

#### DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects human CD25/IL-2R alpha in ELISA.                                                                                                                                                                                                                                    |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>1</sub> Clone # 1037230                                                                                                                                                                                                                           |
| <b>Purification</b>       | Protein A or G purified from cell culture supernatant                                                                                                                                                                                                                       |
| <b>Immunogen</b>          | Human embryonic kidney cell, HEK293-derived human CD25/IL-2R alpha<br>Glu22-Cys213<br>Accession # P01589                                                                                                                                                                    |
| <b>Conjugate</b>          | Alexa Fluor 594<br>Excitation Wavelength: 590 nm<br>Emission Wavelength: 617 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*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.

**Neutralization** Optimal dilution of this antibody should be experimentally determined.

#### PREPARATION AND STORAGE

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

#### BACKGROUND

IL-2 receptor alpha (IL-2R alpha), 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 (gamma c). Human IL-2R alpha cDNA encodes a 213 amino acid (aa) precursor with a 21 aa signal peptide and a 192 aa extracellular region. The ECD of Human IL-2R alpha shares a 59% amino acid sequence identity with the ECD of mouse and rat IL-2R alpha, respectively. IL-2R alpha is primarily expressed on activated T cells and on regulatory T cells (Treg) (1-3). IL-2R beta (CD122) and γc (IL-2R gamma /CD132) dimerize to form a constitutively expressed intermediate affinity IL-2 receptor (4, 5). By itself, IL-2R alpha binds IL-2 with low affinity. IL-2R alpha makes no contacts with IL-2R beta or γc, and only minor changes are observed in the IL-2 structure in response to receptor binding. These findings support the principal role of IL-2R alpha to deliver IL-2 to the signaling complex and act as regulator of signal transduction (6, 7). A soluble form of IL-2R alpha 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-2R alpha are found in some cancers and immune disorders (10). IL-2R alpha is required for activation induced cell death (AICD) of naive T cells, a mechanism responsible for deleting autoreactive T cell clones (11, 12). IL-2R alpha is also required for the development of CD4+CD25+ Treg which suppresses autoreactive CD4+ T cells, thereby contributing to peripheral T cell homeostasis (11-13).

#### PRODUCT SPECIFIC NOTICES

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