

IL-2R β (C-10): sc-393093

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 chain is also a subunit of IL-13R.

REFERENCES

- Mosley, B., et al. 1989. The murine interleukin-4 receptor: molecular cloning and characterization of secreted and membrane bound forms. *Cell* 59: 335-348.
- 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.
- Cao, X., et al. 1993. γ chain: chromosomal mapping and tissue specificity of IL-2R γ chain expression. *Proc Natl. Acad. Sci. USA* 90: 8464-8468.

CHROMOSOMAL LOCATION

Genetic locus: IL2RB (human) mapping to 22q12.3; Il2rb (mouse) mapping to 15 E1.

SOURCE

IL-2R β (C-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 502-522 near the C-terminus of IL-2R β of mouse origin.

PRODUCT

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

IL-2R β (C-10) is available conjugated to agarose (sc-393093 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393093 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393093 PE), fluorescein (sc-393093 FITC), Alexa Fluor[®] 488 (sc-393093 AF488), Alexa Fluor[®] 546 (sc-393093 AF546), Alexa Fluor[®] 594 (sc-393093 AF594) or Alexa Fluor[®] 647 (sc-393093 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-393093 AF680) or Alexa Fluor[®] 790 (sc-393093 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393093 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

IL-2R β (C-10) is recommended for detection of IL-2R β of mouse, rat and 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 β siRNA (h): sc-35654, IL-2R β siRNA (m): sc-35655, IL-2R β shRNA Plasmid (h): sc-35654-SH, IL-2R β shRNA Plasmid (m): sc-35655-SH, IL-2R β shRNA (h) Lentiviral Particles: sc-35654-V and IL-2R β shRNA (m) Lentiviral Particles: sc-35655-V.

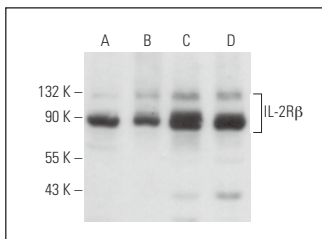
Molecular Weight of IL-2R β : 70-75 kDa.

Positive Controls: IL-2R β (m): 293T Lysate: sc-121046, NIH/3T3 whole cell lysate: sc-2210 or RAW 264.7 whole cell lysate: sc-2211.

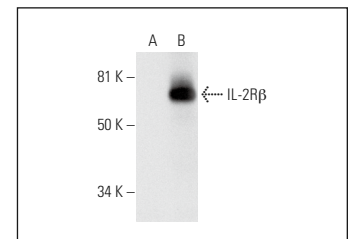
RECOMMENDED SUPPORT REAGENTS

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 β (C-10): sc-393093. Western blot analysis of IL-2R β expression in NIH/3T3 (A), 3T3-L1 (B), RAW 264.7 (C) and WEHI-231 (D) 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.

SELECT PRODUCT CITATIONS

- Zhang, Y., et al. 2023. Molecular mechanisms of snoRNA-IL-15 crosstalk in adipocyte lipolysis and NK cell rejuvenation. *Cell Metab.* 35: 1457-1473.e13.

STORAGE

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

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