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Product Information

Anti-Interleukin-4
produced in goat, affinity isolated antibody

Catalog Number **I7526**

Synonym: Anti-IL-4

Product Description
Anti-Interleukin-4 is produced in goat using as immunogen recombinant human IL-4 (rhIL-4) expressed in *Escherichia.coli*. The antibody is purified using human IL-4 affinity chromatography.

Anti-Interleukin-4 will neutralize the biological activity of rhIL-4. It will not neutralize the activity of rmIL-4. The antibody may also be used in immunoblotting, immunohistochemistry and ELISA. The antibody shows no cross-reactivity with rmIL-4 and rrIL-4. In addition, by ELISA, it shows no cross-reactivity with other cytokines tested.*

Interleukin-4 is a multifunctional lymphokine which interacts with cells of multilineages including T cells, B cells, thymocytes, hematopoietic cells and fibroblasts.[1-3] IL-4 was first described as stimulating B-lymphocyte proliferation in the presence of anti-IgM antibodies.[4] It was then shown that IL-4 could induce the expression of molecules of the class II MHC in resting B cells.[5-6] Synonyms for IL-4 include: B cell stimulatory factor-1 (BSF-1), T cell growth factor-2 (TCGF-2) and mast cell growth factor-2 (MCGF-2).[7-9] Interleukin-4 is a complex glycoprotein released by a subset of activated T cells. The molecular weight of IL-4 occurring naturally is 12-20 kDa.

Reagents
Lyophilized powder from PBS with 5% trehalose.

Endotoxin: < 0.1 EU per 1μg antibody by LAL method
Sterility: 0.2 μm-filtered, aseptic fill

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
Add 1 mL of 0.2 μm-filtered PBS to produce a 0.1 mg/mL stock solution. 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-IL-4 is tested for its ability to neutralize the bioactivity of rhIL-4 in a cell proliferation assay using a human factor-dependent cell line, TF-1.[10] The ND_{50} of the antibody is defined as the concentration of antibody resulting in a one-half maximal inhibition of bioactivity of rhIL-4 that is present at a concentration just high enough to elicit a maximum response. In this bioassay, rhIL-4 was preincubated with various dilutions of the antibody for 1 hour at 37 °C in a 96-well microtiter plate. TF-1 cells were added to each well. The total volume of 100 μL, containing antibody, rhIL-4 at 0.5 ng/mL and cells at 1 x 10^5 cells/ml, was incubated for 48 hours at 37 °C in a 5% CO_2 humidified incubator and then pulsed for the last 4 hours with ^{3}H-thymidine. Cells were harvested onto glass filters and the ^{3}H-thymidine incorporation into DNA was measured.

Product Profile
Bioactivity: ND_{50} = 0.02-0.1 μg/mL

Indirect ELISA: 0.5-1 μg/mL antibody detects 0.3 ng/well of rhIL-4.

Indirect Immunoblotting: 0.1-0.2 μg/mL antibody detects rhIL-2 at 2 ng/lane under non-reducing and reducing conditions.

Immunohistochemistry: 0.5-5 μg/mL may be used to detect IL-4 in cultured cells or tissue sections.

References

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* rhACT II, rhANG, rhAnnexin V, rhAR, rhB7-1, rhB7-2, rmB7-2, rhBTC, rhβ-NGF, rrβ-NGF, rhBDNF, rmC10, rhCD8, rhCD28, rrCINC-1, rhCNTF, rhCNTF sRα, rrCNTF, rrCNTF sRα, rhCTLA-4/Fc, rmCRG-2, rhEGF, rhENA-78, rhEotaxin, rmEotaxin, rhEPO, rhEPO R, rhFGF acidic, rhFGF basic, rhFGF-4, rhFGF-5, rhFGF-6, rhFGF-7, rmFGF-8b, rhFGF-9, rhFlk2/Flt3 ligand, rhFlt-1 R/Fc, rhG-CSF, rhG-CSF Rα, rmG-CSF, rhGDNF, rrGDNF, rhGM-CSF, rhGM-CSF Rα, rmGM-CSF, rhGROα, rhGROβ, rhGRO(, rhHB-EGF, rhHCC-1, rhHRG-α, rhHRG-β, rhHGF, rhI-309, rhIFN-(, rmIFN-(, rrIFN-(, rhIGF-I, rhIGF-I R, rhIGF-II, rhIL-1α, rhIL-1 RI, rhIL-1 RII, rmIL-1α, rhIL-1β, rmIL-1β, rrIL-1β, rhIL-1ra, rmIL-1ra, rhIL-2, rhIL-2 sRα, rhIL-2 sRβ, rhIL-2 sR(, rmIL-2, rrIL-2, rhIL-3, rhIL-3 sRα, rmIL-3, rhIL-4 sR, rmIL-4, rrIL-4, rhIL-5, rhIL-5 sRα, rmIL-5, rhIL-6, rhIL-6 sR, rmIL-6, rhIL-7, rhIL-7 R, rmIL-7, rhIL-8, rhIL-9, rhIL-9 sR, rmIL-9, rhIL-10, rhIL-10 sR, rmIL-10, rmIL-10 sR, rhIL-11, rmIL-11, rhIL-12, rmIL-12, rhIL-13, rmIL-13, rhIL-15, rhIL-17, rhIP-10, rmJE, rmKC, rhLIF, rhLIF R, rmLIF, rmLymphotactin, rmMARC, rhM-CSF, rmM-CSF, rhMCP-1, rhMCP-1 R, rhMCP-2, rhMCP-3, rhMidkine, rhMIF, rhMIG, rmMIG, rhMIP-1α, rmMIP-1α, rhMIP-1β, rmMIP-1β, rmMIP-2, rhMSP, rhNT-3, rhNT-4, rhOB, rmOB, rhOSM, rmOSM, rhPD-ECGF, hPDGF, pPDGF, rhPDGF-AA, rhPDGF-AB, rhPDGF-BB, rrPDGF-BB, rhPDGF Rα, rhPlGF, rhPTN, rhRANTES, rmRANTES, rhSCF, rmSCF, rhsgp130, rhSLPI, hTfR, rhTGF-α, rhTGF-β1, rhTGF-β2, rhTGF-β3, raTGF-β5, rhLAP (TGF-β1), rhLatent TGF-β1, rhTGF-βsRII, rhTGF-B sRIII, rhTNF-α, rmTNF-α, rrTNF-α, rhTNF-β, rhsTNF RI, rmsTNF RI, rhsTNF RII, rmsTNF RII, rhTPO, rmTPO, rhVEGF, rhVEGF/PlGF, rmVEGF, rmWNT-4

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