

IL-2R β (C-2): sc-166427

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. 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.

CHROMOSOMAL LOCATION

Genetic locus: IL2RB (human) mapping to 22q12.3.

SOURCE

IL-2R β (C-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 502-533 near the C-terminus of IL-2R β of human 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-2) is available conjugated to agarose (sc-166427 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166427 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166427 PE), fluorescein (sc-166427 FITC), Alexa Fluor[®] 488 (sc-166427 AF488), Alexa Fluor[®] 546 (sc-166427 AF546), Alexa Fluor[®] 594 (sc-166427 AF594) or Alexa Fluor[®] 647 (sc-166427 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-166427 AF680) or Alexa Fluor[®] 790 (sc-166427 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166427 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

IL-2R β (C-2) is recommended for detection of IL-2R β 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), immunohistochemistry (including paraffin-embedded sections) (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 shRNA Plasmid (h): sc-35654-SH and IL-2R β shRNA (h) Lentiviral Particles: sc-35654-V.

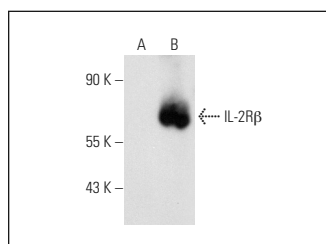
Molecular Weight of IL-2R β : 70-75 kDa.

Positive Controls: HuT 78 whole cell lysate: sc-2208, BJAB whole cell lysate: sc-2207 or IL-2R β (h): 293T Lysate: sc-114166.

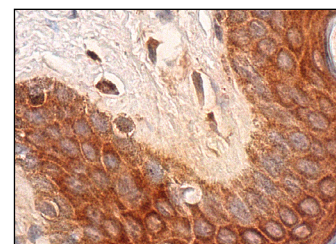
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



IL-2R β (C-2): sc-166427. Western blot analysis of IL-2R β expression in non-transfected: sc-117752 (A) and human IL-2R β transfected: sc-114166 (B) 293T whole cell lysates.



IL-2R β (C-2): sc-166427. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of epidermal cells.

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.