Feline GM-CSF Antibody

Monoclonal Mouse IgG_1 Clone # 159307

Catalog Number: MAB9871

DESCRIPTION

Species Reactivity	Feline
Specificity	Detects feline GM-CSF in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with GM-CSF from human, mouse, rat, or pig is observed.
Source	Monoclonal Mouse IgG_1 Clone # 159307
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant feline GM-CSF Ala18-Lys144 (Met36Ile, Thr56Ala & Lys126Asn) Accession # AAC06041
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 as a 0.2 µm filtered solution in PBS.

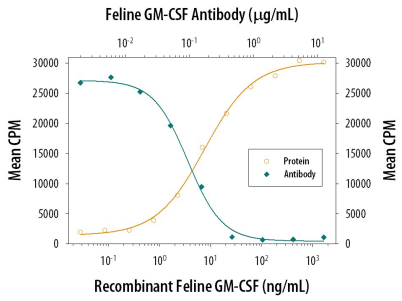
APPLICATIONS

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.*

Neutralization	Measured by its ability to neutralize GM–CSF-induced proliferation in the TF–1 human erythroleukemic cell line. Kitamura, T. *et al.* (1989) J. Cell Physiol. **140**:323. The Neutralization Dose (ND_{50}) is typically 0.1-0.4 µg/mL in the presence of 50 ng/mL Recombinant Feline GM–CSF.

DATA

Neutralization



Cell Proliferation Induced by GM-CSF and Neutralization by Feline GM-CSF Antibody. Recombinant Feline GM-CSF (Catalog # 987-FL) stimulates proliferation in the TF-1 human erythroleukemic cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Feline GM-CSF (50 ng/mL) is neutralized (green line) by increasing concentrations of Mouse Anti-Feline GM-CSF Monoclonal Antibody (Catalog # MAB9871). The ND_{50} is typically 0.1-0.4 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

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 α-helices (8-10). Mature feline GM-CSF shares 52%-56% amino acid sequence identity with mouse and rat GM-CSF and 67%-72% canine, human, and porcine 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 (11, 12). In addition, GM-CSF binds a naturally occurring soluble form of GM-CSF Rα (13). Feline and human GM-CSF show cross-species activity (14, 15).

References:

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