**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, 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. See Certificate of Analysis for details.  
*Small pack size (SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

**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.

<table>
<thead>
<tr>
<th>Western Blot</th>
<th>Recommended Concentration</th>
<th>Sample</th>
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<tbody>
<tr>
<td>Mouse G-CSF Sandwich Immunoassay</td>
<td>1 μg/mL</td>
<td>Recombinant Mouse G-CSF (Catalog # 414-CS)</td>
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</table>

**Data**

Cell Proliferation Induced by G-CSF and Neutralization by Mouse G-CSF Antibody.  
Recombinant Mouse G-CSF (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 Neutralization Dose (ND50) is typically 0.01-0.03 μg/mL in the presence of 0.125 ng/mL Recombinant Mouse G-CSF.

**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.
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.