

DESCRIPTION

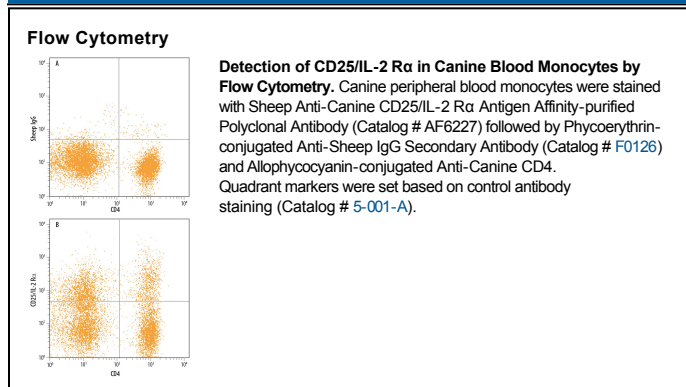
Species Reactivity	Canine
Specificity	Detects canine CD25/IL-2 R α in direct ELISAs. In direct ELISAs, less than 5% cross-reactivity with recombinant human CD25/IL-2 R α , recombinant mouse CD25/IL-2 R α , and recombinant rat CD25/IL-2 R α is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant canine CD25/IL-2 R α Tyr19-Ile238 Accession # BAI49682
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
Flow Cytometry	2.5 μ g/10 ⁶ cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA



PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
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-2 receptor alpha (IL-2 R α), 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 R α is primarily expressed on activated T cells and on regulatory T cells (Treg) (1-3). The canine IL-2 R α 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 R α shares 49% - 60% aa sequence identity with human, mouse, and rat IL-2 R α . IL-2 R β (CD122) and γ_c (IL-2 R γ /CD132) dimerize to form a constitutively expressed intermediate affinity IL-2 receptor (5, 6). By itself, IL-2 R α binds IL-2 with low affinity. It associates with IL-2 R β and γ_c to generate a ternary high affinity IL-2 receptor complex (7). A soluble form of IL-2 R α 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 R α are found in some cancers and immune disorders (10). IL-2 R α 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 R α 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).

References:

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