

Human GM-CSF (glycosylated, His-Tag)

Synonyms: CSF2, GMCSF

PLEASE NOTE: ALWAYS CENTRIFUGE VIAL BEFORE OPENING

Size	Order #	Lot #	Expiry Date
5 µg	1450.952.005		
20 µg	1450.952.020		
50 µg	1450.952.050		

Please enquire for bulk quantities and other vial sizes

Description

Recombinant human Granulocyte Macrophage Colony Stimulating Factor (GM-CSF), a 14.5 kDa protein consisting of 127 amino acid residues (Ala18-Glu144), 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 α chain and a common β chain that is shared by the high-affinity receptors for IL-3 and IL-5.

- **Source** Insect cells
- **Purity** $\geq 98\%$ (SDS-PAGE, silver stained)

Biological Activity

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

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.

Amino Acid Sequence

APARSPSPST QPWEHVNAIQ EARRLLNLSR DTAEMNETV EWISEMFDLQ EPTCLQTRLE LYKQGLRGSL
TKLKGPLTMM ASHYKQHCPP TPETSCATQI ITFESFKENL KDFLLVIPFD CWEFVQETRH HHHHH

Usage: For research use only. Not for use in diagnostic or therapeutic procedures. Not for human use.

*The Buffer may vary depending on the Lot #. Please contact our technical support if you have specific requirements.

ORDERING
 Tel.: +49 40 43208448-0
 order@active-bioscience.de
 www.active-bioscience.de

TECHNICAL SUPPORT
 Tel.: +49 40 43208448-11
 support@active-bioscience.de

Active Bioscience GmbH
 Oberaltenallee 8
 D-22081 Hamburg
 HRB 98170 Amtsgericht Hamburg