Cotton Rat IL-2 Antibody

Monoclonal Mouse IgG_{2B} Clone # 144614

Catalog Number: MAB579

DESCRIPTION

Species Reactivity	Cotton Rat
Specificity	Detects cotton rat IL-2 in direct ELISAs and Western blots. In direct ELISAs and Western blots, 50-100% cross-reactivity with recombinant rat IL-2 is observed and no cross-reactivity with recombinant human IL-2, recombinant mouse (rm) IL-2, recombinant porcine IL-2, or rmIL-15 is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 144614
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant cotton rat IL-2 Ala21-Gln155 Accession # AF398549
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	Recombinant Cotton Rat IL-2 (Cys146Tyr) (Catalog # 579-R2)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Interleukin-2 (IL-2) is a O-glycosylated four α-helix bundle cytokine that has potent stimulatory activity for antigen-activated T cells. It is expressed by $CD4^+$ and $CD8^+$ T cells, γδ T cells, B cells, dendritic cells, and eosinophils (1-3). Mature cotton rat IL-2 shares 67%, 70% and 78% amino acid sequence identity with human, mouse and rat IL-2, respectively. The receptor for IL-2 consists of three subunits that are present on the cell surface in varying preformed complexes (4-6). The 55 kDa IL-2 Rα is specific for IL-2 and binds with low affinity. The 75 kDa IL-2 Rβ, which is also a component of the IL-15 receptor, binds IL-2 with intermediate affinity. The 64 kDa common gamma chain γc/IL-2 Rγ, which is shared with the receptors for IL-4, -7, -9, -15, and -21, does not independently interact with IL-2. Upon ligand binding, signal transduction is performed by both IL-2 Rβ and γc. IL-2 is best known for its autocrine and paracrine activity on T cells. It drives resting T cells to proliferate and induces IL-2 and IL-2 Rα synthesis (1, 2). It contributes to T cell homeostasis by promoting the Fas-induced death of naïve $CD4^+$ T cells but not activated $CD4^+$ memory lymphocytes (7). IL-2 plays a central role in the expansion and maintenance of regulatory T cells, although it inhibits the development of Th17 polarized cells (8-10). Thus, IL-2 may be a key cytokine in the natural suppression of autoimmunity (11, 12).

References:

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