

Datasheet for ABIN2666817
GM-CSF Protein (AA 18-144)



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Overview

Quantity:	10 µg
Target:	GM-CSF (CSF2)
Protein Characteristics:	AA 18-144
Origin:	Rat
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Biological Activity:	Active
Application:	Flow Cytometry (FACS)

Product Details

Purity:	> 95 % , as determined by Coomassie stained SDS-PAGE.
Sterility:	0.22 µm filtered
Endotoxin Level:	Less than 0.01 ng per µg cytokine as determined by the LAL method.

Target Details

Target:	GM-CSF (CSF2)
Alternative Name:	GM-CSF (CSF2 Products)
Background:	Csf2 is the gene that encodes GM-CSF (granulocyte-macrophage colony stimulating factor), which is conserved in human, chimpanzee, Rhesus monkey, dog, cow, mouse, and rat. GM-CSF plays a key role in signaling emergency hemopoiesis (predominantly myelopoiesis) in response to infection, including the production of granulocytes and macrophages in the bone marrow

Target Details

and their maintenance, survival, and functional activation at sites of injury or insult. The receptor for GM-CSF is a heterodimer that comprises a major binding subunit (GMRalpha) and a major signaling subunit (beta-c). The beta-c chain is a common subunit for GM-CSF, IL-3, and IL-5 receptors. The receptor subunits are always coexpressed on the surface of leukocytes, with beta-c being expressed at lower levels than GMRalpha. Certain nonhemopoietic cell types also express the GM-CSF receptor. GM-CSF has anti-apoptotic functions on neurons and is neuroprotective in animal stroke models. It stimulates neuronal differentiation of adult neuronal stem cells (NSCs). GM-CSF has been identified as a factor involved in arteriogenesis after brain ischemia. In addition, GM-CSF induces arteriogenic growth of collateral vessels after occlusion of cardiac or peripheral arteries.

Molecular Weight:	The 128 amino acid recombinant protein has a predicted molecular mass of approximately 14.6 kDa. The DTT-reduced and non-reduced proteins migrate at approximately 17 and 14 kDa respectively by SDS-PAGE. The N-terminal amino acid is Met.
Pathways:	JAK-STAT Signaling , Cellular Response to Molecule of Bacterial Origin

Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Comment:	Biological activity: ED50 = 5 - 20 pg/ml, corresponding to a specific activity of 5 - 20 x 10 ⁷ units/mg, as determined by induction of FDC-P1 cell proliferation.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Reconstitution:	For maximum results, quick spin vial prior to opening. Stock solutions should be prepared at no less than 10 µg/mL in sterile buffer (PBS, HPBS, DPBS, and EBSS) containing carrier protein such as 1 % BSA or HSA. After dilution, the cytokine can be stored between 2 °C and 8 °C for one month or from -20 °C to -70 °C for up to 3 months.
Buffer:	0.22 µm filtered protein solution is in PBS, pH 7.2
Handling Advice:	Avoid repeated freeze/thaw cycles.
Storage:	-20 °C
Storage Comment:	Unopened vial can be stored between 2°C and 8°C for three months, at -20°C for six months, or at -70°C for one year.