

IL-2R β (m): 293T Lysate: sc-121046

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. Mosley, B., et al. 1989. The murine interleukin-4 receptor: molecular cloning and characterization of secreted and membrane bound forms. *Cell* 59: 335-348.
2. Tanaka, T., et al. 1991. A novel monoclonal antibody against murine IL-2 receptor β chain. Characterization of receptor expression in normal lymphoid cells and EL-4 cells. *J. Immunol.* 147: 2222-2228.
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.
4. Minami, Y., et al. 1993. The IL-2 receptor complex: its structure, function, and target genes. *Annu. Rev. Immunol.* 11: 245-268.
5. Taniguchi, T. and Minami, Y. 1993. The IL-2/IL-2 receptor system: a current overview. *Cell* 73: 5-8.
6. Kondo, M., et al. 1994. 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. 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.
9. Malek, T.R., et al. 1995. Biochemical identity and characterization of the mouse interleukin-2 receptor β and γ_c subunits. *J. Interferon Cytokine Res.* 15: 447-454.

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.

CHROMOSOMAL LOCATION

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

PRODUCT

IL-2R β (m): 293T Lysate represents a lysate of mouse IL-2R β transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

IL-2R β (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive IL-2R β antibodies. Recommended use: 10-20 μ l per lane.

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

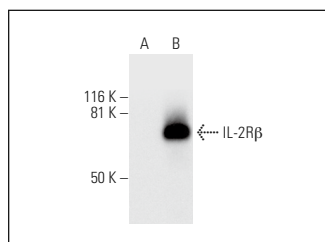
IL-2R β (G-1): sc-393092 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse IL-2R β expression in IL-2R β transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

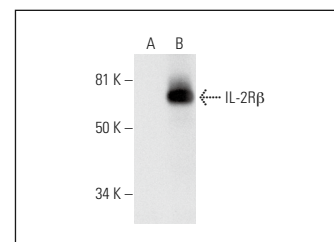
To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-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.

DATA



IL-2R β (G-1): sc-393092. Western blot analysis of IL-2R β expression in non-transfected: sc-117752 (A) and mouse IL-2R β transfected: sc-121046 (B) 293T whole cell lysates.



IL-2R β (C-10): sc-393093. Western blot analysis of IL-2R β expression in non-transfected: sc-117752 (A) and mouse IL-2R β transfected: sc-121046 (B) 293T whole cell lysates.

RESEARCH USE

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