

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse G-CSF in direct ELISAs.
Source	Recombinant Monoclonal Rat IgG ₁ Clone # 67604R
Purification	Protein A or G purified from cell culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant mouse G-CSF Accession # P09920
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide
*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.	

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

ELISA Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

G-CSF is a pleiotropic cytokine best known for its specific effects on the proliferation, differentiation, and activation of hematopoietic cells of the neutrophilic granulocyte lineage. It is produced mainly by monocytes and macrophages upon activation by endotoxin, TNF-α and IFN-γ. Other cell types including fibroblasts, endothelial cells, astrocytes and bone marrow stromal cells can also secrete G-CSF after LPS, IL-1, or TNF-α activation. In addition, various carcinoma cell lines and myeloblastic leukemia cells can express G-CSF constitutively.

The murine G-CSF cDNA encodes a 208 amino acid (aa) residue precursor protein containing a 30 aa residue signal peptide that is proteolytically cleaved to generate the 178 aa residue mature protein. Human G-CSF is 73% identical at the amino acid level to murine G-CSF and the two proteins show species cross-reactivity.

In vitro, G-CSF stimulates growth, differentiation and functions of cells from the neutrophil lineage. It also has blast cell growth factor activity and can synergize with IL-3 to shorten the G₀ period of early hematopoietic progenitors. Consistent with its *in vitro* functions, G-CSF has been found to play important roles in defense against infection, in inflammation and repair, and in the maintenance of steady state hematopoiesis. Recombinant human G-CSF has been approved for the amelioration of chemotherapy induced neutropenia as well as for severe chronic neutropenia following marrow transplant.

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