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## Datasheet for ABIN1589598 **GM-CSF Protein (His tag)**

### Overview

Quantity:	50 µg
Target:	GM-CSF (CSF2)
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This GM-CSF protein is labelled with His tag.

### Product Details

Purpose:	GM-CSF
Sequence:	APARSPSPST QPWEHVNAIQ EARRLLNLSR DTAEMNETV EVISEMFDLQ EPTCLQTRLE LYKQGLRGSL TKLKGPLTMM ASHYKQHCPP TPETSCATQI ITFESFKENL KDFLLVIPFD CWEPVQETRH HHHHH
Specificity:	Chromosomal location:5q31.1
Characteristics:	Length (aa):135
Purity:	> 98 % by SDS-PAGE
Endotoxin Level:	< 0.1 ng per µg of GM-CSF

### Target Details

Target:	GM-CSF (CSF2)
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## Target Details

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Alternative Name: GM-CSF ([CSF2 Products](#))

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Background: Granulocyte Macrophage Colony Stimulating Factor (GM-CSF), a 14.6 kDa protein consisting of 127 amino acid residues (Ala18-Glu144) and fused to a C-terminal His-tag (6x His), is a potent species specific stimulator of bone marrow cells and several other cell types. 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 or immune and inflammatory stimuli. Besides granulocyte-macrophage progenitors, GM-CSF is also a growth factor for erythroid, megakaryocyte and eosinophil progenitors. On mature hematopoietic cells, GM-CSF is a survival factor for and activates the effector functions of granulocytes, monocytes/macrophages and eosinophils. GM-CSF has also been reported to have a functional role on non-hematopoietic 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. GM-CSF is species specific and human GM-CSF has no biological effects on mouse cells. GM-CSF exerts its biological effects through binding to specific cell surface receptors. The high affinity receptors required for human GM-CSF signal transduction have been shown to be heterodimers consisting of a GM-CSF-specific  $\alpha$  chain and a common  $\beta$  chain that is shared by the high-affinity receptors for IL-3 and IL-5.

Synonyms: CSF2, GMCSF

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Molecular Weight: ~15-18 kDa

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Gene ID: 1437

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NCBI Accession: [NM\\_000758](#), [NP\\_000749](#)

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Pathways: [JAK-STAT Signaling](#), [Cellular Response to Molecule of Bacterial Origin](#)

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## Application Details

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Application Notes: Measured in a cell proliferation assay using TF-1 human erythroleukemic cells [Kitamura T et al, J Cell Physiol, 1989]. The ED50 for this effect is typically <0.1 ng/mL corresponding to a specific activity of  $\geq 1 \times 10^7$  units/mg.

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Comment: Cytokines & Growth Factors

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Restrictions: For Research Use only

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## Handling

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Format:	Lyophilized
Reconstitution:	The lyophilized rh GM-CSF is soluble in water and most aqueous buffers and can be reconstituted in water to a concentration of 0.1 mg/mL. This solution can be diluted into other buffered solutions or stored at -20 °C for future use.
Buffer:	PBS
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	RT, 0 °C, -20 °C
Storage Comment:	The lyophilized powder though stable at room temperature, is best stored desiccated below 0°C. Reconstituted GM-CSF should be stored in working aliquots at -20°C.