

# IL-2R $\alpha$ (PC61 5.3): sc-18861

## BACKGROUND

The IL-2 receptor is a multicomponent complex consisting of three subunits,  $\alpha$ ,  $\beta$  and  $\gamma$ , each of which is required for high-affinity binding of IL-2. The  $\alpha$  chain functions primarily in binding IL-2, whereas the  $\beta$  and  $\gamma$  chains contribute to IL-2 binding and are essential to IL-2-induced activation of signaling pathways leading to T cell growth. Both IL-4R and IL-7R were initially described as single chain, high-affinity ligand-binding cytokine receptors. However, it is now well established that the IL-2R $\gamma$  chain functions as a second subunit of the high-affinity IL-4R and IL-7R receptors. Consequently, the originally described subunits of these latter receptors are now referred to as IL-4R $\alpha$  and IL-7R $\alpha$ , respectively, while the common subunit is referred to as  $\gamma$ c. Although the common  $\gamma$  chain enhances ligand binding in these three cytokine receptors, it has no capacity to bind these ligands on its own. There is evidence that the  $\gamma$ c chain is also a subunit of IL-13R.

## REFERENCES

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- Takeshita, T., et al. 1992. Cloning of the  $\gamma$  chain of the human IL-2 receptor. *Science* 57: 379-382.
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- Kondo, M., et al. 1993. Sharing of the interleukin-2 (IL-2) receptor  $\gamma$  chain between receptors for IL-2 and IL-4. *Science* 262: 1874-1877.
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## CHROMOSOMAL LOCATION

Genetic locus: Il2ra (mouse) mapping to 2 A1.

## SOURCE

IL-2R $\alpha$  (PC61 5.3) is a rat monoclonal antibody immunized with B6.1 cytotoxic T cell line of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as fluorescein (sc-18861 FITC) or phycoerythrin (sc-18861 PE) conjugates for flow cytometry, 100 tests.

Available azide-free for blocking of IL-2 binding and IL-2 dependent growth stimulation, sc-18861 L, 200  $\mu$ g/0.1 ml.

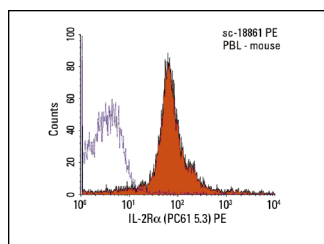
## APPLICATIONS

IL-2R $\alpha$  (PC61 5.3) is recommended for detection of IL-2R $\alpha$  of mouse origin by flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

Suitable for use as control antibody for IL-2R $\alpha$  siRNA (m): sc-35657, IL-2R $\alpha$  shRNA Plasmid (m): sc-35657-SH and IL-2R $\alpha$  shRNA (m) Lentiviral Particles: sc-35657-V.

Molecular Weight of IL-2R $\alpha$ : 55 kDa.

## DATA



IL-2R $\alpha$  (PC61 5.3) PE: sc-18861 FITC. FCM analysis of PMA-stimulated mouse peripheral blood leukocytes. Black line histogram represents the isotype control, normal rat IgG<sub>1</sub>: sc-2827.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.