

IL-2R (A00073.01): sc-81042

BACKGROUND

The IL-2 receptor is a multicomponent complex consisting of three subunits, α , β and γ , each of which is required for high-affinity binding of IL-2. The α chain functions primarily in binding IL-2, whereas the β and γ 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 γ 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 α and IL-7R α , respectively, while the common subunit is referred to as γ_c . Although the common γ 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 γ_c chain is also a subunit of IL-13R.

REFERENCES

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3. Cao, X., et al. 1993. Characterization of cDNAs encoding the murine interleukin-2 receptor (IL-2R) γ chain: chromosomal mapping and tissue specificity of IL-2R γ chain expression. *Proc. Natl. Acad. Sci. USA* 90: 8464-8468.
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5. Taniguchi, T. and Minami, Y. 1993. The IL-2/IL-2 receptor system: a current overview. *Cell* 73: 5-8.
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7. Russell, S.M., et al. 1994. Interleukin-2 receptor γ chain: a functional component of the interleukin-4 receptor. *Science* 262: 1880-1883.
8. He, Y.W., et al. 1995. Expression and function of the γ_c subunit of the IL-2, IL-4, and IL-7 receptors. Distinct interaction of γ_c in the IL-4 receptor. *J. Immunol.* 154: 1596-1605.
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CHROMOSOMAL LOCATION

Genetic locus: Il2rb (mouse) mapping to 15 E1.

SOURCE

IL-2R (A00073.01) is a rat monoclonal antibody raised against Con A-activated T cells of mouse origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

IL-2R (A00073.01) is recommended for detection of IL-2R of mouse origin by flow cytometry (1 μ g per 1 x 10⁶ cells).

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 for detailed protocols and support products.