

Colony Stimulating Factor 2, Granulocyte Macrophage (GM-CSF) Active Protein | GM-CSF active protein

Active Colony Stimulating Factor 2, Granulocyte Macrophage (GM-CSF)

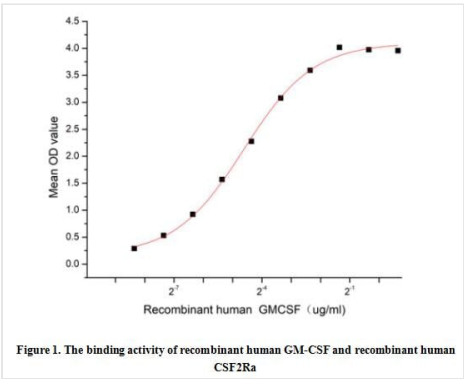
CATALOG # AAA161668	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Colony Stimulating Factor 2; Granulocyte Macrophage (GM-CSF); Active Colony Stimulating Factor 2; Granulocyte Macrophage; CSF2; GMCSF; Sargramostim; Molgramostin; Granulocyte-Macrophage Colony Stimulating Factor4; GM-CSF active protein

PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	Greater than 90% by SDS-PAGE
Form/Format	Freeze-dried powder; PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Sequence	Ala18~Glu1 44
Applicable Applications for GM-CSF active protein	Activity Assay, Cell Culture
Species	Human
Expression System	Prokaryotic expression
Tag	N-terminal His and GST Tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method)
Isoelectric Point	6
Research Area	Cytokine, Hematology
Preparation and Storage	Store at 2-8 degree C for one month, -80 degree C for 12 months

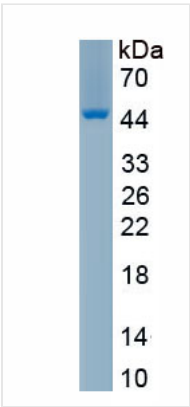


Bioactivity

Granulocyte-macrophage colony-stimulating factor (GM-CSF), also known as colony stimulating factor 2 (CSF2), is a monomeric glycoprotein secreted by macrophages, T cells, mast cells, natural killer cells, endothelial cells and fibroblasts that functions as a cytokine. GM-CSF is a monomeric glycoprotein that functions as a cytokine - it is a white blood cell growth factor. It also has some effects on mature cells of the immune system, such as inhibiting neutrophil migration and causing an alteration of the receptors expressed on the cells surface. GM-CSF signals via signal transducer and activator of transcription, STAT5. In macrophages, it has also been shown to signal via STAT3. Besides, Colony Stimulating Factor 2 Receptor Alpha (CSF2Ra) has been identified as an interactor of GM-CSF, thus a binding ELISA assay was conducted to detect the interaction of recombinant human GM-CSF and recombinant human CSF2Ra. Briefly, GM-CSF were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 ul were then transferred to CSF2Ra-coated microtiter wells and incubated for 1h at 37 degree C. Wells were washed with PBST and incubated for 1h with anti-GM-CSF pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 degree C. Finally, add 50 uL stop solution to the wells and read at 450 nm immediately. The binding activity of recombinant human GM-CSF and recombinant human CSF2Ra was shown in Figure 1, the EC50 for this effect is 0.04 ug/mL.

SDS-PAGE

Figure. SDS-PAGE



ADDITIONAL INFORMATION

Product Categories/Family for GM-CSF active protein	Active proteins
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NCBI AND UNIPROT INFORMATION

NCBI GI #	183364
NCBI GeneID	1437
UniProt Accession #	P04141; Q14CE8; Q2VPI8; Q8NFI6
Molecular Weight	16,295 Da
NCBI Official Full Name	GM-CSF
NCBI Official Synonym Full Names	colony stimulating factor 2 (granulocyte-macrophage)
NCBI Official Symbol	CSF2
NCBI Official Synonym Symbols	GMCSF
NCBI Protein Information	granulocyte-macrophage colony-stimulating factor; CSF; molgramostin; sargramostim
UniProt Protein Name	Granulocyte-macrophage colony-stimulating factor
UniProt Gene Name	CSF2
UniProt Synonym Gene Names	GMCSF; GM-CSF; CSF
UniProt Entry Name	CSF2_HUMAN

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.

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Online datasheet: <https://stage.aaabiotech.com/e-coli-active-protein/colony-stimulating-factor-2-granulocyte-macrophage-gm-csf/161668>