# Feline GM-CSF Antibody

Antigen Affinity-purified Polyclonal Goat IgG

Catalog Number: AF987

## DESCRIPTION

| | |
|---|---|
| **Species Reactivity** | Feline |
| **Specificity** | Detects feline GM-CSF in direct ELISAs and Western blots. In direct ELISAs, approximately 40% cross-reactivity with recombinant mouse GM-CSF, recombinant rat GM-CSF, and recombinant human GM-CSF is observed. |
| **Source** | Polyclonal Goat IgG |
| **Purification** | Antigen Affinity-purified |
| **Immunogen** | *E. coli*-derived recombinant feline GM-CSF |
| **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.<br>*Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS. |

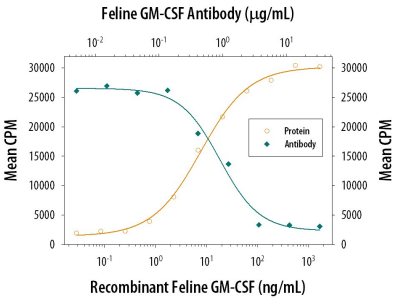
## APPLICATIONS

**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.*

| | Recommended Concentration | Sample |
|---|---|---|
| **Western Blot** | 0.1 µg/mL | Recombinant Feline GM-CSF (Catalog # 987-FL) |
| **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 0.5-2.0 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 # 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 concen-trations of Goat Anti-Feline GM-CSF Antigen Affinity-purified Polyclonal Antibody (Catalog # AF987). The $ND_{50}$is typically 0.5-2.0 µg/mL.

## PREPARATION AND STORAGE

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|---|---|
| **Reconstitution** | Reconstitute at 0.2 mg/mL in sterile PBS. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*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.**<br>• 12 months from date of receipt, -20 to -70 °C as supplied.<br>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>• 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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