

Product Information

Monoclonal Anti-Interleukin-2 Soluble Receptor α , clone 22722

produced in mouse. purified immunoglobulin

Catalog Number **I5652**

Product Description

Monoclonal Anti-Interleukin-2 Soluble Receptor α (IL-2 sR α) (mouse IgG1 isotype) is derived from the 22722 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from a Balb/c mouse immunized with recombinant human IL-2 sR α , expressed in Sf21 cells. The antibody is purified from ascites fluid using protein A chromatography.

Monoclonal Anti-Human IL-2 sR α may be used to neutralize the biological activity mediated by IL-2 sR α . The antibody may also be used in immunohistochemistry and immunocytochemistry. By immunoblotting, the antibody show < 4% cross reactivity with recombinant human IL-2 R β , and no cross-reactivity with recombinant human IL-2 R γ IL-1 RI, IL-1 RII, IL-4 R, IL-5 R α , IL-6 R, IL-7 R, IL-9 R and IL-10 R.

The biological effects of IL-2R signals are much more complex than simply mediating T-cell growth. Depending on the set of conditions, IL-2R signals may also promote cell survival, effector function, and apoptosis. These sometimes contradictory effects underscore the fact that a diversity of intracellular signaling pathways are potentially activated by IL-2R. There are at least 3 components of the IL-2 receptor, IL-2 R α , IL-2 R β , and IL-2 R γ chains. The IL-2 R γ chain is shared by IL-2, IL-4 and IL-7.^{1,2} The low affinity α chain is a 55 kDa polypeptide. It is incapable of transmitting intracellular signals due to its short cytoplasmic tail. However, it can bind IL-2 rapidly to the cell membrane. The β chain (75 kDa) and the γ chain (64 kDa) form a complex that can bind IL-2 with high affinity and slow dissociation and can mediate signal transduction.³

Alternative names for IL-2R alpha include CD25, p55 and Tac antigen (for activated T-cell).⁴ Cells known to express α -chains include activated and resting CD4+ and CD8+ T cells,⁵⁻⁷ resting and activated B cells,⁸ immature thymocytes,⁹ endothelium,¹⁰ embryonic fibroblasts,¹¹ glioblastoma (oligodendroglial) cells,¹² activated monocytes,¹³ Kupffer cells, macrophages and Langerhans cells,^{14,15} and various tumor cells.¹⁶

Reagents

The product is supplied lyophilized from a 0.2 μ m filtered solution in phosphate buffered saline with 5% trehalose.

Endotoxin level is 0.1 EU per 1 μ g of the antibody as determined by the LAL method.

Preparation Instructions

To one vial of lyophilized powder, add 1 ml of 0.2 μ m-filtered PBS to produce a 0.5 mg/ml stock solution of antibody. 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. 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.

Procedure

Anti-Human IL-2 sR α is tested for its ability to neutralize human cell surface IL-2 R α mediated IL-2 bioactivity in a ³H-thymidine incorporation assay using human N-1186 cells. The ND₅₀ of the antibody is defined as the concentration of antibody resulting in a one-half maximal inhibition of the cell surface IL-2 R α mediated recombinant human IL-2 response on a responsive cell line.

Product Profile

Neutralization: a working concentration of 0.5-1 µg/ml of Monoclonal Anti-IL-2 sR α will block 50% of the bioactivity due to 1 ng/ml recombinant human IL-2 in a ³H-thymidine incorporation assay using human N-1186 cells.

Immunoblotting: a working concentration of ~1 µg/ml is determined using recombinant human IL-2 R α under non-reducing conditions only.

Immunohistochemistry: a working antibody concentration of 8-25 µg/ml is recommended in frozen human tissue sections.

Immunocytochemistry: a working antibody concentration of 8-25 µg/ml is recommended in human PBMCs.

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

References

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