Mouse GM-CSF Antibody

Polyclonal Goat IgG

Catalog Number: AB-415-NA

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse GM-CSF in direct ELISAs and Western blots. In direct ELISAs, less than 10% cross-reactivity with recombinant human GM-CSF and recombinant rat GM-CSF is observed, and less than 3% cross-reactivity with recombinant feline GM-CSF, recombinant porcine GM-CSF, and recombinant canine GM-CSF is observed.
Source	Polyclonal Goat IgG
Purification	Protein A or G purified
Immunogen	*E. coli*-derived recombinant mouse GM-CSF Ala18-Lys141 Accession # Q14AD9
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.

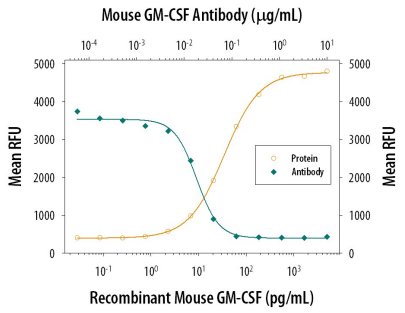
APPLICATIONS

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 GM-CSF (Catalog # 415-ML)
Neutralization	Measured by its ability to neutralize GM–CSF-induced proliferation in the DA3 mouse myeloma cell line. Ihle, J. N. *et al.* (1984) Advances in Viral Oncology. In G. Klein (eds): Raven Press, New York, NY. **4**:95. The Neutralization Dose (ND_{50}) is typically 0.01-0.05 µg/mL in the presence of 0.1 ng/mL Recombinant Mouse GM–CSF.	

DATA

Neutralization



Cell Proliferation Induced by GM-CSF and Neutralization by Mouse GM-CSF Antibody. Recombinant Mouse GM-CSF (Catalog # 415-ML) stimulates proliferation in the DA3 mouse myeloma cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Mouse GM-CSF (0.1 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Mouse GM-CSF Polyclonal Antibody (Catalog # AB-415-NA). The ND_{50} is typically 0.01-0.05 µg/mL.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 1 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
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.

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. GM-CSF promotes a Th1 biased immune response, angiogenesis, allergic inflammation, and the development of autoimmunity. It shows clinical effectiveness in ameliorating chemotherapy-induced neutropenia, and GM-CSF transfected tumor cells are utilized as cancer vaccines. The 22 kDa glycosylated GM-CSF, similar to IL-3 and IL-5, is a cytokine with a core of four bundled α-helices. 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 Rα/CD116 and the signal transducing common β chain (CD131) which is also a component of the high-affinity receptors for IL-3 and IL-5. In addition, GM-CSF binds a naturally occurring soluble form of GM-CSF Rα. 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.

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