Cytokines

**Mouse Recombinant GM-CSF (CHO-expressed)**

Granulocyte-macrophage colony-stimulating factor

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<th>10 μg</th>
<th>50 μg</th>
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**Product Description**

Granulocyte-macrophage colony-stimulating factor (GM-CSF) promotes the proliferation and differentiation of hematopoietic progenitor cells and the generation of neutrophils, eosinophils, and macrophages. In synergy with other cytokines such as stem cell factor, IL-3, erythropoietin, and thrombopoietin, it also stimulates erythroid and megakaryocyte progenitor cells (Barreda et al.). GM-CSF is produced by multiple cell types, including stromal cells, Paneth cells, macrophages, dendritic cells (DCs), endothelial cells, smooth muscle cells, fibroblasts, chondrocytes, and Th1 and Th17 cells (Francisco-Cruz et al.). The receptor for GM-CSF (GM-CSFR) is composed of two subunits: the cytokine-specific α subunit (GMRα; CD116) and the common subunit βc (CD131) shared with IL-3 and IL-5 receptors (Broughton et al.). GM-CSFR is expressed on hematopoietic cells, including progenitor cells and immune cells, as well as non-hematopoietic cells. GM-CSF is able to stimulate the development of DCs that ingest, process, and present antigens to the immune system (Francisco-Cruz et al.).

**Product Information**

- **Alternative Names:** Colony-stimulating factor, CSF, Csf2, Granulocyte-macrophage colony-stimulating factor
- **Accession Number:** Q14AD9
- **Amino Acid Sequence:** APTRSPITVT RPWKHVEAIK EALNLDDMP VTLNEEVEV V SNEFSFKKL TCQVRLKIFE QGLRGNFTKL KGA LNMT SYQTYCPPTPE TDCETQVTTY AD FIDSLKTF LMTIPFECKK PVQK
- **Predicted Molecular Mass:** 14.2 kDa
- **Species:** Mouse
- **Cross Reactivity:** Reported to be species-specific
- **Formulation:** Lyophilized after dialysis against phosphate-buffered saline.
- **Source:** CHO

**Specifications**

- **Activity:** The specific activity is ≥ 2.0 x 10^7 units/mg (EC50 ≤ 50 pg/mL) as determined by a cell proliferation assay using FDC-P1 cells.
- **Purity:** ≥ 95%
- **Endotoxin Level:** Measured by kinetic Limulus amebocyte lysate (LAL) analysis and is ≤ 0.2 EU/μg protein.

**Preparation and Storage**

- **Storage:** Store at -80°C.
- **Stability:** Stable as supplied for 12 months from date of receipt.
- **Preparation:** Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. As a general guide, do not store at 2 - 8°C for more than 1 week or at -20°C for more than 2 months. Avoid repeated freeze-thaw cycles.
(A) The biological activity of Mouse Recombinant GM-CSF (CHO-expressed) was tested by its ability to promote the proliferation of FDC-P1 cells. Cell proliferation was measured using a fluorometric assay method. The EC50 is defined as the effective concentration of the growth factor at which cell proliferation is at 50% of maximum. The EC50 in the example above is less than 50 pg/mL.

(B) 2 μg of Mouse Recombinant GM-CSF (CHO-expressed) was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Mouse Recombinant GM-CSF (CHO-expressed) has a predicted molecular mass of 14.2 kDa.

Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/cytokines or contact us at techsupport@stemcell.com.

References

