

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-2 R β in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) IL-2 R α , rh γ_c , rhIL-4 R, or rhIL-6 R is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 27302
Purification	Protein A or G purified from ascites
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human IL-2 R β Ala27-Asp239 Accession # NP_000869
Endotoxin Level	<0.10 EU per 1 μ g of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 μ m 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 μ m filtered solution in PBS.

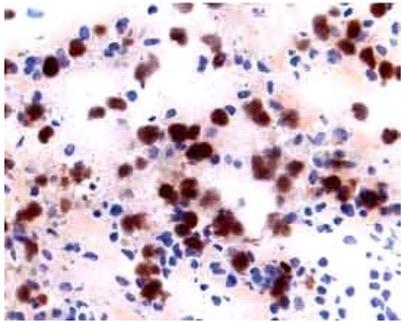
APPLICATIONS

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
Flow Cytometry	2.5 μ g/10 ⁶ cells	Human whole blood CD56 ⁺ natural killer cells
Immunohistochemistry	8-25 μ g/mL	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	
Neutralization	Measured by its ability to neutralize IL-2-induced proliferation in the MO7e human megakaryocytic leukemic cell line. Avanzi, G. <i>et al.</i> (1988) Br. J. Haematol. 69 :359. The Neutralization Dose (ND ₅₀) is typically 0.05-0.15 μ g/mL in the presence of 30 ng/mL Recombinant Human IL-2.	

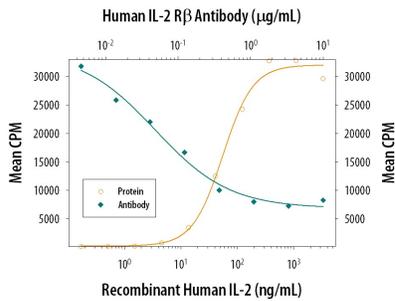
DATA

Immunohistochemistry



IL-2 R β in Human Lymph Node. IL-2 R β was detected in immersion fixed frozen sections of human lymph node using 15 μ g/mL Mouse Anti-Human IL-2 R β Monoclonal Antibody (Catalog # MAB224) overnight at 4 °C. Tissue was stained (red) and counterstained with hematoxylin (blue). View our protocol for [Chromogenic IHC Staining of Frozen Tissue Sections](#).

Neutralization



Cell Proliferation Induced by IL-2 and Neutralization by Human IL-2 R β Antibody. Recombinant Human IL-2 (Catalog # 202-IL) stimulates proliferation in the MO7e human megakaryocytic leukemic cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Human IL-2 (30 ng/mL) is neutralized (green line) by increasing concentrations of Mouse Anti-Human IL-2 R β Monoclonal Antibody (Catalog # MAB224). The ND₅₀ is typically 0.05-0.15 μ g/mL.

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

Functional IL-2 receptors can exist in two affinity states on cell surfaces, the high affinity complex consisting of heterotrimers of the α , β , and γ chains and the intermediate affinity complex comprising heterodimers of the β and γ chains. Individual β chains and α chains exhibit low affinity IL-2 binding, and the γ chain alone does not bind IL-2. In addition to their involvement in IL-2 mediated signal transduction, both the β chain and γ chain have been shown to be required for IL-15 mediated signaling. IL-2 R β is a member of the cytokine receptor superfamily. Human IL-2 R β cDNA encodes a 551 amino acid (aa) precursor Type I membrane protein with a 26 aa signal peptide, a 214 aa extracellular region, a 25 aa transmembrane region and a 286 aa cytoplasmic domain. A soluble IL-2 R β has been identified in the culture supernatants of a human lymphoid cell line, YT, that displays IL-2 R β . Soluble IL-2 R β binds IL-2 with low affinity and is not an effective IL-2 antagonist on cells displaying the high or intermediate affinity IL-2 signaling receptors. Nevertheless, soluble IL-2 R β binds IL-15 with sufficient affinity to neutralize IL-15 biological activities.