

## GM-CSF Recombinant Protein | CSF2 recombinant protein

GM-CSF Protein, Mouse, Recombinant (hFc Tag)

CATALOG #  
**AAA257487**

HOST  
**HEK293 Cells**

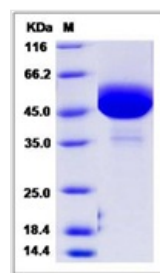
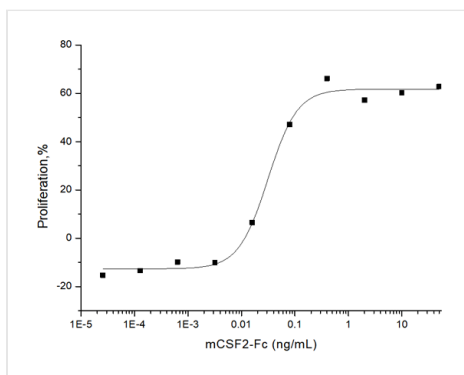
### PRODUCT SYNONYMS

GM-CSF; GM-CSF Protein; Mouse; Recombinant (hFc Tag); Mouse GM-CSF/CSF2 Protein (Fc Tag); colony stimulating factor 2 (granulocyte-macrophage); Csfgm Protein; Gm-CSf Protein; GMCSF Protein; MGI-IGM Protein; CSF2 recombinant protein

### PRODUCT SPECIFICATIONS

|                         |                                                                                                                                                                                                                                                                                                                                  |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                    | HEK293 Cells                                                                                                                                                                                                                                                                                                                     |
| Purity/Purification     | >95 % as determined by SDS-PAGE                                                                                                                                                                                                                                                                                                  |
| Form/Format             | Lyophilized from sterile PBS, pH7.4. Normally 5%-8% trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.                                                                                                                                                                                        |
| Sequence Positions      | 384aa                                                                                                                                                                                                                                                                                                                            |
| Sequence                | Ala18-Lys1 41                                                                                                                                                                                                                                                                                                                    |
| Species                 | Mouse                                                                                                                                                                                                                                                                                                                            |
| Tag                     | hFc                                                                                                                                                                                                                                                                                                                              |
| Endotoxin               | <1.0EU per ug of the protein as determined by the LAL method                                                                                                                                                                                                                                                                     |
| Predicted N Terminal    | Glu                                                                                                                                                                                                                                                                                                                              |
| Protein Construction    | JA DNA sequence encoding the mouse CSF2 (P01587) (Ala18-Lys141) was expressed with the fused Fc region of human IgG1 at the N-terminus                                                                                                                                                                                           |
| Activity                | Measured in a cell proliferation assay using FDC-P1 cells. The ED50 for this effect is typically 0.02-0.1ng/mL.                                                                                                                                                                                                                  |
| Preparation and Storage | Samples are stable for up to twelve months from date of receipt at -20 degree C to -80 degree C. Store it under sterile conditions at -20 degree C to -80 degree C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.<br>Shipping: They are shipped out with blue ice pack |

### IMAGES



Application Data

#### Application Data

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ADDITIONAL INFORMATION

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| Related Product Information for CSF2 recombinant protein | Granulocyte-macrophage colony-stimulating factor (GM-CSF) is one of an array of 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. |
| Product Categories/Family for CSF2 recombinant protein   | Cancer Drug Targets; IL17 signaling pathway                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| References                                               | Robertson SA. (2007) GM-CSF regulation of embryo development and pregnancy. Cytokine Growth Factor Rev. 18(3-4): 287-98.<br>Waller EK. (2007) The role of sargramostim (rhGM-CSF) as immunotherapy. Oncologist. 12 Suppl 2: 22-6.<br>Clive KS, et al. (2010) Use of GM-CSF as an adjuvant with cancer vaccines: beneficial or detrimental? Expert Rev Vaccines. 9(5): 519-25.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

NCBI AND UNIPROT INFORMATION

|                                  |                                                                                                                        |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------|
| NCBI GI #                        | 110625658                                                                                                              |
| NCBI GeneID                      | 12981                                                                                                                  |
| NCBI Accession #                 | NP_034099.2                                                                                                            |
| NCBI GenBank Nucleotide #        | NM_009969.4                                                                                                            |
| UniProt Accession #              | P01587                                                                                                                 |
| Molecular Weight                 | 16,091 Da                                                                                                              |
| NCBI Official Full Name          | granulocyte-macrophage colony-stimulating factor                                                                       |
| NCBI Official Synonym Full Names | colony stimulating factor 2 (granulocyte-macrophage)                                                                   |
| NCBI Official Symbol             | Csf2                                                                                                                   |
| NCBI Official Synonym Symbols    | Csfgm; GMCSF; Gm-CSF; MGI-IGM                                                                                          |
| NCBI Protein Information         | granulocyte-macrophage colony-stimulating factor; CSF; granulocyte-macrophage colony stimulating factor 2; put. GM-CSF |
| UniProt Protein Name             | Granulocyte-macrophage colony-stimulating factor                                                                       |
| UniProt Gene Name                | Csf2                                                                                                                   |
| UniProt Synonym Gene Names       | Csfgm; GM-CSF; CSF                                                                                                     |
| UniProt Entry Name               | CSF2_MOUSE                                                                                                             |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

