

# Recombinant Mouse CSF2, Tag Free

# Information

Accession #	P01587	
Alternate Names	Colony-stimulating factor; CSF; CSF2; CSF-2; GMCSF; GM-CSF; Molgramostim; molgramostin	
Source	Human embryonic kidney cell, HEK293-derived mouse CSF2 protein	
Protein sequence	Ala18-Lys141	
M.Wt	14.1 kDa	
Appearance	Solution protein	
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. - 12 months from date of receipt, -20 to -70°C as supplied.	
Concentration	0. 2 mg/mL	
Formulation	Dissolved in sterile PBS buffer.	
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. This solution can be diluted into other aqueous buffers.	
<b>Biological Activity</b>	The EC50 for this effect is 5-30 pg/mL. Measured in a cell proliferation assay using DA3 mouse myeloma cells.	
Shipping Condition	Shipping with dry ice.	
Handling	Centrifuge the vial prior to opening.	
Usagenees	For Research Use Only! Not to be used in humans.	

## Quality Control

Purity	> 95%, determined by SDS-PAGE.	
Endotoxin	<0.010 EU per 1 ug of the protein by the LAL method.	BIO

## Description

CSF2 was initially characterized as a factor that can support the in vitro colony formation of granulocyte-macrophage progenitors. It is also a growth factor for erythroid, megakaryocyte, and eosinophil progenitors. GM-CSF is produced by a number of different cell types (including T cells, B cells, macrophages, mast cells, endothelial cells, fibroblasts, and adipocytes) in response to cytokine or inflammatory stimuli. On mature hematopoietic cells, GM-CSF is a survival factor for and activates the effector functions of granulocytes, monocytes/macrophages, and eosinophils <sup>[1, 2]</sup>. GM-CSF promotes a Th1 biased immune response, angiogenesis, allergic

inflammation, and the development of autoimmunity <sup>[3-5]</sup>. It shows clinical effectiveness in ameliorating chemotherapy-induced neutropenia, and GM-CSF transfected tumor cells are utilized as cancer vaccines <sup>[6, 7]</sup>. The 22 kDa glycosylated GM-CSF, similar to IL-3 and IL-5, is a cytokine with a core of four bundled alpha -helices <sup>[8-10]</sup>. Mature mouse GM-CSF shares 49%-54% amino acid sequence identity with canine, feline, human, and porcine GM-CSF and 69% with rat GM-CSF. GM-CSF exerts its biological effects through a heterodimeric receptor complex composed of GM-CSF R alpha /CD116 and the signal transducing common beta chain (CD131) which is also a component of the high-affinity receptors for IL-3 and IL-5 <sup>[11, 12]</sup>. In addition, GM-CSF binds a naturally occurring soluble form of GM-CSF R alpha <sup>[13]</sup>.

### Reference

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