Anti-Human G-CSF Functional Grade Purified

Catalog Number: 16-7338
Also known as: Granulocyte Colony-Stimulating Factor, CSF-3
RUO: For Research Use Only. Not for use in diagnostic procedures.

Product Information

Contents: Anti-Human G-CSF Functional Grade Purified
REF **Catalog Number:** 16-7338
Clone: 4A4RC
Concentration: 1 mg/mL
Host/Isotype: Mouse IgG1, kappa
Handling Conditions: Use in sterile environment.
Endotoxin: Less than 0.001 ng/ug antibody, as determined by the LAL assay.

Formulation: aqueous buffer, no sodium azide
Temperature Limitation: Store at 2-8°C.
LOT **Batch Code:** Refer to vial
Use By: Refer to vial

Description

This 4A4RC monoclonal antibody reacts with G-CSF (Granulocyte Colony-Stimulating Factor), a growth factor that stimulates the proliferation, differentiation, and mobilization of hematopoetic stem cells. It is expressed by monocytes, macrophages, and bone marrow stromal cells, and can also be induced in fibroblasts by IL-17A. Unlike GM-CSF and IL-3, which can stimulate cells of multiple lineages, G-CSF activity is limited to neutrophilic granulocytes. G-CSF is essential to the maintenance of neutrophil counts during homeostasis, and low basal levels of the protein are detectable in the serum of healthy individuals. Circulating levels become elevated rapidly upon infection, as G-CSF is also important for the activation and mobilization of mature neutrophils during the innate immune response. G-CSF therapy is commonly used to treat neutropenia following bone marrow transplant or chemotherapy.

Applications Reported

This 4A4RC monoclonal antibody inhibits the activity of human G-CSF.

Applications Tested

The ND50 of 4A4RC, as measured by the inhibition of M-NFS-60 cell proliferation, is less than or equal to 60 ng/mL in the presence of 0.25 ng/mL of Human G-CSF Recombinant Protein. Neutralization dose will vary depending on assay method, cytokine concentration, and cell type. This antibody should be carefully titrated for optimal performance in the assay of interest.

References

von Vietinghoff S, Ley K. Homeostatic regulation of blood neutrophil counts. J Immunol. 2008 Oct 15;181(8):5183-8.

Panopoulos AD, Watowich SS. Granulocyte colony-stimulating factor: molecular mechanisms of action during steady state and 'emergency' hematopoiesis. Cytokine. 2008 Jun; 42(3): 277-88.

Lieschke GJ, Grail D, Hodgson G, Metcalf D, Stanley E, Cheers C, Fowler KJ, Basu S, Zhan YF, Dunn AR. Mice lacking granulocyte colony-stimulating factor have chronic neutropenia, granulocyte and macrophage progenitor cell deficiency, and impaired neutrophil mobilization. Blood. 1994 Sep 15; 84(6): 1737-46.

Related Products

14-8523 Human G-CSF Recombinant Protein
16-4714 Mouse IgG1 K Isotype Control Functional Grade Purified (P3.6.2.8.1)
50-7351 Anti-Human G-CSF eFluor® 660 (8F5CSF)

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