

Recombinant Human Granulocyte-Macrophage Colony Stimulating Factor

#R00073

Size: 5 µg/100 µg/500 µg

Stability & Storage

Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.

- 1 month, 2 to 8 °C under sterile conditions after reconstitution.

- 3 months, -20 to -70 °C under sterile conditions after reconstitution.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

Granulocyte-Macrophage Colony Stimulating Factor (GM-CSF) is secreted 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 stimulation. It was initially characterized as a growth factor that can support the in vitro colony formation of granulocyte-macrophage progenitors and has functions of stimulates the growth and differentiation of hematopoietic precursor cells from various lineages. GM-CSF has also been reported to have a functional role on non-hematopoietic cells and can induce human endothelial cells to migrate and proliferate. Additionally, it can stimulate the proliferation of a number of tumor cell lines, including osteogenic sarcoma, carcinoma and adenocarcinoma cell lines. Human GM-CSF shares 54 % sequences identity with mouse GM-CSF, but has no biological effects across species. GM-CSF is used

as a medication to stimulate the production of white blood cells following chemotherapy and has also recently been evaluated in clinical trials for its potential as a vaccine adjuvant in HIV-infected patients.

AA Sequence

APARSPSPSTQPWEHVNAIQEARRLLNLSRDAAEM
NETVEVISEMFDLQEPTCLQTRLELYKQGLRGLTKL
KGPLTMMASHYKQHCPPTPETSCATQIITFESFKENL
KDFLLVIPFDCWEPVQE

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.

Product Specification

Synonyms	Granulocyte/Macrophage Colony-Stimulating Factor, CSF-2, MGI-1GM, Pluripoietin-α
Accession	P04141
GeneID	1437
Species	Human
Source	Escherichia coli.
Molecular Weight	Approximately 14.5 kDa, a single non-glycosylated polypeptide chain containing 127 amino acids.
Purity	> 98 % by SDS-PAGE and HPLC analyses.
Biological Activity	Fully biologically active when compared to standard. The ED ₅₀ as determined by a cell proliferation assay using human TF-1 cells is less than 0.1 ng/ml,

	corresponding to a specific activity of $> 1.0 \times 10^7$ IU/mg.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation	Lyophilized from a 0.2 μ m filtered concentrated solution in PBS, pH 7.4.
Endotoxin	Less than 1.0 EU/ μ g of rHuGM-CSF as determined by LAL method.
