Mouse G-CSF Antibody

Monoclonal Rat IgG_1 Clone # 67604

Catalog Number: MAB414

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse G-CSF in ELISAs and Western blots. In ELISAs, does not cross-react with recombinant human (rh) G-CSF, rhCNTF, rmIL-6, rmLIF, or rmOSM.
Source	Monoclonal Rat IgG_1 Clone # 67604
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant mouse G-CSF Val31-Ala208 Accession # P09920
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.

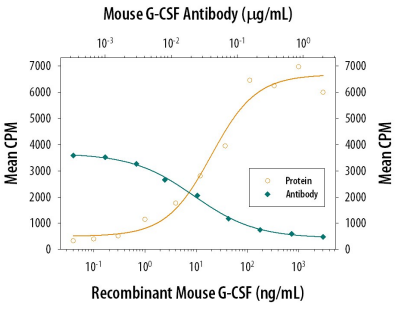
APPLICATIONS

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.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	Recombinant Mouse G-CSF (Catalog # 414-CS)
Mouse G-CSF Sandwich Immunoassay		**Reagent**
ELISA Capture	2-8 µg/mL	Mouse G-CSF Antibody (Catalog # MAB414)
ELISA Detection	0.1-0.4 µg/mL	Mouse G-CSF Biotinylated Antibody (Catalog # BAF414)
Standard		Recombinant Mouse G-CSF (Catalog # 414-CS)
Neutralization	Measured by its ability to neutralize G-CSF-induced proliferation in the NFS-60 mouse myeloid cells line. Shirafuji, N. *et al.* (1989) Exp. Hematol. **17**:116. The Neutralization Dose (ND_{50}) is typically 0.01-0.03 µg/mL in the presence of 0.125 ng/mL Recombinant Mouse G-CSF.	

DATA

Neutralization



Cell Proliferation Induced by G-CSF and Neutralization by Mouse G-CSF Antibody. Recombinant Mouse G-CSF (Catalog # Catalog # 414-CS) stimulates proliferation in the NFS-60 mouse myeloid cells line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Mouse G-CSF (0.125 ng/mL) is neutralized (green line) by increasing concentrations of Mouse G-CSF Monoclonal Antibody (Catalog # MAB414). The ND_{50} is typically 0.01-0.03 µg/mL.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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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 G_0 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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