GM-CSF/CSF2 Human Active Protein

PRODUCT OVERVIEW

Product Name	GM-CSF/CSF2, Active Protein
Full Product Name	Recombinant Human GM-CSF/CSF2 Protein
Product Gene Name	GM-CSF/CSF2 active protein
Product Synonym Names	Granulocyte-Macrophage Colony-Stimulating Factor; GM-CSF; Colony-Stimulating Factor; CSF; Molgramostin; Sargramostim; CSF2; GMCSF
Sequence	Ala18-Glu1 44
Host	E Coli
Form/Format	Lyophilized from a 0.2 mum filtered solution of PBS, pH7.4.
Purity/Purification	>95% as determined by reducing SDS-PAGE.
Preparation and Storage	Lyophilized protein should be stored at < -20 degree C, though stable at room temperature for 3 weeks. Reconstituted protein solution can be stored at 4-7 degree C for 2-7 days. Aliquots of reconstituted samples are stable at < -20 degree C for 3 months.
Molecular Weight	Molecular Mass: 14.6kDa Actual Protein Molecular Mass: 14kDa
OMIM	138960
3D Structure	ModBase 3D Structure for P04141
Active Protein Note	Protein activity can be an ambiguous term. Please refer to the data sheet or inquire with Technical Support to determine the definition of activity for this product.
Species	Human
Endotoxin	< 1.0 EU per mug as determined by the LAL method.
Activity	Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The ED50 for this effect is 4-20 pg/mL.
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for GM-CSF/CSF2 active protein	Protein Construction: Recombinant Human Granulocyte-Macrophage Colony-Stimulating Factor is produced by our E Coli expression system and the target gene encoding Ala18-Glu144 is expressed. Background: Granulocyte-Macrophage Colony Stimulating Factor (GM-CSF) was initially characterized as a growth factor that can support the in vitro colony formation of granulocyte-macrophage progenitors. It is produced by a number of different cell types (including activated T cells, B cells, macrophages, mast cells, endothelial cells and fibroblasts) in response to cytokine of immune and inflammatory stimuli. Besides granulocyte-macrophage progenitors, GM-CSF is also a growth factor for erythroid, megakaryocyte and eosinophil progenitors. On mature hematopoietic, monocytes/ macrophages and eosinophils. GM-CSF has a functional role on non-hematopoitic cells. It can induce human endothelial cells to migrate and proliferate. Additionally, GM-CSF can also stimulate the proliferation of a number of tumor cell lines, including osteogenic sarcoma, carcinoma and adenocarcinoma cell lines.
Other Notes	Small volumes of GM-CSF/CSF2 active protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

Searchable Terms for GM-CSF/CSF2 purchase	MBS2557271 is an active protein targeting GM-CSF/CSF2. Also known as Recombinant Human GM-CSF/CSF2 Protein. Host: E Coli.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for GM-CSF/CSF2. It may not necessarily be applicable to this product.

NCBI GI #	183364
NCBI GeneID	1437
NCBI Accession #	AAA52578.1
UniProt Primary Accession #	P04141
UniProt Related Accession #	P04141
NCBI Official Full Name	GM-CSF
NCBI Official Synonym Full Names	colony stimulating factor 2
NCBI Official Symbol	CSF2
NCBI Official Synonym Symbols	CSF; GMCSF
UniProt Protein Name	Granulocyte-macrophage colony-stimulating factor
UniProt Synonym Protein Names	Colony-stimulating factor; CSF; Molgramostin; Sargramostim
UniProt Gene Name	CSF2
UniProt Synonym Gene Names	GMCSF; GM-CSF; CSF
UniProt Entry Name	CSF2_HUMAN
NCBI Protein Information	granulocyte-macrophage colony-stimulating factor
NCBI Summary for GM-CSF/CSF2	The protein encoded by this gene is a cytokine that controls the production, differentiation, and function of granulocytes and macrophages. The active form of the protein is found extracellularly as a homodimer. This gene has been localized to a cluster of related genes at chromosome region 5q31, which is known to be associated with interstitial deletions in the 5q- syndrome and acute myelogenous leukemia. Other genes in the cluster include those encoding interleukins 4, 5, and 13. [provided by RefSeq, Jul 2008]
Research Articles on GM-CSF/CSF2	**1.** Study demonstrates that GM-CSF signaling is an important mechanism to tune macrophage inflammatory state and improve Mycobacterium tuberculosis (Mtb) control and that this pathway can be manipulated by pathogens to drive a more permissive bacterial state. Blocking GM-CSF makes macrophages more permissive of Mtb growth while addition of GM-CSF increases bacterial control.
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