

DESCRIPTION

Species Reactivity	Rat
Specificity	Detects rat CD25/IL-2 Rα in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 20% cross-reactivity with recombinant mouse CD25/IL-2 Rα is observed, approximately 10% cross-reactivity with recombinant human (
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant rat CD25/IL-2 Rα Glu22-Gln235 Accession # P26897
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 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.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	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 rat IL-2 Rα cDNA encodes a 267 amino acid (aa) precursor that includes a 21 aa signal peptide, a 214 aa extracellular domain (ECD) with two Sushi domains, a 21 aa transmembrane segment, and an 11 aa cytoplasmic domain (4). Within the ECD, rat IL-2 Rα shares 58% and 81% aa sequence identity with human and mouse IL-2 Rα, respectively. It shares approximately 15% aa sequence identity with IL-4, -7, -9, -15, and -21 receptor subunits that also complex with γ_c. 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).

PRODUCT SPECIFIC NOTICES

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