

## IL-2R $\gamma$ (N-20): sc-670

### 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.

### CHROMOSOMAL LOCATION

Genetic locus: IL2RG (human) mapping to Xq13.1.

### SOURCE

IL-2R $\gamma$  (N-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of IL-2R $\gamma$  of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-670 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

IL-2R $\gamma$  (N-20) is recommended for detection of IL-2R $\gamma$  of human origin by Western Blotting (starting dilution 1:200, 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 $\gamma$  siRNA (h): sc-35653, IL-2R $\gamma$  shRNA Plasmid (h): sc-35653-SH and IL-2R $\gamma$  shRNA (h) Lentiviral Particles: sc-35653-V.

Molecular Weight of IL-2R $\gamma$ : 55-60 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or HuT 78 whole cell lysate: sc-2208.

### RESEARCH USE

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

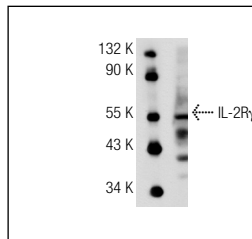
### PROTOCOLS

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

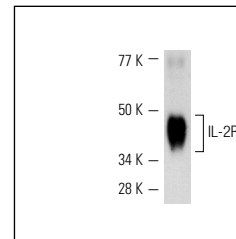
### STORAGE

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

### DATA



IL-2R $\gamma$  (N-20): sc-670. Western blot analysis of IL-2R $\gamma$  expression in Jurkat whole cell lysate.



IL-2R $\gamma$  (N-20): sc-670. Western blot analysis of human recombinant IL-2R $\gamma$  extracellular domain.

### SELECT PRODUCT CITATIONS

- Zhang, Q., et al. 1996. Activation of JAK/Stat proteins involved in signal transduction pathway mediated by receptor for interleukin 2 in malignant T lymphocytes derived from cutaneous anaplastic large T cell lymphoma and Sezary syndrome. *Proc. Natl. Acad. Sci. USA* 93: 9148-9153.
- Goebel, J., et al. 2000. Daclizumab (Zenapax) inhibits early interleukin-2 receptor signal transduction events. *Transpl. Immunol.* 8: 153-159.
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- Bonder, C.S., et al. 2002. IFN- $\gamma$  downregulates interleukin-4 functional activity on monocytes by multiple mechanisms. *J. Interferon Cytokine Res.* 22: 287-293.
- Sauce, D., et al. 2006. EBV-associated mononucleosis leads to long-term global deficit in T-cell responsiveness to IL-15. *Blood* 108: 11-18.
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- Giron-Michel, J., et al. 2009. EBV-associated mononucleosis does not induce long-term global deficit in T-cell responsiveness to IL-15. *Blood* 113: 4541-4547.
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- Giron-Michel, J., et al. 2012. Interleukin-15 plays a central role in human kidney physiology and cancer through the  $\gamma$ c signaling pathway. *PLoS ONE* 7: e31624.

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