

Active Recombinant Human CSF2, His-tagged, Animal Free

Cat. No. CSF2-143H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	rHuman GM-CSF is a glycosylated polypeptide chain containing 127 amino acids (18-144 aa CSF2_HUMAN P04141), fused to 10 His tag at N-terminal. rHuman GM-CSF migrate as a broad band between 15 and 25 kDa due to post-translation modification, in particular glycosylation. Human recombinant protein expressed in Nicotiana benthamiana. Recombinant human Granulocyte-macrophage colony-stimulating factor (GM-CSF) contains a 10-His-tag at the N-terminal end, is produced by transient expression in non-transgenic plants and is purified by sequential chromatography (FPLC). This product contains no animal-derived components or impurities. Animal free product.
Species	Human
Source	Nicotiana Benthamiana
ProteinLength	18-144 a.a.
Description	GMCSF is a cytokine that stimulates the growth and differentiation of hematopoietic precursor cells from various lineages, including granulocytes, macrophages, eosinophils and erythrocytes. It's involved in differentiation of dendritic cells and is a key factor in differentiation pathways leading form stem cells. GMCSF is produced by several cell types as monocytes, fibroblasts, endothelial cells and T-Lymphocytes in response to a number of inflammatory mediators present in the hemopoietic environment and peripheral site of inflammation. Human GMCF is an important therapeutic cytokine used in the treatment of myeloid leukemia,

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neutropenia and aplastic anemia and it could become interesting in the treatment following bone marrow transplantation. It performs its biological activity by binding to a specific receptor complex which is composed of a cytokine-specific alpha chain and beta chain, shared with the receptors for interleukin-3 and interleukin-5. GM-CSF has been identified to mediate the activation of Jak-Stat and MAPK pathways.

Form	Recombinant human GM-CSF is lyophilized from 10 mM PBS buffer pH 7.6 and 0.2 M NaCl.
Bio-activity	The activity of recombinant human GM-CSF is determined by the dose-dependent induction of human TF-1 proliferation cell *Cell proliferation was measured by MTT method. ED50 is ≤ 0.05 ng/mL.
Molecular Mass	rHuman GM-CSF is a glycosylated polypeptide chain containing 127 amino acids (18-144 aa CSF2_HUMAN P04141), fused to 10 His tag at N-terminal. rHuman GM-CSF migrate as a broad band between 15 and 25 kDa due to post-translation modification, in particul
AA Sequence	HHHHHHHHHHAPARSPSPSTQPWEHVNAIQEARRLLNLSRDAAEMNETVEVISEM FDLQEPTCLQTRLELYKQG LRGS�TKLKGPLTMMASHYKQHCPPTPETSCATQIITF ESFKENLKDFFLLVIPFDCWEPVQE
Endotoxin	< 0.04="" eu="" ug="" protein="" (lal="">
Purity	>97% by SDS-PAGE gel
Applications	Cell culture, Western Blot.
Storage	This lyophilized preparation is stable at 2-8o C for short term, long storage it should

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be kept at -20°C. Reconstituted rh GM-CSF should be stored in working aliquots at -20°C. Repeated freezing and thawing is not recommended.

Reconstitution

Lyophilized protein should be reconstituted in water to a concentration of 25-50 ng / µl. Optimal concentration should be determined for specific application and cell lines. Optimal reconstitution please follow batch Quality Control sheet instructions.

GENE INFORMATION

Gene Name CSF2 colony stimulating factor 2 (granulocyte-macrophage) [Homo sapiens]

Official Symbol CSF2

Synonyms

CSF2; colony stimulating factor 2 (granulocyte-macrophage); granulocyte-macrophage colony-stimulating factor; GM CSF; GMCSF; granulocyte macrophage colony stimulating factor; molgramostin; sargramostim; CSF; colony-stimulating factor; granulocyte-macrophage colony stimulating factor; MGC131935; MGC138897;

Gene ID 1437

mRNA Refseq NM_000758

Protein Refseq NP_000749

MIM 138960

UniProt ID P04141

Chromosome Location 5q23-q31

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Pathway

Amoebiasis, organism-specific biosystem; Amoebiasis, conserved biosystem; Calcineurin-regulated NFAT-dependent transcription in lymphocytes, organism-specific biosystem; Calcium signaling in the CD4+ TCR pathway, organism-specific biosystem; Cytokine Signaling in Immune system, organism-specific biosystem; Cytokine-cytokine receptor interaction, organism-specific biosystem; Cytokine-cytokine receptor interaction, conserved biosystem;

Function

cytokine activity; granulocyte macrophage colony-stimulating factor receptor binding; growth factor activity; protein binding;

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