SANTA CRUZ BIOTECHNOLOGY, INC.

IL-2Rα (h2): 293T Lysate: sc-176584

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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-2Rγ 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-4Rα and IL-7Rα, respectively, while the common subunit is referred to as γc. 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 γc 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.
9. He, Y.W., et al. 1995. Expression and function of the γc subunit of the IL-2, IL-4 and IL-7 receptors. J. Immunol. 154: 1596-1605.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

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

PRODUCT

IL-2Rα (h2): 293T Lysate represents a lysate of human IL-2Rα transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

IL-2Rα (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive IL-2Rα antibodies. Recommended use: 10-20 µl per lane.

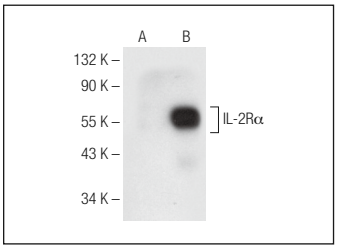
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

IL-2Rα (H-6): sc-374034 is recommended as a positive control antibody for Western Blot analysis of enhanced human IL-2Rα expression in IL-2Rα transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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.

DATA



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

RESEARCH USE

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