

Product Information

Anti-Interleukin-4

produced in goat, IgG fraction of Antiserum

Catalog Number **I8784**

Product Description

Anti-Interleukin-4 (IL-4) is produced in goat using as immunogen recombinant human interleukin-4 (GeneID 3565) expressed in *Escherichia coli*. The antibody is purified using Protein G affinity chromatography.

Anti-Interleukin-4 recognizes human interleukin-4. Applications include neutralization and immunoblotting. This antibody shows no cross-reactivity with rmlL-4

Interleukin-4 (IL-4) is a multifunctional lymphokine, which interacts with cells of multilineages including T cells, B cells, thymocytes, hematopoietic cells, and fibroblasts.^{1, 2} IL-4 was first described as stimulating B-lymphocyte proliferation in the presence of anti-IgM antibodies.³ It was then shown that IL-4 could induce the expression of molecules of the class II MHC in resting B cells.^{4, 5} Synonyms for IL-4 include: B cell stimulatory factor-1 (BSF-1), T cell growth factor-2 (TCGF-2), and mast cell growth factor-2 (MCGF-2).⁶⁻⁸ Interleukin-4 is a complex glycoprotein released by a subset of activated T cells. The molecular weight of interleukin-4 occurring naturally is 12-20 kDa.

Reagent

Supplied lyophilized from a 0.2 µm filtered solution of phosphate buffered saline.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

To one vial of lyophilized powder, add 1 mL of 0.2 µm filtered phosphate buffered saline to produce a 1 mg/mL stock solution. If aseptic technique is used, no further filtration should be needed for use in cell culture environments.

Storage/Stability

Prior to reconstitution, store at -20 °C. The reconstituted product may be stored at 2-8 °C for up to one month. For extended storage, freeze in working aliquots at -20 °C. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended.

Neutralization

To measure the ability of the antibody to neutralize the bioactivity of rhIL-4 on human TF-1 cells, rhIL-4 was incubated with various concentrations of the antibody for 1 hour at 37° C in a 96 well plate. Following this preincubation period, TF-1 cells were added. The assay mixture in a total volume of 100 µL, containing antibody at the concentrations of 0.001 to 10.0 µg/mL, rhIL-4 at 0.5 ng/mL and cells at 1 X 10⁵ cells/mL, was incubated at 37° C for 48 hours in a humidified CO₂ incubator. ³H-thymidine was added during the final 4 hours of incubation. The cells were subsequently harvested onto glass fiber filters and the amount of ³H-thymidine incorporated into DNA was determined.

The Neutralization Dose₅₀ (ND₅₀) for this antibody is defined as that concentration of antibody required to yield one-half maximal inhibition of the cytokine activity on a responsive cell line, when that cytokine is present at a concentration just high enough to elicit a maximum response.

Product Profile

Immunoblotting: a working concentration of 1-2 µg/mL is recommended. The detection limit for recombinant human IL-4 is ~0.5 ng/lane under non-reducing and reducing conditions.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

Endotoxin: < 10 ng/μg antibody as determined by the LAL method.

References

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RC,SC,PHC 07/11-1