SANTA CRUZ BIOTECHNOLOGY, INC.

IL-2Rγ (M-20): sc-668

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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-2Rγ 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-4Rα and IL-7Rα respectively, while the common subunit is referred to as γc. 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 γc 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 89: 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.

CHROMOSOMAL LOCATION

Genetic locus: Il2rg (mouse) mapping to X D.

SOURCE

IL-2Rγ (M-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of IL-2Rγ of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-668 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IL-2Rγ (M-20) is recommended for detection of IL-2Rγ of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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-2Rγ siRNA (m): sc-35656, IL-2Rγ shRNA Plasmid (m): sc-35656-SH and IL-2Rγ shRNA (m) Lentiviral Particles: sc-35656-V.

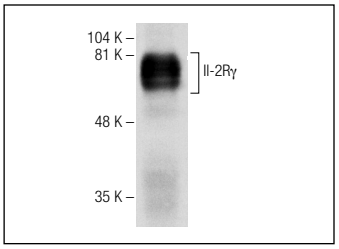
Molecular Weight of IL-2Rγ: 55-60 kDa.

Positive Controls: IL-2Rγ (m): 293T Lysate: sc-121045 or CTLL-2 cell lysate: sc-2242.

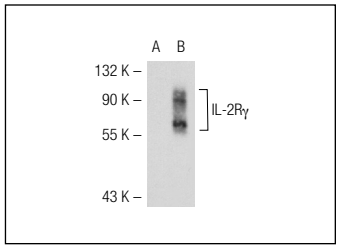
STORAGE

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

DATA



IL-2Rγ (M-20): sc-668. Western blot analysis of IL-2Rγ expression in CTLL-2 whole cell lysate.



IL-2Rγ (M-20): sc-668. Western blot analysis of IL-2Rγ expression in non-transfected: sc-117752 (**A**) and mouse IL-2Rγ transfected: sc-121045 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Mohapatra, S., et al. 2001. Interdependence of Cdk2 activation and interleukin-2R α accumulation in T cells. J. Biol. Chem. 276: 21984-21989.
2. Kuniyasu, H., et al. 2003. Production of interleukin 15 by human colon cancer cells is associated with induction of mucosal hyperplasia, angiogenesis, and metastasis. Clin. Cancer Res. 9: 4802-4810.
3. Lesur, O., et al. 2003. Role of IFN-γ and IL-2 in rat lung epithelial cell migration and apoptosis after oxidant injury. Am. J. Physiol. Lung Cell. Mol. Physiol. 286: L4-L14.
4. Duran, A., et al. 2004. Crosstalk between PKCζ and the IL-4/Stat6 pathway during T-cell-mediated hepatitis. EMBO J. 23: 4595-4605.
5. Dubois, S.P., et al. 2005. Survival adjustment of mature dendritic cells by IL-15. Proc. Natl. Acad. Sci. USA 102: 8622-8627.
6. Budagian, V., et al. 2005. A promiscuous liaison between IL-15 receptor and Axl receptor tyrosine kinase in cell death control. EMBO J. 24: 4260-4270.
7. Horng, T., et al. 2007. NKG2D signaling is coupled to the interleukin 15 receptor signaling pathway. Nat. Immunol. 8: 1345-1352.
8. Fujii, H., et al. 2009. Lack of nuclear translocation of cytoplasmic domains of IL-2/IL-15 receptor subunits. Cytokine 46: 302-308.
9. Stone, K.P., et al. 2011. Rapid endocytosis of interleukin-15 by cerebral endothelia. J. Neurochem. 116: 544-553.
10. Kang, B.H., et al. 2013. Simultaneous profiling of 194 distinct receptor transcripts in human cells. Sci. Signal. 6: 1-15.

RESEARCH USE

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