SANTA CRUZ BIOTECHNOLOGY, INC.

IL-4Rα (M-300): sc-25474

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 59: 335-348.
2. 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.
3. Takeshita, T., et al. 1992. Cloning of the γ chain of the human IL-2 receptor. Science 57: 379-382.
4. 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.
5. Minami, Y., et al. 1993. The IL-2 receptor complex: its structure, function and target genes. Ann. Rev. Immunol. 11: 245-268.
6. Kondo, M., et al. 1993. Sharing of the interleukin-2 (IL-2) receptor γ chain between receptors for IL-2 and IL-4. Science 262: 1874-1877.

CHROMOSOMAL LOCATION

Genetic locus: Il4ra (mouse) mapping to 7 F3.

SOURCE

IL-4Rα (M-300) is a rabbit polyclonal antibody raised against amino acids 511-810 of IL-4Rα 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.

STORAGE

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

APPLICATIONS

IL-4Rα (M-300) is recommended for detection of IL-4Rα 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), 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-4Rα siRNA (m): sc-35662, IL-4Rα shRNA Plasmid (m): sc-35662-SH and IL-4Rα shRNA (m) Lentiviral Particles: sc-35662-V.

Molecular Weight of IL-4Rα: 140 kDa.

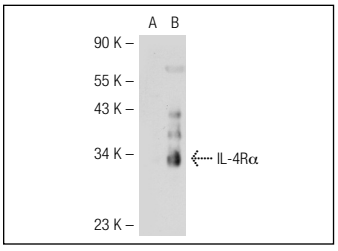
Molecular Weight of IL-4Rα glycoprotein: 130 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, WEHI-231 whole cell lysate: sc-2213 or IL-4Rα (m): 293T Lysate: sc-127006.

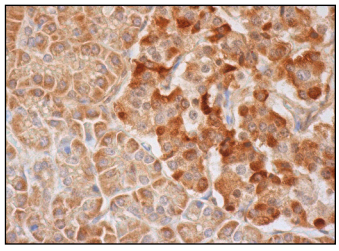
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



IL-4Rα (M-300): sc-25474. Western blot analysis of IL-4Rα expression in non-transfected: sc-117752 (**A**) and mouse IL-4Rα transfected: sc-127006 (**B**) 293T whole cell lysates.



IL-4Rα (M-300): sc-25474. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine glandular cells and Islets of Langerhans.

RESEARCH USE

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

PROTOCOLS

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