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Product Information

Anti-Interleukin-4 Soluble Receptor
produced in goat, IgG fraction of antiserum

Catalog Number **I6527**

Synonym: Anti- IL-4 sR

Product Description
Anti-Interleukin-4 Soluble Receptor is produced in goat using a recombinant human IL-4 RI, expressed in Sf21 cells as immunogen. The antibody is purified using protein G chromatography.

Anti-Interleukin-4 Soluble Receptor will block human cell surface IL-4 receptor mediated IL-4 bioactivity. By ELISA, the antibody shows no cross-reactivity with other cytokines tested.*

It may be used for neutralization of cell surface human IL-4 R mediated IL-4 bioactivity and the detection of IL-4 R by immunoblotting and ELISA.

Interleukin-4 (IL-4) is a type I cytokine produced by T cells, mast cells and basophils. It exhibits many biological and immunoregulatory functions on T cells, B cells, mast cells, monocytes, dendritic cells and fibroblasts.[1] These responses range from the regulation of helper T cell differentiation[2] and the production of IgE[3] to the regulation of the adhesive properties of endothelial cells via VCAM-1[4]. The IL-4 gene is located on chromosome 5 and displays several cell-specific regulatory sequences in its promoter, which explain its restricted secretion pattern to activated T cells and mast cells.

The IL-4 receptor is multimeric. Two different forms of IL-4 receptors have been defined. The classical is expressed in hematopoietic cells and consists of IL-4Rα (140 kDa) and IL-2Rγ(c) (65 kDa) chains. The alternative form is predominantly expressed on non-hematopoietic cells and consists of IL-4Rα and IL-13Rα (70-75 kDa) chains. It is able to transduce both IL-4 and IL-13 signals. Major signal transduction events of IL-4 are mediated through JAK/IRS-2 and STAT6 pathways.[5,6]

Reagents
Supplied lyophilized from a 0.2 μm filtered solution in phosphate buffered saline, pH 7.4, with 5% trehalose.

Preparation Instructions
To one vial of lyophilized powder, add 1 ml of 0.2 :m-filtered PBS to produce a 1mg/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-4 sR is tested for its ability to block human cell surface IL-4 R mediated bioactivity of recombinant human IL-4 in a ^{3}H-thymidine incorporation assay using TF-1 cells.[7] 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-4 R mediated recombinant human IL-4 response on a responsive cell line.

Product Profile
For neutralization, a working concentration of 5-10 :g/ml of Anti-IL-4 sR will block 50% of the bioactivity due to 0.2 ng/ml recombinant human IL-4 in a ^{3}H-thymidine incorporation assay using TF-1 cells.
For indirect ELISA, a working concentration of 0.5 – 1 μg/ml is determined to detect a limit of 0.3 ng/well of human recombinant IL-4 R.
For indirect immunoblotting, a working concentration of 1 -2 μg/ml is determined using 5 ng/lane under non-reducing and reducing conditions.

Endotoxin level: < 0.10 EU per 1 μg antibody as determined by the LAL method.

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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4. Schleimer, R.P., et al., *J Immunol*., 15, 1086 (1992).
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7. Kitamura, T., et al., *J. Cell Physiol*., 140, 323 (1989).

* rhANG, rhAR, rhβ-NGF, rhCNTF, rhEGF, rhEpo, rhFGF acidic, rhFGF basic, rhFGF-3, rhFGF-4, rhFGF-5, rhFGF-6, rhFGF-7, rhG-SCF, rhGM-CSF, rmGM-CSF, rhGROα, rhGROβ, rhGROγ, rhHB-EGF, rhHGF, rhIFN-γ, rhIGF-I, rhIGF-II, rhIL-1α, rmIL-1α, rhIL-1β, rmIL-1β, rhIL-1ra, rhIL-1 sRII, rhIL-2, rhIL-2 sRα, rhIL-2 sRβ, rhIL-3, rhIL-3 sRα, rmIL-3, rhIL-4, rmIL-4, rhIL-5, rhIL-5 sRα, rhIL-5 sRβ, rmIL-5, rhIL-6, rhIL-6 sR, rmIL-6, rhIL-7, rmIL-7, rhIL-8, rhIL-9, rmIL-9, rhIL-10, rmIL-10, rhIL-11, rhIL-12, rhIL-13, rmIL-13, rhLIF, rmLIF, rhM-CSF, rhMCP-1, rhMIP-1α, rmMIP-1α, rhMIP-1β, rmMIP-1β, rhOSM, rhPD-ECGF, hPDGF, pPDGF, rhPDGF-AA, rhPDGF-AB, rhPDGF-BB, rhPTN, rhRANTES, rhSCF, rmSCF, rhsgp130, rhSLPI, rhTGF-α, rhTGF-β1, pTGF-β1.2, pTGF-β2, rcTGF-β3, raTGF-β5, rhLAP (TGF-β1), rhLatent TGF-β1, rhTGF-β sRII, rhTNF-α, rmTNF-α, rhTNF-β, rhsTNF RI, rhsTNF RII, rhVEGF

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