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Product Information

Monoclonal Anti-Interleukin-7 Rα/CD127
Clone 132215
produced in rat, purified immunoglobulin

Catalog Number **I8034**

Product Description

Anti-Interleukin-7 Rα/CD127 is produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a rat immunized with purified, NS0-derived, recombinant mouse Interleukin-7 Receptor α (rmIL-7 Rα) extracellular domain (GeneID 16197). The IgG fraction of the tissue culture supernatant was purified by Protein G affinity chromatography.

Anti-Interleukin-7 Rα/CD127 recognizes mouse interleukin-7. Applications include immunoblotting, ELISA and Flow Cytometry.

Interleukin-7 (IL-7) is a lymphoid cell growth factor that affects pre-B, pro-B, and early T cells.[1] It was previously known as pre-B cell growth factor and lymphopoietin-1.[2,3] IL-7 is a glycoprotein which promotes the proliferation of precursor B cells, thymocytes, T cell progenitors, and mature $CD4^+$ and $CD8^+$ T cells. The biological effects of IL-7 are mediated by the binding of IL-7 to the specific cell surface receptor. The functional high-affinity IL-7 receptor consists of an α chain and a γ chain.[4] Both IL-7 Rα and IL-7 Rγ are members of the hematopoietin receptor superfamily.

The ligand-binding subunit of the IL-7 R complex has been cloned from human and mouse.[5] IL-7 Rα cDNA encodes a precursor protein containing a signal peptide, an extracellular ligand binding domain, a transmembrane region, and a cytoplasmic region. Human and mouse IL-7 Rα show 64% amino acid sequence identity. IL-7 Rα transcripts have been observed in spleen, thymus, fetal liver, developing T cells, B cells, mature T cells, and bone marrow-derived macrophages.

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 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

Immunoblotting: a working concentration of 1-2 μg/mL is recommended. The detection limit for recombinant mouse IL-7 Rα is ~5 ng/lane under non-reducing and reducing conditions.

ELISA capture: a working concentration of 0.5-1.0 μg/mL is recommended as the coating concentration. The detection limit for recombinant mouse IL-7 Rα is ~20 ng/well.

Flow Cytometry; a working antibody concentration of 25 µg/mL added to 10 µL/1-2.5x10^5 cells in a total volume not exceeding 200 µL is recommended.

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. Henney, C. S., *Immunology Today*, **10**, 170 (1989).
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4. Hofmeister, R., et al., *Cytokine Growth Factor Rev*., **10**, 41-60 (1999).
5. Goodwin, R.G., et al., *Cell*, **60**, 941-951 (1990).

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