

IL-2R γ (A-10): sc-271060

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.

CHROMOSOMAL LOCATION

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

SOURCE

IL-2R γ (A-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 342-369 at the C-terminus of IL-2R γ of human origin.

PRODUCT

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

IL-2R γ (A-10) is available conjugated to agarose (sc-271060 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271060 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271060 PE), fluorescein (sc-271060 FITC), Alexa Fluor[®] 488 (sc-271060 AF488), Alexa Fluor[®] 546 (sc-271060 AF546), Alexa Fluor[®] 594 (sc-271060 AF594) or Alexa Fluor[®] 647 (sc-271060 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-271060 AF680) or Alexa Fluor[®] 790 (sc-271060 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271060 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

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

APPLICATIONS

IL-2R γ (A-10) is recommended for detection of IL-2R γ 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 γ siRNA (h): sc-35653, IL-2R γ shRNA Plasmid (h): sc-35653-SH and IL-2R γ shRNA (h) Lentiviral Particles: sc-35653-V.

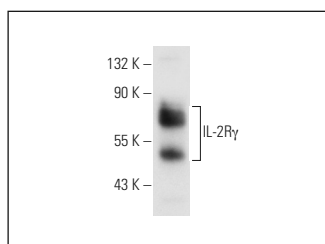
Molecular Weight of IL-2R γ : 55-60 kDa.

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

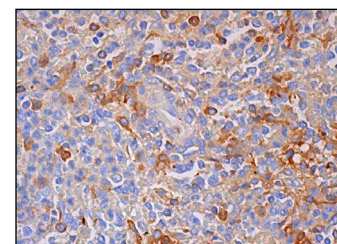
RECOMMENDED SUPPORT REAGENTS

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 γ (A-10): sc-271060. Western blot analysis of IL-2R γ expression in HuT 78 whole cell lysate.



IL-2R γ (A-10): sc-271060. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing membrane and cytoplasmic staining of subset of cells in red pulp.

SELECT PRODUCT CITATIONS

1. Miao, J.X., et al. 2020. Promising xenograft animal model recapitulating the features of human pancreatic cancer. *World J. Gastroenterol.* 26: 4802-4816.

RESEARCH USE

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