

## GFH8AF Recombinant Human GM-CSF (Animal-Free)

### Description

Granulocyte-Macrophage Colony-Stimulating Factor (GM-CSF) is hematopoietic growth factor produced by endothelial cells, monocytes, fibroblasts, and T cells. GM-CSF stimulates the production of neutrophilic granulocytes, macrophages, and mixed granulocyte-macrophage colonies from bone marrow cells. GM-CSF promotes immune system development and regulates neutrophil function during infection. Human and mouse GM-CSF show no cross-reactivity.

This product is produced with no animal derived raw products. All processing and handling employs animal free equipment and animal free protocols.

<b>Length</b>	128 aa
<b>Molecular Weight</b>	14.6 kDa
<b>Source</b>	E. coli
<b>Accession Number</b>	P04141
<b>Purity</b>	≥95% determined by reducing and non-reducing SDS-PAGE

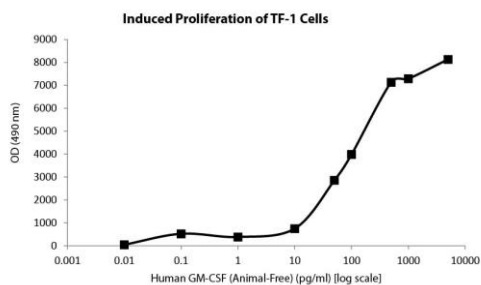
### Specifications

<b>Alternative Names</b>	Granulocyte-Macrophage Colony-Stimulating Factor, GMCSF, CSF-2, MGI1GM, colony stimulating factor 2 (granulocyte-macrophage), colony-stimulating factor, CSF-2, MGIIGM, sargramostim, molgramostin
<b>Biological Activity</b>	Human GM-CSF (Animal-Free) is fully biologically active when compared to standard. The activity is determined by a proliferation assay using TF-1 cells and it is typically less than 200 pg/ml. This corresponds to an expected specific activity of $5 \times 10^6$ units/mg.
<b>Endotoxin Level</b>	≤1.00 EU/μg as measured by kinetic LAL
<b>Formulation</b>	Lyophilized from a sterile (0.2 micron) filtered aqueous solution containing 10 mM sodium phosphate, pH 7.5
<b>AA Sequence</b>	MAPARSPSPS TQPWEHVNAI QEARRLLNLS RDTAEMNET VEVISEMFDL QEPTCLQTRL ELYKQGLRGS LTKLKGPLTM MASHYKQHCP PTPETSCATQ IITFESFKEN LKDFLLVIPF DCWEPVQE

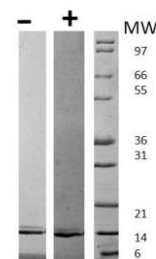
### Preparation and Storage

<b>Reconstitution</b>	Centrifuge vial before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with sterile water at 0.1 mg/ml, which can be further diluted into other aqueous solutions.
<b>Stability and Storage</b>	12 months from date of receipt when stored at -20°C to -80°C as supplied. 1 month when stored at 4°C after reconstituting as directed. 3 months when stored at -20°C to -80°C after reconstituting as directed.

### Data



Induced proliferation of TF-1 cells assay for Human GM-CSF.



Non-reducing (-) and reducing (+) conditions in a 4 - 20% Tris-Glycine gel stained with Coomassie Blue. 1 μg of protein was loaded in each lane. Human GM-CSF has a predicted Mw of 14.6 kDa.