

IL-4R α (H-300): sc-25473

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

- Mosley, B., et al. 1989. The murine interleukin-4 receptor: molecular cloning and characterization of secreted and membrane bound forms. *Cell* 59: 335-348.
- 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.
- Takeshita, T., et al. 1992. Cloning of the γ chain of the human IL-2 receptor. *Science* 57: 379-382.
- Cao, X., et al. 1993. Characterization of cDNAs encoding the murine interleukin-2 receptor (IL-2R) γ chain: chromosomal mapping and tissue specificity of IL-2R γ chain expression. *Proc. Natl. Acad. Sci. USA* 90: 8464-8468.
- Minami, Y., et al. 1993. The IL-2 receptor complex: its structure, function and target genes. *Ann. Rev. Immunol.* 11: 245-268.

CHROMOSOMAL LOCATION

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

SOURCE

IL-4R α (H-300) is a rabbit polyclonal antibody raised against amino acids 526-825 of IL-4R α of human origin.

PRODUCT

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

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.

APPLICATIONS

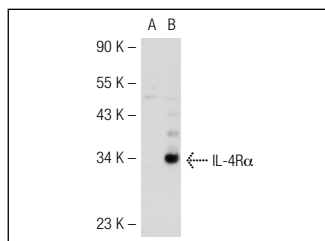
IL-4R α (H-300) is recommended for detection of IL-4R α of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) 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.

Positive Controls: Daudi + IL-4 cell lysate: sc-2267, Ramos + IL-4 cell lysate: sc-24762 or IL-4R α (m): 293T Lysate: sc-127006.

DATA



IL-4R α (H-300): sc-25473. Western blot analysis of IL-4R α expression in non-transfected: sc-117752 (A) and mouse IL-4R α transfected: sc-127006 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Kioi, M., et al. 2004. Mechanism of action of interleukin-13 antagonist (IL-13E13K) in cells expressing various types of IL-4R. *Cell. Immunol.* 229: 41-51.
- Liao, W., et al. 2008. Priming for T helper type 2 differentiation by interleukin 2-mediated induction of interleukin 4 receptor α -chain expression. *Nat. Immunol.* 9: 1288-1296.

PROTOCOLS

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