

IL-7 (NYRhIL7): sc-73320

BACKGROUND

Interleukin-7 (IL-7) was originally described as a factor capable of inducing *in vitro* proliferation of pre-B cells from marrow cultures. The IL-7 gene encodes a protein 177 amino acids in length. IL-7 exerts its biological function through the IL-7 receptor which is expressed on pre-B cells, thymocytes and bone marrow-derived macrophages. The IL-7 receptor is composed of an IL-7 receptor-specific chain and the IL-2 receptor γ chain common to the IL-2, IL-4, IL-7, IL-9 and IL-15 receptors. IL-7 stimulation leads to the activation of Janus tyrosine kinase family members JAK1 and JAK3. Other studies have shown that in T cells the IL-7 receptor-specific chain associates with the Src kinases family Lck and Fyn. IL-7 induces phosphorylation of insulin receptor substrate-1 (IRS-1) and insulin receptor substrate-2 (IRS-2), originally called 4PS.

REFERENCES

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- Takehita, T., et al. 1992. Cloning of the γ chain of the human IL-2 receptor. Science 257: 379-382.
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- Russell, S.M., et al. 1993. Interleukin-2 receptor γ chain: a functional component of the interleukin-4 receptor. Science 262: 1880-1883.
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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.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: IL7 (human) mapping to 8q21.12.

SOURCE

IL-7 (NYRhIL7) is a mouse monoclonal antibody raised against recombinant IL-7 of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

IL-7 (NYRhIL7) is recommended for detection of IL-7 of 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), intracellular flow cytometry (1 μ g per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IL-7 siRNA (h): sc-39629, IL-7 shRNA Plasmid (h): sc-39629-SH and IL-7 shRNA (h) Lentiviral Particles: sc-39629-V.

Molecular Weight of IL-7: 25 kDa.

SELECT PRODUCT CITATIONS

- Jian, M., et al. 2018. Interleukin-7 receptor activates PI3K/Akt/mTOR signaling pathway via downregulation of Beclin-1 in lung cancer. Mol. Carcinog. E-published.

RESEARCH USE

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