GM-CSF Protein, Human (His)

Cat. No.:	HY-P7016C
Synonyms:	rHuGM-CSF; CSF-2; MGI-1GM; Pluripoietin-alpha; Molgramostin; Sargramostim
Species:	Human
Source:	E. coli
Accession:	P04141 (A18-E144)
Gene ID:	1437
Molecular Weight:	Approximately 16 kDa

PROPERTIES

AA Sequence	A P A R S P S P S T Q P W E H V N A I Q E A R R L L N L S R D T A A E M N E T V E V I S E M F D L Q E P T C L Q T R L E L Y K Q G L R G S L T K L K G P L T M M A S H Y K Q H C P P T P E T S C A T Q I I T F E S F K E N L K D F L L V I P F D C W E P V Q E
Biological Activity	Measured in a cell proliferation assay using TF□1 human erythroleukemic cells.The ED_{50} for this effect is 26.66-33.71 pg/mL, corresponding to a specific activity is 2.97×10^7-3.75×10^7 units/mg.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 50 mM Tris-HCL, 300 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Granulocyte-macrophage colony-stimulating factor (GM-CSF) is produced by a variety of cell types including T cells, macrophages, endothelial cells and fibroblasts upon receiving immune stimuli. It is an important hematopoietic growth factor and immune modulator. GM-CSF also has profound effects on the functional activities of various circulating leukocytes. GM-CSF stimulates multipotent progenitor cells depending on its concentration, the proliferation of macrophage progenitors at the lowest doses, followed by granulocyte, erythroid, eosinophil, megakaryocyte and

multipotent progenitors. It also stimulates the differentiation of myeloid leukemic cells and controls eosinophil function in some instances[1][2]. GM-CSF also enhances the functionality of mature cells, such as neutrophils. In neutrophils, GM-CSF potentiates degranulation, the release of oxygen and nitrogen radical ions, phagocytosis, and inhibits apoptosis[3]. GM-CSF inhibition in some animal

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