

# IL-2R $\alpha$ (C-9): sc-393326

## BACKGROUND

The IL-2 receptor is a multicomponent complex consisting of three subunits,  $\alpha$ ,  $\beta$  and  $\gamma$ , each of which is required for high-affinity binding of IL-2. The  $\alpha$  chain functions primarily in binding IL-2, whereas the  $\beta$  and  $\gamma$  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 $\gamma$  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 $\alpha$  and IL-7R $\alpha$ , respectively, while the common subunit is referred to as  $\gamma$ c. Although the common  $\gamma$  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  $\gamma$ 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 Mr 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.

## CHROMOSOMAL LOCATION

Genetic locus: IL2RA (human) mapping to 10p15.1; Il2ra (mouse) mapping to 2 A1.

## SOURCE

IL-2R $\alpha$  (C-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 23-49 at the N-terminus of IL-2R of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IL-2R $\alpha$  (C-9) is available conjugated to agarose (sc-393326 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393326 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393326 PE), fluorescein (sc-393326 FITC), Alexa Fluor<sup>®</sup> 488 (sc-393326 AF488), Alexa Fluor<sup>®</sup> 546 (sc-393326 AF546), Alexa Fluor<sup>®</sup> 594 (sc-393326 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-393326 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-393326 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-393326 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393326 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

IL-2R $\alpha$  (C-9) is recommended for detection of IL-2R $\alpha$  of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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 $\alpha$  siRNA (h): sc-29367, IL-2R $\alpha$  siRNA (m): sc-35657, IL-2R $\alpha$  shRNA Plasmid (h): sc-29367-SH, IL-2R $\alpha$  shRNA Plasmid (m): sc-35657-SH, IL-2R $\alpha$  shRNA (h) Lentiviral Particles: sc-29367-V and IL-2R $\alpha$  shRNA (m) Lentiviral Particles: sc-35657-V.

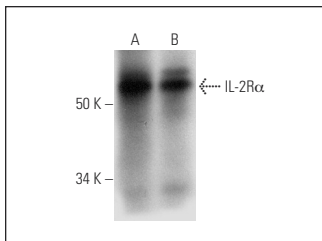
Molecular Weight of IL-2R $\alpha$ : 55 kDa.

Positive Controls: WEHI-231 whole cell lysate: sc-2213 or HuT 78 whole cell lysate: sc-2208.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



IL-2R $\alpha$  (C-9): sc-393326. Western blot analysis of IL-2R $\alpha$  expression in WEHI-231 (A) and HuT 78 (B) 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.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.