Porcine GM-CSF Biotinylated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: BAF711

DESCRIPTION

Species Reactivity	Porcine
Specificity	Detects porcine GM-CSF in direct ELISAs and Western blots. In direct ELISAs, approximately 25% cross-reactivity with recombinant rat GM-CSF is observed, 15% cross-reactivity with recombinant human GM-CSF is observed, and 5% cross-reactivity with recombinant mouse GM-CSF is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant porcine GM-CSF Ala18-Lys144 Accession # Q29118
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. 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	0.1 µg/mL	Recombinant Porcine GM-CSF (Catalog # 711-PG)

PREPARATION AND STORAGE

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.
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 (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 porcine GM-CSF shares 61%-72% amino acid sequence identity with canine, feline, human, and rat GM-CSF and 53% with mouse 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). The activity of GM-CSF is species specific between human and mouse (14).

References:

1. Martinez-Moczygemba, M. and D.P. Huston (2003) J. Allergy Clin. Immunol. **112**:653.
2. Barreda, D.R. *et al.* (2004) Dev. Comp. Immunol. **28**:509.
3. Eksioglu, E.A. *et al.* (2007) Exp. Hematol. **35**:1163.
4. Cao, Y. (2007) J. Clin. Invest. **117**:2362.
5. Fleetwood, A.J. *et al.* (2005) Crit. Rev. Immunol. **25**:405.
6. Heuser, M. *et al.* (2007) Semin. Hematol. **44**:148.
7. Hege, K.M. *et al.* (2006) Int. Rev. Immunol. **25**:321.
8. Kaushansky, K. *et al.* (1992) Biochemistry **31**:1881.
9. Diederichs, K. *et al.* (1991) Science **254**:1779.
10. Inumaro, S. and H. Takamatsu (1995) Immunol. Cell Biol. **73**:474.
11. Onetto-Pothier, N. *et al.* (1990) Blood **75**:59.
12. Hayashida, K. *et al.* (1990) Proc. Natl. Acad. Sci. **87**:9655.
13. Pelley, J.L. *et al.* (2007) Exp. Hematol. **35**:1483.
14. Shanafelt, A.B. *et al.* (1991) J. Biol. Chem. **266**:13804.

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