

Granulocyte-Macrophage Colony-Stimulating Factor (GM-CSF)

CATALOG NUMBER: GM-CSF-010P, 10 µg

Introduction	<p>Granulocyte-macrophage colony-stimulating factor (GM-CSF) is a protein secreted by macrophages, T cells, mast cells, NK cells, endothelial cells and fibroblasts.</p> <p>GM-CSF is a cytokine that functions as a white blood cell growth factor. GM-CSF stimulates stem cells to produce granulocytes (neutrophils, eosinophils, and basophils) and monocytes. Monocytes exit the circulation and migrate into tissue, whereupon they mature into macrophages and dendritic cells. Thus, it is part of the immune/inflammatory cascade, by which activation of a small number of macrophages can rapidly lead to an increase in their numbers, a process crucial for fighting infection. The active form of the protein is found extracellularly as a homodimer.</p> <p>GM-CSF is used as a medication to stimulate the production of white blood cells following chemotherapy. GM-CSF has also recently been evaluated in clinical trials for its potential as a vaccine adjuvant in HIV-infected patients.</p>
Description	<p>Recombinant human GM-CSF produced in <i>E.coli</i> is a single, non-glycosylated, polypeptide chain containing 127 amino acids, two pairs of disulfide bonds and having a molecular mass of approximately 14.5kD.</p>
Source	<p><i>E. coli</i></p>
Applications	<p>Cell culture (produced in GMP facility)</p>
Purity	<p>≥ 97% purity (by SDS PAGE and HPLC)</p>
Endotoxin Level	<p>≤1 EU/mg, determined by the LAL method</p>
Biological Activity	<p>Measured in a cell proliferation assay using the factor-dependent cell line, TF-1, the specific activity shall be not less than 1×10^7 IU/mg.</p>
Formulation	<p>Lyophilized from a 0.2µm filtered solution in 10mM Phosphate Buffer</p> <p>Reconstitute with double distilled water at a concentration of no less than 1 µg/ml with 0.1% human serum albumin (A highly purified plant-derived human serum albumin is strongly suggested to be used, Cat# HAS-1r) or bovine serum albumin as a stock.</p>
Storage	<p>Stable for 6-months from the date of shipment when kept at -20 °C or -70 °C. Upon reconstitution, it can be stored at 4 °C for at least one month or -20 °C for at least three months. Avoid repeated freeze-thaw cycles.</p>
Usage	<p>This product is produced for LABORATORY RESEARCH USE ONLY. For other applications, such as cGMP quality GM-CSF, please contact us by email.</p>