Mouse CD25/IL-2 R alpha Alexa Fluor® 488-conjugated Antibody

Monoclonal Rat IgG_1 Clone # PC61.5.3

Catalog Number: FAB9164G
25 TESTS

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse CD25/IL-2 R alpha in flow cytometry.
Source	Monoclonal Rat IgG_1 Clone # PC61.5.3
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	B6.1 mouse cytotoxic T cell line
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *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.

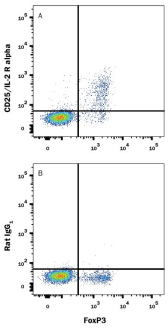
APPLICATIONS

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.*

	Recommended Concentration	Sample
Flow Cytometry	5 µL/10^6 cells	See Below

DATA

Flow Cytometry



Detection of CD25/IL-2 R alpha in Mouse Splenocytes by Flow Cytometry. Mouse splenocytes were stained with Rabbit Anti-Human/Mouse FoxP3 Alexa Fluor® 647-conjugated Monoclonal Antibody (Catalog # IC8214R) and either (A) Rat Anti-Mouse CD25/IL-2 R alpha Alexa Fluor® 488-conjugated Monoclonal Antibody (Catalog # FAB9164G) or (B) Rat IgG_1 Alexa Fluor 488 Isotype Control (Catalog # IC005G). View our protocol for Staining Membrane-associated Proteins.

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). The mouse IL-2 Rα cDNA encodes a 268 amino acid (aa) precursor that includes a 21 aa signal peptide, a 215 aa extracellular domain (ECD) with two Sushi domains, a 21 aa transmembrane segment, and an 11 aa cytoplasmic domain. Within the ECD, mouse IL-2 Rα shares 81% and 58% aa sequence identity with rat and human 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. 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. 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. Increased serum levels of soluble IL-2 Rα are found in some cancers and immune disorders. IL-2 Rα is required for Activation Induced Cell Death (AICD) of naive T cells, a mechanism responsible for deleting autoreactive T cell clones. 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.

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