



IL-2R α (IL2R.1): sc-57297

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

1. Paterson, D.J., et al. 1987. Antigens of activated rat T lymphocytes including a molecule of 50,000 M_r, detected only on CD4⁺ T blasts. *Mol. Immunol.* 24: 1281-1290.
2. Mosley, B., et al. 1989. The murine interleukin-4 receptor: molecular cloning and characterization of secreted and membrane-bound forms. *Cell* 59: 335-348.
3. Goodwin, R.G., et al. 1990. Cloning of the human and murine interleukin-7 receptors: demonstration of a soluble form and homology to a new receptor superfamily. *Cell* 60: 941-951.
4. Takeshita, T., et al. 1992. Cloning of the γ chain of the human IL-2 receptor. *Science* 257: 379-382.
5. 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.
6. Kondo, M., et al. 1993. Sharing of the interleukin-2 (IL-2) receptor γ chain between receptors for IL-2 and IL-4. *Science* 262: 1874-1877.
7. Russell, S.M., et al. 1993. Interleukin-2 receptor γ chain: a functional component of the interleukin-4 receptor. *Science* 262: 1880-1883.
8. Minami, Y., et al. 1993. The IL-2 receptor complex: its structure, function and target genes. *Annu. Rev. Immunol.* 11: 245-268.

CHROMOSOMAL LOCATION

Genetic locus: IL2RA (human) mapping to 10p15.1.

SOURCE

IL-2R α (IL2R.1) is a mouse monoclonal antibody raised against recombinant IL-2R α of human origin.

PRODUCT

Each vial contains 50 μ g IgG₁ in 0.5 ml of PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.1% stabilizer protein

APPLICATIONS

IL-2R α (IL2R.1) is recommended for detection of IL-2R α of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for IL-2R α siRNA (h): sc-29367, IL-2R α shRNA Plasmid (h): sc-29367-SH and IL-2R α shRNA (h) Lentiviral Particles: sc-29367-V.

Molecular Weight of IL-2R α : 55 kDa.

SELECT PRODUCT CITATIONS

1. Bedoya, A.M., et al. 2013. Location and density of immune cells in precursor lesions and cervical cancer. *Cancer Microenviron.* 6: 69-77.

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.