



Product Information

ANTI-MOUSE INTERLEUKIN -1 β (IL-1 β)

Developed in Goat
IgG Fraction of Antiserum

Product No. I 3767

Anti-Mouse Interleukin -1 β (IL-1 β) is developed in goat using recombinant mouse IL-1 β , expressed in *E. coli*, as immunogen. The product is purified by Protein G affinity chromatography. Goat Anti-Mouse IL-1 β is provided lyophilized from phosphate buffered saline, to which no preservatives are added.

Description

Interleukin-1 (IL-1), originally known as lymphocyte activating factor (LAF), activates T cells and lymphocytes, which then proliferate and secrete interleukin-2.¹ IL-1 is primarily released from stimulated macrophages and monocytes, but also is released from several other cell types,² and is thought to play a key role in inflammatory and immune responses.³ Other synonyms for IL-1 include: endogenous pyrogen (EP), mitogenic protein (MP), helper peak-1 (HP-1), T cell replacing factor III (TRF III or TRF_H), B cell activating factor (BAF) and B cell differentiation factor (BDF).⁴ The two closely related agents, interleukin-1 α (IL-1 α) and interleukin-1 β (IL-1 β) bind to the same cell surface receptor, elicit nearly identical biological responses and share 25% homology in their amino acid sequence.

Performance

Anti-Mouse IL-1 β is tested for its ability to neutralize the biological activity of rmIL-1 β on the mouse T-helper D10.G4.1 cell line.⁵ The ND₅₀ of the antibody is defined as the concentration of antibody resulting in a one-half maximal inhibition of bioactivity of rmIL-1 β that is present at a concentration just high enough to elicit a maximum response. In this bioassay, 50 pg/ml rmIL-1 β was mixed with various dilutions of antibody in a 96-well plate for 1 hour at 37 °C. After preincubation, D10.G4 cells and 1.25 μ g/ml concanavalin A were added to the antigen-antibody mixture. The assay mixture was incubated at 37 °C for 72 hours in a humidified CO₂ incubator and pulsed during the final 4 hours with ³H-thymidine. Cells were harvested onto glass filters and the ³H-thymidine incorporation into DNA was measured. The antibody will not neutralize the biological activity of rhIL-1 β . The antibody may also be

used in immunoblotting and ELISA. By ELISA and immunoblotting, the antibody shows 25% cross-reactivity with rhIL-1 β . In addition, the antibody shows no cross-reactivity with other cytokines tested.*

Product Information

Mass/vial: 1 mg
Immunogen: Recombinant, Mouse IL-1 β
Host Animal: Goat
Formulation: Lyophilized from PBS without additives.
Endotoxin: <10 ng/vial by LAL method
Bioactivity: ND₅₀ = 0.1 -2 μ g/ml
Direct ELISA: 0.5 - 1 μ g/ml antibody detects <0.15 ng/well of recombinant, mouse IL-1 β .
Indirect Immunoblotting: 1 - 2 μ g/ml antibody detects recombinant, mouse IL-1 β 0.5 ng/lane under reducing and non-reducing conditions.
Sterility: 0.2 μ m-filtered, aseptic fill

Reconstitution and Use

To one vial of lyophilized powder, add 1 ml of 0.2 μ m-filtered PBS to produce a 1 mg/ml stock solution of Anti-Mouse IL-1 β . If aseptic technique is used, no further filtration should be needed for use in cell culture environments.

Storage

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.

References

1. Gery, I., et al., *J. Exp. Med.*, **136**, 128 (1972).
2. Oppenheim, J., et al., *Immunol. Today*, **7**, 45 (1986).
3. Durum, S., et al., *Ann. Rev. Immunol.*, **3**, 263 (1985).
4. Aarden, L., et al., *J. Immunol.*, **123**, 2928 (1979).
5. Symons, J.A., et al., in "Lymphokines and Interferons, A Practical Approach", Clemens, M., et al., (eds.), IRL Press, Oxford, p. 272 (1987).

* rhANG, rhAR, rhBTC, rh β -NGF, rmC10, rhCNTF, rrCNTF, rhEGF, rhENA-78, rhEPO, rhFGFa, rhFGFb, rhFGF-3, rhFGF-4, rhFGF-5, rhFGF-6, rhFGF-7, rhG-CSF, rhGDNF, rhGM-CSF, rhGM-CSF R α , rmGM-CSF, rhGRO α , rhGRO β , rhGRO γ , rhHB-EGF, rhHGF, rhI-309, rhIFN- γ , rhIGF-I, rhIGF-I R, rhIGF-II, rhIL-1 α , rhIL-1 RI, rhIL-1 RII, rhIL-1 α , rhIL-1 ra, rhIL-2, rhIL-2 sR α , rhIL-2 sR β , rhIL-3, rhIL-3 sR α , rmIL-3, rhIL-4, rhIL-4 sR, rmIL-4, rhIL-5, rhIL-5 sR α , rhIL-5 sR β , rmIL-5, rhIL-6, rhIL-6 sR, rmIL-6, rhIL-7, rhIL-7 R, rmIL-7, rhIL-8, rhIL-9, rmIL-9, rhIL-10, rmIL-10, rhIL-11, rhIL-12, rhIL-13, rmIL-13, rhIP-10, rmJE, rhLIF, rhLIF R, rmLIF, rhM-CSF, rmM-CSF, rhMCP-1, rhMCP-1 R, rhMidkine, rhMIP-1 α , rmMIP-1 α , rhMIP-1 β , rmMIP-1 β , rhNT-4, rhOSM, rhPD-ECGF, hPDGF, pPDGF, rhPDGF-AA, rhPDGF-AB, rhPDGF-BB, rhPIGF, rhPTN, rhRANTES, rhSCF, rmSCF, rhsgp130, rhSLPI, hTfR, rhTGF- α , rhTGF- β 1, rhTGF- β 2, rhTGF- β 3, raTGF- β 5, rhLAP (TGF- β 1), rhLatent TGF- β 1, rhTGF- β sRII, rhTGF- β sRIII, rhTNF- α , rmTNF- α rhTNF- β , rhsTNF RI, rhsTNF RII, rhVEGF.

Pcs1/99

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.