

Datasheet for ABIN7318085 **GM-CSF Protein**



Overview

Quantity:	20 µg
Target:	GM-CSF (CSF2)
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Biological Activity:	Active

Product Details

Purpose:	Recombinant Human GM-CSF/CSF2 Protein (HEK293 Cells)(Active)
Sequence:	Met 1-Glu144
Characteristics:	A DNA sequence encoding human GMCSF (NP_000749.2) (Met1-Glu144) was expressed.
Purity:	> 90 % as determined by reducing SDS-PAGE.
Endotoxin Level:	< 1.0 EU per μ g as determined by the LAL method.
Biological Activity Comment:	Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The ED50 for
	this effect is typically 0.1-0.6 ng/ml.

Target Details

Target:	GM-CSF (CSF2)
Alternative Name:	GM-CSF/CSF2 (CSF2 Products)
Background:	Background: Granulocyte-macrophage colony-stimulating factor (GM-CSF) is one of an array of

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cytokines with pivotal roles in embryo implantation and subsequent development. Several cell
lineages in the reproductive tract and gestational tissues synthesise GM-CSF under direction by
ovarian steroid hormones and signalling agents originating in male seminal fluid and the
conceptus. The pre-implantation embryo, invading placental trophoblast cells and the abundant
populations of leukocytes controlling maternal immune tolerance are all subject to GM-CSF
regulation. GM-CSF stimulates the differentiation of hematopoietic progenitors to monocytes
and neutrophils, and reduces the risk for febrile neutropenia in cancer patients. GM-CSF also
has been shown to induce the differentiation of myeloid dendritic cells (DCs) that promote the
development of T-helper type 1 (cellular) immune responses in cognate T cells. The active form
of the protein is found extracellularly as a homodimer, and the encoding gene is localized to a
related gene cluster at chromosome region 5q31 which is known to be associated with 5q-
syndrome and acute myelogenous leukemia. As a part of the immune/inflammatory cascade,
GM-CSF promotes Th1 biased immune response, angiogenesis, allergic inflammation, and the
development of autoimmunity, and thus worthy of consideration for therapeutic target. GM-CSF
has been utilized in the clinical management of multiple disease processes. Most recently, GM-
CSF has been incorporated into the treatment of malignancies as a sole therapy, as well as a
vaccine adjuvant. While the benefits of GM-CSF in this arena have been promising, recent
reports have suggested the potential for GM-CSF to induce immune suppression and, thus,
negatively impact outcomes in the management of cancer patients. GM-CSF deficiency in
pregnancy adversely impacts fetal and placental development, as well as progeny viability and
growth after birth, highlighting this cytokine as a central maternal determinant of pregnancy
outcome with clinical relevance in human fertility.Immune
Checkpoint Immunotherapy Cancer Immunotherapy Targeted Therapy
Synonym: Granulocyte-Macrophage Colony-Stimulating Factor; GM-CSF; Colony-Stimulating
Factor; CSF; Molgramostin; Sargramostim; CSF2; GMCSF

Molecular Weight:	14.5 kDa
NCBI Accession:	NP_000749
Pathways:	JAK-STAT Signaling, Cellular Response to Molecule of Bacterial Origin
Application Details	
Restrictions:	For Research Use only

Handling

Format:

Lyophilized

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Handling	
Reconstitution:	Please refer to the printed manual for detailed information.
Buffer:	Lyophilized from sterile PBS, pH 7.4. 1. Normally 5 % - 8 % trehalose, mannitol and 0.01 % Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. 2. Please contact us for any concerns or special requirements. Please refer to the specific buffer information in the hard copy of CoA.
Storage:	4 °C,-20 °C,-80 °C
Storage Comment:	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

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