

Recombinant Human GM-CSF

Information

Gene ID	1437
Accession #	P04141
Alternate Names	Colony stimulating factor 2, CSF-2, GMCSF
Source	Human embryonic kidney cell, HEK293-derived human GM-CSF/CSF2 protein
Protein sequence	Ala18-Glu144
Tag	His, Strep
M.Wt	The protein has a calculated MW of 14.5 kDa. The protein migrates as 25 kDa \pm 3 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.
Appearance	Solution protein.
Stability & Storage	Avoid repeated freeze-thaw cycles. It is recommended that the protein be aliquoted for optimal storage. 12 months from date of receipt, -20 to -70 °C as supplied.
Concentration	0.2 mg/mL
Formulation	Dissolved in sterile PBS buffer.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. This solution can be diluted into other aqueous buffers.
Biological Activity	Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The EC50 for this effect is 6-30 pg/mL.
Shipping Condition	Shipping with dry ice.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Quality Control

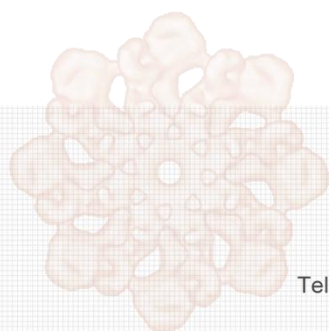
Purity	> 95 % by SDS-PAGE.
Endotoxin	Less than 0.1 EU/μg as determined by LAL method.

Description

Granulocyte-macrophage colony-stimulating factor (GM-CSF) is secreted by several different types of cells, including activated T cells, B cells, macrophages, mast cells, endothelial cells, and fibroblasts, in response to cytokines or immune and inflammatory stimuli. It was originally described as a growth factor that can support in vitro colony formation of granulocyte-macrophage progenitor cells and has the function of stimulating the growth and differentiation of hematopoietic precursor cells from different lineages. GM-CSF has also been reported to have functional effects on non-hematopoietic cells and can induce human endothelial cell migration and proliferation. In addition, it stimulates the proliferation of a variety of tumor cell lines, including osteoblastic sarcoma, carcinoma, and adenocarcinoma cell lines. Human GM-CSF and mouse GM-CSF have 54% sequence identity, but there is no biological effect between different species. GM-CSF is used as a drug to stimulate the production of white blood cells after chemotherapy and has recently been evaluated in clinical trials as a vaccine adjuvant in HIV-infected patients.

Reference

1. Wang JM, Chen ZG, Colotta F, et al. 1988. Behring Inst Mitt: 270-3.
2. 1989. N Engl J Med, 320: 253-4.
3. Nissen-Druey C. 1989. Nouv Rev Fr Hematol, 31: 99-101
4. Eager Rand Nemunaitis J. 2005. Mol Ther, 12: 18-27
5. Tran T, Fernandes DJ, Schuliga M, et al. 2005. Br J Pharmacol, 145: 123-31.



APEX BIO Technology

www.apexbt.com

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com

