

DESCRIPTION

Species Reactivity	Canine
Specificity	Detects canine CD25/IL-2 Rα in direct ELISAs. In direct ELISAs, less than 5% cross-reactivity with recombinant human CD25/IL-2 Rα, recombinant mouse CD25/IL-2 Rα, and recombinant rat CD25/IL-2 Rα is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant canine CD25/IL-2 Rα Tyr19-Ile238 Accession # BAI49682
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

CyTOF-ready	Optimal dilution of this antibody should be experimentally determined.
Flow Cytometry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

IL-2 receptor alpha (IL-2 Rα), also known as CD25, is a 55 kDa type I membrane glycoprotein that belongs to the family of cytokine receptors that utilize the common gamma chain subunit (γ_c). IL-2 Rα is primarily expressed on activated T cells and on regulatory T cells (Treg) (1-3). The canine IL-2 Rα cDNA encodes a 268 amino acid (aa) precursor that includes a 20 aa signal peptide, a 217 aa extracellular domain (ECD) with two Sushi domains, a 19 aa transmembrane segment, and an 12 aa cytoplasmic domain (4). Within the ECD, canine IL-2 Rα shares 49% - 60% aa sequence identity with human, mouse, and rat IL-2 Rα. IL-2 Rβ (CD122) and γ_c (IL-2 Rγ/CD132) dimerize to form a constitutively expressed intermediate affinity IL-2 receptor (5, 6). By itself, IL-2 Rα binds IL-2 with low affinity. It associates with IL-2 Rβ and γ_c to generate a ternary high affinity IL-2 receptor complex (7). A soluble form of IL-2 Rα can be generated by proteolytic cleavage of the cell surface receptor, rendering the T cell unresponsive to IL-2 (8, 9). Increased serum levels of soluble IL-2 Rα are found in some cancers and immune disorders (10). IL-2 Rα is required for activation induced cell death (AICD) of naive T cells, a mechanism responsible for deleting autoreactive T cell clones (11, 12). IL-2 Rα is also required for the development of CD4⁺CD25⁺ Treg which suppress autoreactive CD4⁺ T cells, thereby contributing to peripheral T cell homeostasis (11-13).

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