

IL-4R α (E-1): sc-165974

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.

CHROMOSOMAL LOCATION

Genetic locus: IL4R (human) mapping to 16p12.1; Il4ra (mouse) mapping to 7 F3.

SOURCE

IL-4R α (E-1) is a mouse monoclonal antibody raised against amino acids 511-810 of IL-4R α of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IL-4R α (E-1) is available conjugated to agarose (sc-165974 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-165974 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-165974 PE), fluorescein (sc-165974 FITC), Alexa Fluor[®] 488 (sc-165974 AF488), Alexa Fluor[®] 546 (sc-165974 AF546), Alexa Fluor[®] 594 (sc-165974 AF594) or Alexa Fluor[®] 647 (sc-165974 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-165974 AF680) or Alexa Fluor[®] 790 (sc-165974 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

IL-4R α (E-1) is recommended for detection of IL-4R α of mouse, rat and 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-4R α siRNA (h): sc-35661, IL-4R α siRNA (m): sc-35662, IL-4R α shRNA Plasmid (h): sc-35661-SH, IL-4R α shRNA Plasmid (m): sc-35662-SH, IL-4R α shRNA (h) Lentiviral Particles: sc-35661-V and IL-4R α shRNA (m) Lentiviral Particles: sc-35662-V.

Molecular Weight of IL-4R α : 140 kDa.

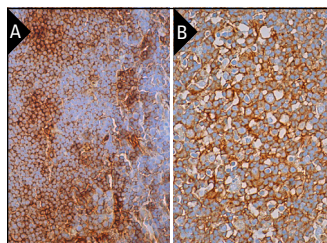
Molecular Weight of IL-4R α glycoprotein: 130 kDa.

Positive Controls: WEHI-231 whole cell lysate: sc-2213 or NIH/3T3 whole cell lysate: sc-2210.

STORAGE

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

DATA



IL-4R α (E-1): sc-165974. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse lymph node tissue showing membrane and cytoplasmic staining of cells in germinal center and cells in non-germinal center (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded rat lymph node tissue showing membrane and cytoplasmic staining of cells in germinal center and cytoplasmic staining of cells in non-germinal center (B).

SELECT PRODUCT CITATIONS

- Arensdorf, A.M. and Rutkowski, D.T. 2013. Endoplasmic reticulum stress impairs IL-4/IL-13 signaling through C/EBP β -mediated transcriptional suppression. *J. Cell Sci.* 126: 4026-4036.
- Kang, M.A., et al. 2019. Interleukin4R α (IL4R α) and IL13R α 1 are associated with the progress of renal cell carcinoma through Janus kinase 2 (JAK2)/forkhead box O3 (FOXO3) pathways. *Cancers* 11: 1394.
- Dutta, A.K., et al. 2020. Signaling through the interleukin-4 and interleukin-13 receptor complexes regulate cholangiocyte TMEM16A expression and biliary secretion. *Am. J. Physiol. Gastrointest. Liver Physiol.* 318: G763-G771.
- Kim, K.M., et al. 2021. Expression of IL4R α and IL13R α 1 are associated with poor prognosis of soft-tissue sarcoma of the extremities, superficial trunk, and retroperitoneum. *Diagn. Pathol.* 16: 2.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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