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Product Information

Anti-Interleukin-2 Soluble Receptor α
produced in goat, affinity isolated antibody

Catalog Number **I6152**

Product Description

Anti-Interleukin-2 Soluble Receptor α (IL-2 sRα) is produced in goat using as immunogen a recombinant human IL-2 sRα, expressed in Sf21 cells. The antibody is purified using IL-2 Rα affinity chromatography.

Anti-Interleukin-2 Soluble Receptor α recognizes human IL-2 Rα by immunoblotting, flow cytometry, and neutralization. The antibody will neutralize the biological activity mediated by IL-2 sRα. By immunoblotting, the antibody shows <15% cross reactivity with recombinant human IL-2 sRγ, < 5% cross-reactivity with IL-6 sR, and < 1% cross-reactivity with human recombinant IL-1 sRII and IL-2 sRβ.

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 Rα, IL-2 βR, and IL-2 Rγ chains. The IL-2 Rγ 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 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-2Rα 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]

Reagent

Supplied lyophilized from a 0.2 μm filtered solution in phosphate buffered saline, pH 7.4, 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

Reconstitute in 0.2 μm-filtered phosphate buffered saline to produce a 0.2 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.

Product Profile

Neutralization: Anti-IL-2 sRα is tested for its ability to neutralize human cell surface IL-2 Rα mediated IL-2 bioactivity in a ^{3}H-thymidine incorporation assay using human N-1186 cells. The antibody will inhibit the IL-2-dependent proliferation of human N-1186 cells in the presence of
1 ng/mL of recombinant human Interleukin-2. The ND_{50} of the antibody is defined as the concentration of antibody resulting in a one-half maximal inhibition of the cell surface IL-2 Rα mediated recombinant human IL-2 response on a responsive cell line.

Immunoblotting: a working concentration of 0.1-0.2 μg/mL is recommended using recombinant human IL-2 Rα.

Flow Cytometry: a working concentration of 2-3 μg/10^6 cells is recommended using human whole blood lymphocytes.

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

References

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