DESCRIPTION

Species Reactivity  Human
Specificity  Detects human IL-10 Rβ in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human (rh) IL-20 Rα, rhIL-10 R, and rhIL-20 Rβ is observed.
Source  Polyclonal Goat IgG
Purification  Antigen Affinity-purified
Immunogen  Mouse myeloma cell line NS0-derived recombinant human IL-10 Rβ Met20-Ser220
Accession #  Q08334
Endotoxin Level  <0.20 EU per 1 µg of the antibody by the LAL method.
Formulation  Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

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 Sample
Concentration
Western Blot  0.1 µg/mL
Flow Cytometry  2.5 µg/10^6 cells
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 Rβ-mediated IL-10 response in LPS-activated human peripheral blood mononuclear cells (PBMC). Ralph, P. et al. (1991) J. Immunology 148:808. The Neutralization Dose (ND_{50}) is typically 2-6 µg/mL in the presence of 0.25 ng/mL Recombinant Human IL-10 and 0.25 ng/mL LPS.

DATA

IL-10 Inhibition of IL-1β secretion and Neutralization by Human IL-10 Rβ Antibody. Recombinant Human IL-10 (Catalog # 217-IL) inhibits IL-1β secretion in LPS-activated human peripheral blood mononuclear cells (PBMC) in a dose-dependent manner (orange line), as measured by the Human IL-1β/IL-1F2 Quantikine ELISA Kit (Catalog # DLB50). IL-1β secretion inhibited by Recombinant Human IL-10 (0.25 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human IL-10 Rβ Antigen Affinity-purified Polyclonal Antibody (Catalog # AF874). The ND_{50} is typically 2-6 µg/mL in the presence of LPS (0.25 ng/mL).

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.
- 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.
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 Rα and the IL-10 Rβ which does not bind IL-10 by itself but is required for signal transduction. The cDNA for human IL-10 Rβ 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 Rβ as CRF2-4 (the 4th member of the cytokine receptor family class II/2). Human and mouse IL-10 Rβ share approximately 69% aa sequence identity. Binding of the non-covalent IL-10 dimer to two IL-10 Rα chains recruits two IL-10 Rβ chains resulting in the activation and phosphorylation of the signaling cascade involving JAK1, TYK2, and STAT3. IL-10 Rβ is expressed ubiquitously. IL-10 Rβ is also a component of the IL-22 receptor complex consisting of the IL-10 Rβ chain and IL-22 R, another type II cytokine receptor family member.

References: