

IL-2R α (H-6): sc-374034

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-positive 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.
7. 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.
6. 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.
9. He, Y.W., et al. 1995. Expression and function of the γ c subunit of the IL-2, IL-4 and IL-7 receptors. *J. Immunol.* 154: 1596-1605.

CHROMOSOMAL LOCATION

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

SOURCE

IL-2R α (H-6) is a mouse monoclonal antibody raised against amino acids 1-272 representing full length IL-2R α of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

IL-2R α (H-6) is recommended for detection of IL-2R α of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

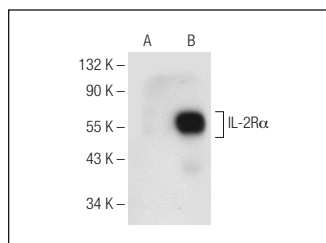
Molecular Weight of IL-2R α : 55 kDa.

Positive Controls: HuT 78 whole cell lysate: sc-2208 or IL-2R α (h2): 293T Lysate: sc-176584.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



IL-2R α (H-6): sc-374034. Western blot analysis of IL-2R α expression in non-transfected: sc-117752 (A) and human IL-2R α transfected: sc-176584 (B) 293T whole cell lysates.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.