

Product No. I-6271
Lot 096H6657

Monoclonal Anti-Mouse Interleukin-6 Receptor
IgG Fraction of Rat Ascites Fluid
Clone 15A7

Monoclonal Anti-Mouse IL-6 Receptor (IgG2b isotype) is purified from a rat hybridoma produced by the fusion of mouse myeloma cells and splenocytes from rat. Mouse IL-6 receptors expressed on the mouse plasmacytoma cell line OKT4 were used as the immunogen. The antibody is purified by Avid-AL affinity chromatography. Monoclonal Anti-IL-6 Receptor is provided as a liquid in phosphate buffered saline to which no preservatives are added.

Description

IL-6 is a multifunctional cytokine, produced by both lymphoid and nonlymphoid cells, which regulates immune responses, acute-phase reactions and haematopoiesis.¹ The IL-6 receptor consists of at least two molecules, one is an 80 kD IL-6 binding protein (α chain) and the other is a 130 kD signal transducer gp130 (β chain).² Mouse IL-6 receptor (α chain) (IL-6R α) consists of 460 amino acids with essentially the same structure as human IL-6R.³ The overall homology between mouse and human IL-6R α is 69% at the DNA level and 54% at the protein level.⁴ This antibody blocks IL-6 binding to the mouse IL-6 receptor. This antibody does not inhibit the growth of a GM-CSF dependent plasmacytoma.⁵

Performance

Anti-Mouse IL-6 Receptor is tested for its ability to neutralize the biological activity of recombinant, mouse IL-6 on T1165.85.2 cells⁵ by blocking the binding of IL-6 to cell surface receptors on mouse T1165.85.2 cells. The ND₅₀ of the antibody is defined as the concentration of antibody resulting in a one-half maximal inhibition of bioactivity of recombinant, mouse IL-6 which is present at a concentration just high enough to elicit a maximum response. In this bioassay,

recombinant, mouse IL-6 was mixed with various dilutions of the antibody and the antigen-antibody mixture was added to cultures of T1165.85.2 cells in a 96-well plate. The assay mixture was incubated at 37°C in a humidified CO₂ incubator. After incubation MTT was added to the 96-well plate and the absorbance read at 540 nm.

Product Information

Mass/vial: 0.25 mg
Immunogen: Mouse IL-6 receptors expressed on the mouse plasmacytoma cell line OKT4.
Isotype: Rat IgG2b
Purity: \geq 95% by agarose gel electrophoresis
Formulation: Frozen liquid of PBS without additives.
Bioactivity: ND₅₀ = 2.1 μ g/ml
RIA: 15 μ g/ml of antibody will block the binding of 0.75 ng/ml ¹²⁵I-labeled mouse IL-6 to IL-6 receptors on the 2F4 cell line.⁵
Sterility: 0.2 μ m-filtered, aseptic fill

Dilution and Use

Dilute the contents of the vial with 0.2 μ m-filtered PBS containing 0.1% BSA or cell culture medium containing 10% serum. If aseptic technique is used, no further filtration should be needed for use in cell culture environments.

Storage

Store undiluted product at -70°C or at 2-8°C for a maximum of 3 months. For extended storage, freeze in working aliquots at -70°C for a maximum of 1 year. Avoid repeated freezing and thawing.

References

1. Sehgal, P., et al., Ann. N.Y. Acad. Sci., **557**, 1 (1989)
2. Taga, T., et al., Cell, **58**, 573 (1989).
3. Sugita, T., et al., J. Exp. Med., **171**, 2001 (1990).
4. Hirano, T., The Cytokine Handbook, ed. Thomson, A., Academic Press, London, 145 (1994).
5. Coulie, et al., Current Topics Microbiol. Immunol., **166**, 43 (1990).