Anti-cotton rat IL-2 Antibody

ORDERING INFORMATION

Catalog Number: AF579

Lot Number: FCF0209021

Size: 100 μg

Formulation: 0.2 μm filtered solution in PBS with 5% trehalose

Storage: -20° C

Reconstitution: sterile PBS

Specificity: cotton rat IL-2

Immunogen: *E. coli*-derived rcrIL-2

Ig Type: cotton rat IL-2 specific goat IgG

Applications: Neutralization of bioactivity
Western blot
Direct ELISA

Preparation
Produced in goats immunized with purified, *E. coli*-derived, recombinant cotton rat interleukin 2 (rcrIL-2). Cotton rat IL-2 specific IgG was purified by cotton rat IL-2 affinity chromatography.

Formulation
Lyophilized from a 0.2 μm filtered solution in phosphate-buffered saline (PBS) with 5% trehalose.

Endotoxin Level
< 0.1 EU per 1 μg of the antibody as determined by the LAL method.

Reconstitution
Reconstitute with sterile PBS. If 1 mL of PBS is used, the antibody concentration will be 0.1 mg/mL.

Storage
Lyophilized samples are stable for twelve months from date of receipt when stored at -20° C to -70° C. Upon reconstitution, the antibody can be stored at 2° - 8° C for 1 month without detectable loss of activity. Reconstituted antibody can also be aliquotted and stored frozen at -20° C to -70° C **in a manual defrost freezer** for six months without detectable loss of activity. **Avoid repeated freeze-thaw cycles.**months without detectable loss of activity. **Avoid repeated freeze-thaw cycles.**

Specificity
This antibody has been selected for its ability to neutralize rcrIL-2 bioactivity.

Neutralization of Cotton Rat IL-2 bioactivity
The exact concentration of antibody required to neutralize rcrIL-2 activity is dependent on the cytokine concentration, cell type, growth conditions and the type of activity studied. To provide a guideline, R&D Systems has determined the neutralization dose for this antibody under a specific set of conditions. The **Neutralization Dose$_{50}$ (ND$_{50}$)** for this antibody is defined as that concentration of antibody required to yield one-half maximal inhibition of the cytokine activity on a responsive cell line, when that cytokine is present at a concentration just high enough to elicit a maximum response.

The ND$_{50}$ for this lot of anti-cotton rat IL-2 antibody was determined to be approximately 0.1 - 0.4 μg/mL in the presence of 1.5 ng/mL of rcrIL-2. The IL-2-dependent ^{3}H-thymidine incorporation by murine CTLL-2 cells was used as the assay. The specific conditions are described in the figure legends.

Additional Applications
Western blot - This antibody can be used at 0.1 - 0.2 μg/mL with the appropriate secondary reagents to detect cotton rat IL-2. The detection limit for rcrIL-2 is approximately 20 ng/lane and 5 ng/lane under non-reducing and reducing conditions, respectively.

Direct ELISA - This antibody can be used at 0.5 - 1.0 μg/mL with the appropriate secondary reagents to detect cotton rat IL-2. The detection limit for rcrIL-2 is approximately 3 ng/well. In this format, this antibody shows approximately 20% cross-reactivity with rrIL-2 and rmIL-2 and less than 5% cross-reactivity with rhIL-2 and rpIL-2.

Optimal dilutions should be determined by each laboratory for each application.

R&D Systems, Inc.
1-800-343-7475

Figure 1

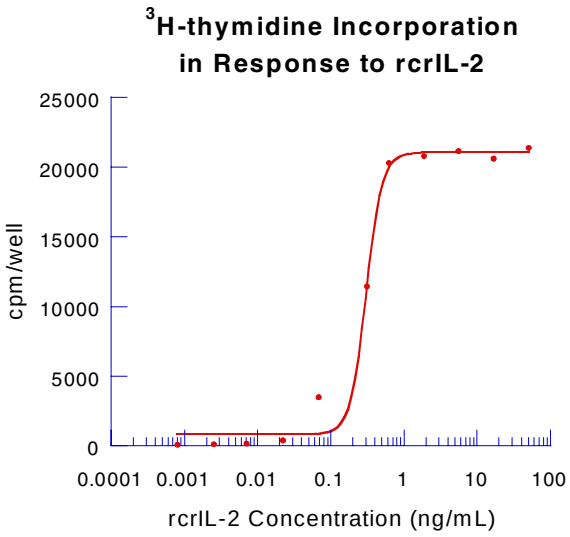

Figure 2

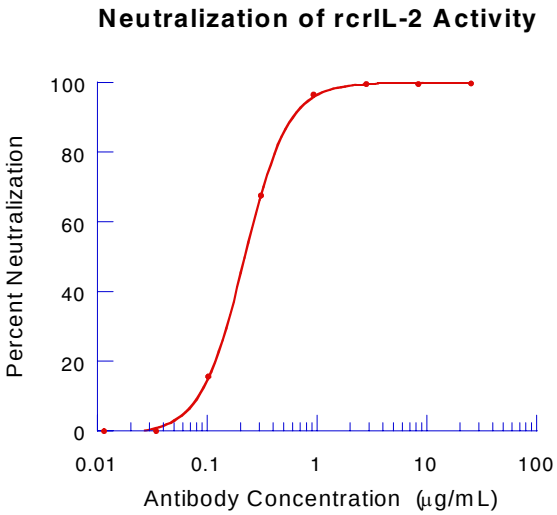

Figure 1
Cotton rat IL-2 stimulates the ^{3}H-thymidine incorporation by the IL-2-dependent murine cell-line CTLL-2 in a dose-dependent manner (Gearing, A.J.H. and C.B. Bird, 1987, in *Lymphokines and Interferons, a practical approach*, IRL Press, Clemens, M.J., Morris, A.G. and A.J.H. Gearing, eds. p.276). The ED_{50} for this effect is typically 0.15 - 0.6 ng/mL.

Figure 2
To measure the ability of the antibody to neutralize the bioactivity of rcrIL-2 on CTLL-2 cells, rcrIL-2 was incubated with various concentrations of the antibody for 1 hour at 37° C in a 96 well microtiter plate. Following this preincubation period, CTLL-2 cells were added. The assay mixture in a total volume of 100 µL, containing antibody at the concentrations indicated, rcrIL-2 at 1.5 ng/mL and the cells at 1 x 10^{5} cells/mL, was incubated at 37° C for 24 hours in a humidified CO_2 incubator. ^{3}H-thymidine was added during the final 4 hours of incubation. The cells were harvested onto glass fiber filters and the ^{3}H-thymidine incorporated into DNA was determined. The ND_{50} of the antibody is approximately 0.1 - 0.4 µg/mL.