

## DESCRIPTION

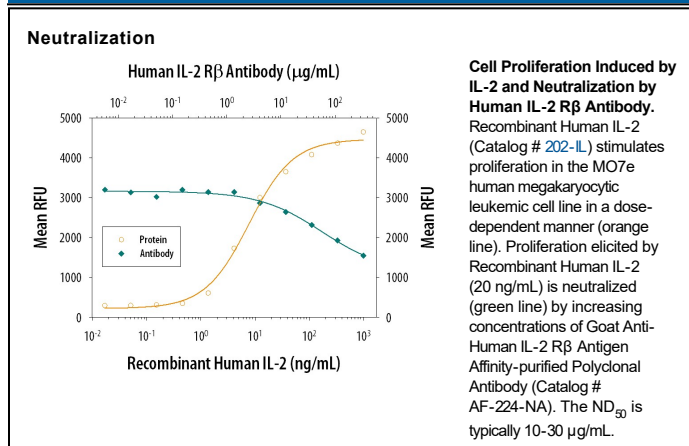
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human IL-2 R $\beta$ in direct ELISAs and Western blots. In direct ELISAs, less than 5% cross-reactivity with recombinant human (rh) IL-2 R $\alpha$ , recombinant mouse (rm) IL-2 R $\beta$ , rhIL-2 R $\gamma$ , and rhIL-15 R is observed. Is also able to block the cell surface of human IL-2 R $\beta$ mediated bioactivities induced by IL-2. For optimal neutralization of IL-2 biological activity on cells expressing the high affinity IL-2 receptors, the use of anti-IL-2 R $\alpha$ in conjunction with anti-IL-2 R $\beta$ antibodies is recommended.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human IL-2 R $\beta$ Ala27-Asp239 Accession # NP_000869
<b>Endotoxin Level</b>	<0.10 EU per 1 $\mu$ g of the antibody by the LAL method.
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ 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 $\mu$ 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
<b>Western Blot</b>	0.1 $\mu$ g/mL	Recombinant Human IL-2 R $\beta$ (Catalog # 224-2B)
<b>Neutralization</b>		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. <b>69</b> :359. The Neutralization Dose (ND <sub>50</sub> ) is typically 10-30 $\mu$ g/mL in the presence of 20 ng/mL Recombinant Human IL-2.

## DATA



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

Functional IL-2 receptors can exist in two affinity states on cell surfaces, the high affinity complex consisting of heterotrimers of the  $\alpha$ ,  $\beta$ , and  $\gamma$  chains, and the intermediate affinity complex comprising heterodimers of the  $\beta$  and  $\gamma$  chains. Individual  $\beta$  chains and  $\alpha$  chains exhibit low affinity IL-2 binding and the  $\gamma$  chain alone does not bind IL-2. In addition to their involvement in IL-2 mediated signal transduction, both the  $\beta$  chain and  $\gamma$  chain have been shown to be required for IL-15 mediated signaling.

IL-2 R $\beta$  is a member of the cytokine receptor superfamily. Human IL-2 R $\beta$  cDNA encodes a 551 amino acid residue precursor Type I membrane protein with a 26 residue signal peptide, a 214 residue extracellular region, a 25 residue transmembrane region and a 286 residue cytoplasmic domain. A soluble IL-2 R $\beta$  (IL-2 sR $\beta$ ) has been identified in the culture supernatants of a human lymphoid cell line, YT, that displays IL-2 R $\beta$ . At present, the function of IL-2 sR $\beta$  is unclear. Recombinant human IL-2 sR $\beta$  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, IL-2 sR $\beta$  binds IL-15 with sufficient affinity to neutralize IL-15 biological activities.