

# Recombinant human granulocyte macrophage colony-stimulating factor (GM-CSF).

## Animal and Endotoxin free

CATALOGUE NUMBER: AMS-395      AVAILABLE SIZES: 10µg, 50µg, 100µg, 1000µg

### DESCRIPTION

Granulocyte macrophage colony-stimulating factor (GM-CSF) is a hematopoietic growth factor produced by various cell types such as T and B cells, macrophages, endothelial cells and fibroblasts, in response to cytokine or inflammatory stimuli. GM-CSF stimulates the development of granulocytes and macrophages, and the proliferation and development of erythroid, megakaryocyte and eosinophil progenitors. It also enhances functional activity of mature hematopoietic cells. GM-CSF is of great clinical value in reconstitution of the hematopoietic system following cancer therapy or bone marrow transplantation.

### SOURCE

Recombinant human GM-CSF is produced in rice suspension cells (*Oryza sativa* L. cv. Dongjin).

### FORMULATION

Sterile filtered through a 0,2 µm filter. Lyophilized from PBS, pH 7.2

### PURITY

Greater than 95% by SDS-PAGE gel analysis.

### RECONSTITUTION

Note: Always centrifuge the vial before opening. It is recommended to reconstitute the lyophilized protein in sterile water to a concentration of no less than 100 µg/ml. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

### STABILITY

The lyophilized protein, though stable at room temperature for few weeks, is best stored at -20°C. Reconstituted protein should be used immediately or stored in working aliquots at -20°C. Avoid repeated freeze-thaw cycles.

### BIOLOGICAL ACTIVITY

Each batch of growth factor is tested for bioactivity and verified to have comparable activity to a commercial source. Bioactivity of recombinant human GM-CSF is measured by its dose-dependent effect on the proliferation of TF-1 cells. The ED50 for this effect is typically below 0.2 ng/ml corresponding to specific activity of > 5 x 10<sup>6</sup> U/mg. We recommend that the optimal concentration for each specific application be determined by an initial dose-response assay.

### ENDOTOXIN LEVEL

Endotoxin level is less than 0.005ng per µg of product (0.05EU/µg) as measured by LAL assay.

### MOLECULAR WEIGHT

Recombinant human GM-CSF contains 127 amino acids in protein and no amino acid in tag. MW is 14kDa without glycosylation and around 26kDa with glycosylation in rice.