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Product Information

Monoclonal Anti-Interleukin-2, clone 5334
produced in mouse, purified immunoglobulin

Catalog Number **I6784**

Product Description

Monoclonal Anti-Interleukin-2 (IL-2) (mouse IgG1 isotype) is purified from a hybridoma produced by the fusion of mouse myeloma cells and B cells from a mouse immunized with recombinant human Interleukin-2 (GeneID 3558) expressed and purified from *Escherichia coli*. The antibody is purified by Protein G affinity chromatography.

Monoclonal Anti-Interleukin-2 recognizes human Interleukin-2. Applications include immuno-histochemistry, flow cytometry, and neutralization. This antibody detects natural and recombinant human Interleukin-2. This antibody will not neutralize the biological activity of recombinant mouse Interleukin-2. When immobilized on a microplate, this antibody will capture recombinant and natural human IL-2.

Interleukin-2 is a T cell-derived cytokine also called T cell growth factor (TCGF). It stimulates the growth and differentiation of T cells, B cells, NK cells, LAK cells, monocytes, macrophages and oligodendrocytes.[1-3] It functions through the heterotrimeric IL2 receptor comprising α, β, and γ chains. There is 60% homology between human and mouse IL2.

Reagent

Supplied lyophilized from a 0.2 µm filtered solution of phosphate buffered saline with 5% trehalose.

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 PBS to produce a 0.5 mg/mL stock solution. If aseptic technique is used, no further filtration should be necessary for use in cell culture environments.

Storage/Stability

Prior to reconstitution, store at –20 °C. 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 recombinant human Interleukin-2 on CTLL-2 cells, recombinant human Interleukin-2 was incubated with various concentrations of the antibody for 1 hour at 37 °C in a 96 well plate. Following this preincubation period, CTLL-2 cells were added. The assay mixture in a total volume of 100 µL, containing antibody at 0.001-10 µg/mL, recombinant human Interleukin-2 at 2 ng/mL, and cells at 1 x 10^5 cells/mL, was incubated at 37 °C for 24 hours in a humidified CO_2 incubator. ^{3}H-thymidine was added during the final 4 hours of incubation. The cells were harvested onto glass fiber filters and the ^{3}H-thymidine incorporated into DNA was determined.

The Neutralization $Dose_{50}$ (ND_{50}) 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

Immunohistochemistry: a working concentration of 8-25 µg/mL is recommended to detect recombinant human Interleukin-2 in activated human peripheral blood leukocytes (PBLs).

Flow Cytometry: this antibody may be used for intracellular staining to detect human Interleukin-2. Cells must first be fixed and permeabilized using 4% paraformaldehyde and 0.1% saponin in phosphate buffered saline. Dilute this antibody to 25 μg/mL and add 10 μL of the diluted solution to 1-5 x 10^5 cells in a total reaction volume not exceeding 200 μL. Following a 30 minute incubation, cells should be washed with 0.1% saponin prior to addition of a secondary developing reagent. The binding of unlabeled monoclonal antibodies may be visualized by adding 10 μL of a 25 μg/mL solution of a secondary developing reagent such as goat Anti-mouse IgG conjugated to a fluorochrome. Cells should be washed for a final time in 0.1% saponin prior to flow cytometric analysis.

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

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

References

1. Smith, K., *Ann. Rev. Immunol.*, **2**, 319 (1984).
2. Smith, K., *Science*, **240**, 1169 (1988).
3. Kuziel, W., et al., The Cytokine Handbook, Thomson. A. (ed.), Academic Press, London, 83 (1991).

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