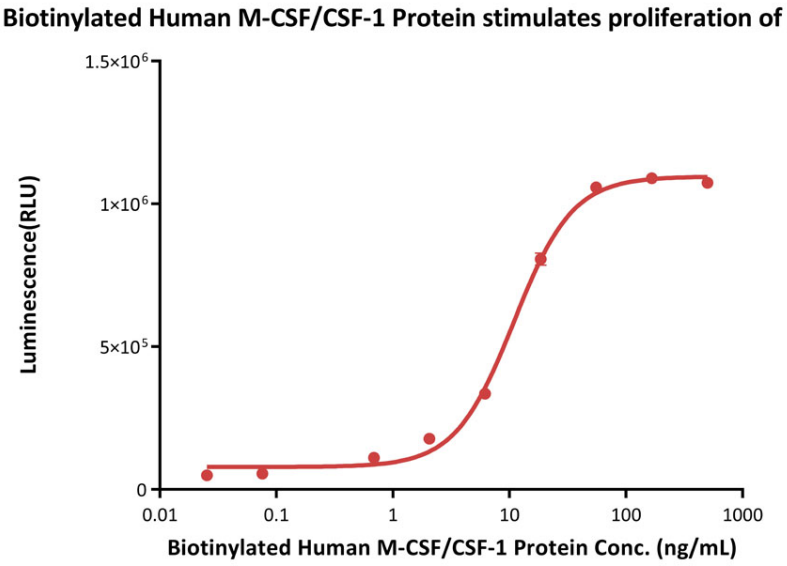


Loaded Biotinylated Human M-CSF, His,Avitag (Cat. No. MCF-H82E6) on SA Biosensor, can bind Human M-CSF R, Fc Tag, low endotoxin (Cat. No. CSR-H5258) with an affinity constant of 24.5 nM as determined in BLI assay (ForteBio Octet Red96e) (Routinely tested).

Bioactivity-CELL BASE



Biotinylated Human M-CSF, His,Avitag (Cat. No. MCF-H82E6) stimulates proliferation of RAW264.7 cells. The EC50 for this effect is 6.20-7.15 ng/mL (Routinely tested).



The bio-activity of Biotinylated Human M-CSF / CSF-1 Protein, His,Avitag™ (Cat. No. MCF-H82E6) was determined by dose-dependent stimulation of the proliferation of M-NFS-60 cells. The EC50 for this effect is 10.91ng/mL (Routinely tested).

Background

The colony stimulating factor 1 (CSF1), also known as macrophage colony-stimulating factor (M-CSF), is a secreted cytokine which influences hematopoietic stem cells to differentiate into macrophages or other related cell types. Eukaryotic cells also produce M-CSF in order to combat intercellular viral infection. It is one of the three experimentally described colony-stimulating factors. M-CSF binds to the colony stimulating factor 1 receptor. Macrophage colony-stimulating factor has been shown to interact with PIK3R2. M-CSF (or CSF-1) is a hematopoietic growth factor that is involved in the proliferation, differentiation, and survival of monocytes, macrophages, and bone marrow progenitor cells. Locally produced M-CSF in the vessel wall contributes to the development and progression of atherosclerosis.