Monoclonal Anti-Interleukin-4, clone 3007
produced in mouse, purified immunoglobulin

Catalog Number I7034

Product Description
Anti-Interleukin-4 (IL-4) is produced in mouse from a hybridoma produced by a mouse immunized with purified, E. coli-derived rhIL-4 (GeneID 3565). The antibody is purified by Protein A affinity chromatography.

Anti-Interleukin-4 recognizes human interleukin-4. Applications include neutralization, immunoblotting, and immunohistochemistry. In immunoblotting, this antibody shows no cross-reactivity with rmIL-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. IL-4 was first described as stimulating B-lymphocyte proliferation in the presence of anti-IgM antibodies. It was then shown that IL-4 could induce the expression of molecules of the class II MHC in resting B cells. Interleukin-4 is a complex glycoprotein released by a subset of activated T cells. The molecular mass of interleukin-4 occurring naturally is 12-20 kDa.

Reagent
Lyophilized from 0.2 µm-filtered solution in phosphate buffered saline containing carbohydrates.

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the 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 PBS to produce a 0.5 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.

Product Profile
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 and 50.0 µg/mL, rhIL-4 at 0.5 ng/mL and cells at 1 x 10^5 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.

Immunoblotting: a working concentration of 1-2 µg/mL is recommended. The detection limit for recombinant human IL-4 is ~0.5 ng/lane and 25 ng/lane under non-reducing and reducing conditions, respectively.

Immunohistochemistry: a working concentration of 15 µg/mL is recommended for human tissues, and 5-15 µg/mL is recommended for human cells.

Note: In order to obtain the best results using various techniques and preparations, it is recommended to determine the optimal working dilutions by titration.

Endotoxin: <0.1 EU/µg antibody as determined by the LAL method.
References