

Granulocyte-Macrophage Colony-Stimulating Factor (GM-CSF), Human, GMP Grade



Cat. No. SR215-1000G

Size: 1 mg

Cat. No. SR215-0100G

Size: 100 µg

Description

Granulocyte-macrophage colony-stimulating factor (GM-CSF), also known as colony-stimulating factor 2 (CSF2), is a monomeric glycoprotein secreted by macrophages, T cells, mast cells, natural killer cells, endothelial cells, and fibroblasts that functions as a cytokine. GM-CSF also plays a role in embryonic development by functioning as an embryokine produced by the reproductive tract.

Expression System

Escherichia coli

Sequence

APARSPSPSTQPWEHVNAIQEARLLNLSRDTAAEMNETVEVISEMFDLQEP
TC LQTRLELYKQGLRGLTKLKGPLTMMASHYKQHCPTPETSCATQIITFESFKEN
LKDFLLVIPDFDCWEPVQE with polyhistidine tag at the N-terminus.

Species

Human

Tag

polyhistidine tag at the N-terminus

Endotoxin Level

<0.1 EU per 1 µg of the protein by the LAL method.

Activity

Measure by its ability to induce TF-1 cells proliferation.

The ED₅₀ for this effect is <80 pg/mL.

The specific activity of recombinant human GM-CSF is approximately >1 x 10⁷ IU/mg.

Purity

>98% as determined by SDS-PAGE. Ni-NTA chromatography

Formulation

The protein was lyophilized from a solution containing 1X PBS, pH 8.0.

Reconstitution

➤ Unopened ampoules can be stored at -20°C or -80°C.

➤ Need not spin the ampoule. Open the cap carefully, then dissolve the lyophilized protein with sterile water for a 100 µg/mL concentration or according to the product's Certificate of Analysis (CoA). (Note: Need not add carrier* to the initial reconstitution solution).

➤ Rinse the inner side of the ampoule gently and stand for at least 20 minutes at room temperature. (Important Note: Do Not Vortex!)

➤ Use the reconstituted solution immediately or store it by distributing it to aliquots and store at -20 °C. (Important Note: Avoid repeated freeze-thaw cycles)

➤ We recommend diluting the solution to working concentration by using buffers or medium containing a carrier*. (Important Note: Do not dilute the working solution with water, which may cause protein degradation.)

*Carriers: 0.1% BSA or 5% HSA or 10% FBS.

Storage

Lyophilized protein should be stored at -20°C.

This product is stable for one year upon receipt, when handled and stored as instructed.

Upon reconstitution, protein aliquots should be stored at -20°C or -80°C.

Avoid repeated freeze/thaw cycles.

Note

Please use within one month after protein reconstitution.

Specification

The recombinant proteins are manufactured in ISO 13485:2016 and GMP-certified facility. The processes include:

➤ Testing and traceability of raw material

➤ Records of the maintenance and equipment calibration

➤ Personnel training records

➤ Batch-to-batch consistency

➤ Documentation of QA control and process changes

➤ Manufactured and tested under an ISO 13485:2016 certified quality management system

➤ Stability monitors of product shelf-life

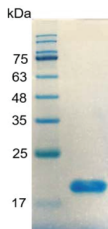
Reference

1. Becher B. et al. (2016) Immunity. 45,5: 963-973.

2. Shi Y. et al. (2006) Cell research. 16,2: 126-33.

3. Hamilton JA. (2015) Expert Rev Clin Immunol. 11,4: 457-65.

4. Hamilton JA, Anderson GP. (2004) Growth Factors. 22,4: 225-31.



SDS-PAGE analysis of recombinant human GM-CSF

Related Ordering Information

Cat. No.	Description	Size
CC103-0500	DMEM, High Glucose	500 ml
CC109-0500	RPMI 1640	500 ml
CC113-0500	DMEM/F-12	500 ml
PC203-0600	60mm Tissue Culture Dish, with Gripping Ring	600 ea
PC273-0100	75T Flask, Plug Seal Cap	100 ea

Caution

- During operation, always wear a lab coat, disposable gloves, and protective equipment.
- Research Use Only. Not intended for any animal or human therapeutic or diagnostic uses.