

Recombinant human CSF2, Active, His-tagged

Cat. No. CSF2-1552H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Recombinant human 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 migrates as a broad band between 15 and 25 kDa due to post-translation modifications, in particular glycosylation.

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, such as granulocytes, macrophages, eosinophil's and erythrocytes. Is 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 leukaemia, neutropenia and aplastic anaemia and it could become interesting in the treatment following bone marrow transplantation. It performs 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. GMCSR has been identified to mediate the activation of Jak-Stat and MAPK pathways.

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Form	Recombinant human GM-CSF is lyophilized from 10 mM PBS buffer pH 7.6 and 0.2 M NaCl.
Molecular Mass	Between 15 and 25 kDa
AA Sequence	HHHHHHHHHHAPARSPSPSTQPWEHVNAIQEARLLNLSRDTAAEMNETVEVISEM FDLQEPTCLQTRLELYKQG LRGS�TKLKGPLTMMASHYKQHCPPTPETSCATQIITF ESFKENLKDFLLVIPFDCWEPVQE
Endotoxin	< 0.04 EU/μg protein (Lal=)
Purity	>97% by SDS-PAGE gel
Storage	This lyophilized preparation is stable at 2-8o C for short term, long storage it should be kept at -20oC. Reconstituted protein should be stored in working aliquots at –20°C. Repeated freezing and thawing is not recommended.
Reconstitution	Centrifuge vial before opening. Lyophilized protein should be reconstituted in water to a concentration of 50 ng/μl. Optimal concentration should be determined for specific application and cell lines.

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;

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Gene ID	1437
mRNA Refseq	NM_000758
Protein Refseq	NP_000749
MIM	138960
UniProt ID	P04141
Chromosome Location	5q23-q31
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;