ProductInformation

MONOCLONAL ANTI-HUMAN INTERLEUKIN-2 SOLUBLE RECEPTOR γ (IL-2 sRγ)
CLONE 38024.11
Purified Mouse Immunoglobulin

Product Number **I5902**

Product Description

Monoclonal Anti-Human Interleukin-2 Soluble Receptor gamma (IL-2 sRγ) (mouse IgG1 isotype) is derived from the 38024.11 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from a mouse immunized with a mouse cell line transfected with human IL-2 sRγ. The antibody is purified from ascites fluid using protein G chromatography.

Monoclonal Anti-Human IL-2 sRγ will be used to block the biological activity mediated by IL-2. By ELISA, the antibody does not cross-react with recombinant human IL-2 Rα, IL-2 Rβ, IL-1 RI, IL-1 RII, IL-4 R , IL-6 R, IL-7 R and IL-10 R.

Monoclonal Anti-Human IL-2 sRγ may be used for neutralization of the biological activity mediated by IL-2 Rγ and the detection of IL-2 Rγ by immunoblotting and ELISA.

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 kD 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 kD) and the γ chain (64 kD) form a complex that can bind IL-2 with high affinity and slow dissociation and can mediate signal transduction.
Cells known to express the gamma-chain include monocytes,[3,4] neutrophils,[5] thymocytes,[6] $CD4^+$ and $CD8^+$ T cells, NK cells and B cells.[7]

Reagents

The product is supplied lyophilized from a 0.2 µm filtered solution in phosphate buffered saline. Endotoxin level is < 10 ng per mg antibody as determined by the LAL method.

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 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 at least one month. For prolonged storage, freeze in working aliquots at –20°C. Avoid repeated freezing and thawing.

Procedure

Anti-Human IL-2 sRγ is tested for its ability to neutralize human cell surface IL-2 Rγ mediated IL-2 bioactivity in a ^{3}H-thymidine incorporation assay using MO7e cells.[8] 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 Rγ mediated recombinant human IL-2 response on a responsive cell line.

Product Profile

For neutralization, a working concentration of 2 - 6 µg/ml of Monoclonal Anti- IL-2 sRγ will block 50% of the bioactivity due to 10 ng/ml recombinant human IL-2 in a ^{3}H-thymidine incorporation assay using 10^5/ml MO7e cells.

For Indirect Immunoblotting, a working concentration of 1-2 µg/ml is determined using recombinant human IL-2 Rγ at 100 ng/lane under non-reducing conditions.

For Indirect ELISA, a working concentration of 0.5 - 1 µg/ml is determined to detect recombinant IL-2 Rγ to a limit of 3 ng/well.

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

References

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