

## Anti-CD25/IL2R alpha Antibody (4X703)

## Product Details

Ig Type:	Mouse IgG1
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	4X703
Purification:	Protein A

## Applications

Verified Activity:	Flow cytometric analysis of IL2RA(CD25) expression on stimulated human peripheral blood lymphocytes. Human peripheral blood mononuclear cells were stimulated for 3 days with Phytohemagglutinin, then stained with purified anti-Human IL2RA(CD25), then a FITC-conjugated second step antibody. The fluorescence histograms were derived from events with the forward and side light-scatter characteristics of viable lymphocytes.
Application:	FCM
Recommended	FCM: 1:25-1:100

## Properties

Stability & Storage:	Store at 2°C-8°C for 1 month. Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles. Preservative-Free.
Shipping:	Shipping with blue ice.

## Antigen Details

Immunogen:	Recombinant Protein: Human IL2RA/IL-2RA/CD25 Protein (TMPY-01103)
Antigen Species:	Human
Synonyms:	CD25/IL2R $\alpha$ ;interleukin 2 receptor, $\alpha$ ;interleukin 2 receptor, alpha
Biology Area:	Neuroinflammation, Cancer Drug Targets

## Research Background

CD25 (alpha-chain of the IL-2 receptor, or IL2RA), is a type I transmembrane glycoprotein with a signal peptide, an extracellular region, a transmembrane region, and a cytoplasmic domain. IL2RA is expressed on activated T cells and regulatory T cells and is capable of binding IL2 with low affinity by itself. However, a ligand-induced high-affinity heterotrimeric receptor complex is produced when IL2RA is associated non-covalently with the IL2 receptor beta and gamma chain, and subsequently initiates the intracellular signal pathways such as MAPK or JAK/STAT. On dendritic cells (DC), CD25 has been previously regarded as an activation marker, while both murine and human DC can express CD25, they do not express the beta-chain of the IL-2 receptor, which is indispensable for the execution of IL-2 signaling. The IL2RA (CD25) gene is a substantial component of the high-affinity receptor molecule highly expressed by activated T lymphocytes. Recently, a piece of strong evidence was obtained for the involvement of IL-2RA in conferring susceptibility to type 1 diabetes (T1D). Cancer growth and development are associated with the stimulation of the innate immune system, including enhanced interleukin 2 receptor (IL-2R) expression in immune cells and its shedding into the circulation in a soluble form of SIL-2Ralpha. In most hematological malignancies, including different types of leukemias and lymphomas, SIL-2Ralpha is released directly from the surface of

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neoplastic cells thus reflecting the tumor bulk, turnover, and activity. Several studies have proved that not only lymphoid cancer cells but also some non-lymphoid cancer cells, express IL-2R on their surface. They include malignant melanoma and carcinomas of the kidney, head and neck, esophagus, and lung. Thus, sIL-2R $\alpha$  is elevated in most proliferative disturbances of the hematopoietic system and many solid tumors. Cancer Immunotherapy Immune Checkpoint Immunotherapy Targeted Therapy

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