

DESCRIPTION	
Species Reactivity	Mouse
Specificity	Detects mouse IL-2 in direct ELISAs.
Source	Monoclonal Rabbit IgG Clone # 1023D
Purification	Protein A or G purified from cell culture supernatant
Immunogen	<i>E. coli</i> -derived mouse IL-2 Ala21-Gln169 Accession # P04351
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.	
ELISA	This antibody functions as an ELISA capture antibody when paired with Goat Anti-Mouse IL-2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-402-NA). <i>This product is intended for assay development on various assay platforms requiring antibody pairs. We recommend the Mouse IL-2 DuoSet ELISA Kit (Catalog # DY402) for convenient development of a sandwich ELISA or the Mouse IL-2 Quantikine ELISA Kit (Catalog # M2000) for a complete optimized ELISA.</i>

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. <ul style="list-style-type: none"> • 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, $\gamma\delta$ T cells, B cells, dendritic cells, and eosinophils (1-3). Mature mouse IL-2 shares 56% and 73% aa sequence identity with human and rat IL-2, respectively. It shows strain-specific heterogeneity in an N-terminal region that contains a poly-glutamine stretch (4). Mouse and human IL-2 exhibit cross-species activity (5). The receptor for IL-2 consists of three subunits that are present on the cell surface in varying preformed complexes (6-8). The 55 kDa IL-2 R α is specific for IL-2 and binds with low affinity. The 75 kDa IL-2 R β , which is also a component of the IL-15 receptor, binds IL-2 with intermediate affinity. The 64 kDa common gamma chain γ /IL-2 R γ , 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 R β and γ . 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 R α 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 (9). IL-2 plays a central role in the expansion and maintenance of regulatory T cells, although it inhibits the development of Th17 polarized cells (10-12). Thus, IL-2 may be a key cytokine in the natural suppression of autoimmunity (13, 14).

References:

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