

Product Information

Anti-Interleukin-4

produced in goat, affinity isolated antibody

Product Number **I7776**

Product Description

Anti-Interleukin-4 is produced in goat using recombinant mouse interleukin-4 expressed in *Escherichia coli* as immunogen. The antibody is purified using mouse IL-4 affinity chromatography.

Anti-Interleukin-4 (IL-4) will neutralize the biological activity of recombinant mouse interleukin-4. It will not neutralize the activity of recombinant human interleukin-4. The antibody may also be used in immunoblotting. The antibody shows < 5% cross-reactivity with recombinant rat IL-4 and no cross-reactivity with recombinant human IL-4.

Interleukin-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 approximately 12-20 kDa.

Reagent

Lyophilized from a 0.2 µm filtered solution in phosphate buffered saline.

Storage/Stability

Prior to reconstitution, store at -20 °C. Reconstituted product may be stored at 2-8 °C for up to one month. For prolonged storage, freeze in working aliquots at -20 °C. Avoid repeated freezing and thawing.

Preparation Instructions

To one vial of lyophilized powder, add 1 ml of 0.2 µm-filtered phosphate buffered saline to produce a 0.1 mg/ml stock solution of antibody. If aseptic technique is used, no further filtration should be needed for use in cell culture environments.

Procedure

Anti-Mouse Interleukin-4 (IL-4) is tested for its ability to neutralize the bioactivity of recombinant mouse interleukin-4 in a cell proliferation assay using a IL-4 responsive murine T helper cell line, HT-2. In this bioassay, recombinant mouse IL-4 is preincubated with various dilutions of the antibody for 1 hour at 22 °C in a 96-well plate. HT-2 cells are added to each well. The total volume of 100 µl, containing antibody, recombinant mouse IL-4 at 7.5 ng/ml, and cells at 1 x 10⁵ cells/ml, is incubated for 48 hours at 37 °C in a 5% CO₂ humidified incubator and then pulsed for the last 4 hours with ³H-thymidine. Cells were harvested onto glass filters and the ³H-thymidine incorporation into DNA is measured.

The ND₅₀ is defined as the concentration of antibody resulting in a one-half maximal inhibition of bioactivity of rIL-4 that is present at a concentration just high enough to elicit a maximum response.

Product Profile

Bioactivity: ND₅₀ is approximately 0.1-0.3 µg/ml

Immunoblotting: a working antibody concentration of 0.1-0.2 µg/ml antibody detects recombinant mouse IL-4 at 2 ng/lane under non-reducing and reducing conditions.

Endotoxin: <10 ng/mg by LAL method

References

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