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GM-CSF Human Recombinant, *Pichia* GROWTH FACTOR

Catalog Number: PRP-222
Quantity: 2 micrograms, 10 micrograms, 1 milligram
Format: Sterile-filtered lyophilized powder
Host: *Pichia pastoris*

Background:

Granulocyte macrophage colony-stimulating factor (GM-CSF) controls the production, differentiation, and function of granulocytes and macrophages. The active form of the protein is a homodimer. GM-CSF stimulates the growth and differentiation of hematopoietic precursor cells from various lineages, including granulocytes, macrophages, eosinophils, and erythrocytes.

Specificity and Preparation:

This protein is produced in yeast as a single glycosylated peptide chain of 127 amino acids with a molecular weight of 26-32 kDa. Recombinant GM-CSF differs from native human GM-CSF by an arginine to leucine substitution at amino acid 23. The carbohydrate moiety of the recombinant form may be different than that of the native protein. rGM-CSF is purified by proprietary chromatographic techniques. The first five amino acids have been sequenced and found to be APARS.

The protein was lyophilized from a 1 mg/ml solution containing 10 mM phosphate buffer pH 7.0 containing mannitol and sucrose as stabilizers. The purity is greater than 97% as determined by reverse-phase HPLC and SDS-PAGE. The ED50 is determined by stimulation of human TF-1 cells and is less than 0.183 ng/ml, corresponding to a specific activity of 5,500,000 IU/mg.

Usage and Storage:

It is recommended to reconstitute this protein in 18MΩ water at not less than 100 µg/ml. Upon reconstitution GM-CSF can be stored for 2-7 days at 4°C. For longer term storage keep the solution below -18°C. It is recommended to add a carrier protein such as HSA or BSA at 0.1% for long term storage. Avoid repeated freeze-thaw cycles. Gently spin down material before use; 5-10 seconds in a microfuge should be adequate.

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