

DESCRIPTION

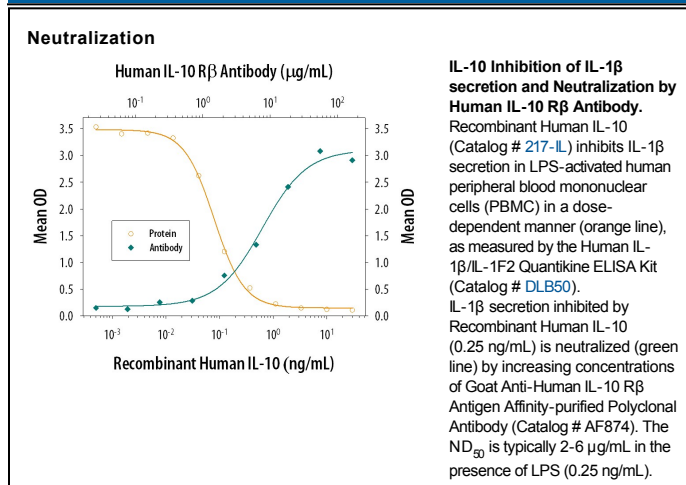
Species Reactivity	Human
Specificity	Detects human IL-10 R β in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human (rh) IL-20 R α , rhIL-10 R, and rhIL-20 R β is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human IL-10 R β Met20-Ser220 Accession # Q08334
Endotoxin Level	<0.20 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 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
Western Blot	0.1 μ g/mL	Recombinant Human IL-10 R β Fc Chimera (Catalog # 874-RB)
Flow Cytometry	2.5 μ g/10 ⁶ cells	Human whole blood monocytes
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-10 R β -mediated IL-10 response in LPS-activated human peripheral blood mononuclear cells (PBMC). Ralph, P. <i>et al.</i> (1991) <i>J. Immunology</i> 148 :808. The Neutralization Dose (ND ₅₀) is typically 2-6 μ g/mL in the presence of 0.25 ng/mL Recombinant Human IL-10 and 0.25 ng/mL LPS.	

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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

IL-10, also known as IL-10 R2, mediates its biological activities via binding to a heteromeric receptor complex consisting of two distinct type II cytokine receptor subunits, the ligand binding IL-10 R α and the IL-10 R β which does not bind IL-10 by itself but is required for signal transduction. The cDNA for human IL-10 R β encodes a 325 amino acid (aa) residue type I transmembrane precursor protein with a 20 aa signal sequence, a 200 aa extracellular region, a 29 aa transmembrane segment, and a short 76 aa cytoplasmic domain. Within the extracellular region, there are two 100 aa subdomains that resemble the constant region of immunoglobulins. This structural motif is responsible for the alternative designation of IL-10 R β as CRF2-4 (the 4th member of the cytokine receptor family class II/2). Human and mouse IL-10 R β share approximately 69% aa sequence identity. Binding of the non-covalent IL-10 dimer to two IL-10 R α chains recruits two IL-10 R β chains resulting in the activation and phosphorylation of the signaling cascade involving JAK1, TYK2, and STAT3. IL-10 R β is expressed ubiquitously. IL-10 R β is also a component of the IL-22 receptor complex consisting of the IL-10 R β chain and IL-22 R, another type II cytokine receptor family member.

References:

1. Donnelly, R.P. *et al.* (2004) *J. Leukoc. Biol.* **76**:314.
2. Donnelly, R.P. *et al.* (1999) *J. Interferon Cytokine Res.* **19**:563.
3. Kotenko, S.V. *et al.* (2000) *J. Biol. Chem.* **276**:2725.
4. Liu, Y. *et al.* (1994) *J. Immunol.* **152**:1821.
5. Lutfalla, G. *et al.* (1993) *Genomics* **16**:366.
6. Kotenko, S.V. *et al.* (1997) *EMBO J.* **16**:5894.