

**DESCRIPTION**

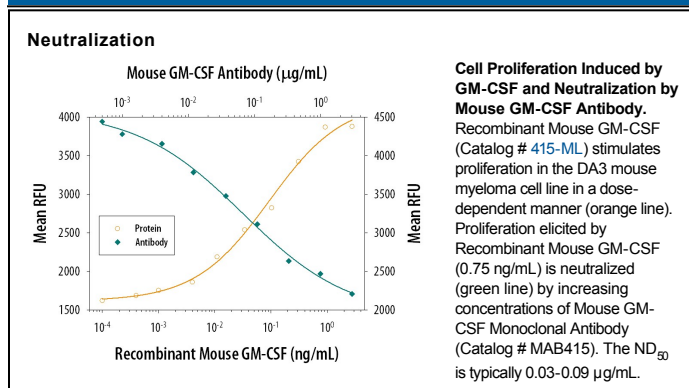
<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse GM-CSF in ELISAs and Western blots. In Western blots, this antibody does not cross-react with recombinant human GM-CSF.
<b>Source</b>	Monoclonal Rat IgG <sub>2A</sub> Clone # MP122E9
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Yeast derived recombinant mouse GM-CSF Accession # P01587
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the antibody by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied 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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	1 µg/mL	Recombinant Mouse GM-CSF (Catalog # <a href="#">415-ML</a> ) under non-reducing conditions only
<b>Mouse GM-CSF Sandwich Immunoassay</b>		<b>Reagent</b>
<b>ELISA Capture</b>	2-8 µg/mL	Mouse GM-CSF Antibody (Catalog # <a href="#">MAB415</a> )
<b>ELISA Detection Standard</b>	0.1-0.4 µg/mL	Mouse GM-CSF Biotinylated Antibody (Catalog # <a href="#">BAF415</a> ) Recombinant Mouse GM-CSF (Catalog # <a href="#">415-ML</a> )
<b>Neutralization</b>	Measured by its ability to neutralize GM-CSF-induced proliferation in the DA3 mouse myeloma cell line. Ihle, J.N. <i>et al.</i> (1984) <i>Advances in Viral Oncology</i> . In G. Klein (eds): Raven Press, New York, NY. 4:95. The Neutralization Dose (ND <sub>50</sub> ) is typically 0.03-0.09 µg/mL in the presence of 0.75 ng/mL Recombinant Mouse GM-CSF.	

**DATA**



**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**BACKGROUND**

GM-CSF was initially characterized as a factor that can support the *in vitro* colony formation of granulocyte-macrophage progenitors. It is also a growth factor for erythroid, megakaryocyte, and eosinophil progenitors. GM-CSF is produced by a number of different cell types (including T cells, B cells, macrophages, mast cells, endothelial cells, fibroblasts, and adipocytes) in response to cytokine or inflammatory stimuli. On mature hematopoietic cells, GM-CSF is a survival factor for and activates the effector functions of granulocytes, monocytes/macrophages, and eosinophils (1, 2). GM-CSF promotes a Th1 biased immune response, angiogenesis, allergic inflammation, and the development of autoimmunity (3-5). It shows clinical effectiveness in ameliorating chemotherapy-induced neutropenia, and GM-CSF transfected tumor cells are utilized as cancer vaccines (6, 7). The 22 kDa glycosylated GM-CSF, similar to IL-3 and IL-5, is a cytokine with a core of four bundled  $\alpha$ -helices (8-10). Mature mouse GM-CSF shares 49-54% amino acid sequence identity with canine, feline, human, and porcine GM-CSF and 69% with rat GM-CSF. GM-CSF exerts its biological effects through a heterodimeric receptor complex composed of GM-CSF R $\alpha$ /CD116 and the signal transducing common  $\beta$  chain (CD131) which is also a component of the high-affinity receptors for IL-3 and IL-5 (11, 12). In addition, GM-CSF binds a naturally occurring soluble form of GM-CSF R $\alpha$  (13). The activity of GM-CSF is species specific between human and mouse. Mouse GM-CSF is only weakly active on rat cells, although rat GM-CSF is fully active on mouse cells (14, 15).

**References:**

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