

IL-7R (E-17): sc-31341

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

1. Mosley, B., et al. 1989. The murine Interleukin-4 receptor: molecular cloning and characterization of secreted and membrane bound forms. *Cell* 89: 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* 257: 379-382.
4. Minami, Y., et al. 1993. The IL-2 receptor complex: its structure, function and target genes. *Annu. Rev. Immunol.* 11: 245-268.
5. 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.
6. Russell, S.M., et al. 1993. Interleukin-2 receptor γ chain: a functional component of the Interleukin-4 receptor. *Science* 262: 1880-1883.

CHROMOSOMAL LOCATION

Genetic locus: IL7R (human) mapping to 5p13; Il7r (mouse) mapping to 15 A1.

SOURCE

IL-7R (E-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of IL-7R 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.

Blocking peptide available for competition studies, sc-31341 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

IL-7R (E-17) is recommended for detection of IL-7R α precursor of mouse, rat 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-7R siRNA (h): sc-35664, IL-7R siRNA (m): sc-35665, IL-7R shRNA Plasmid (h): sc-35664-SH, IL-7R shRNA Plasmid (m): sc-35665-SH, IL-7R shRNA (h) Lentiviral Particles: sc-35664-V and IL-7R shRNA (m) Lentiviral Particles: sc-35665-V.

Molecular Weight of IL-7 heterodimer: 90 kDa.

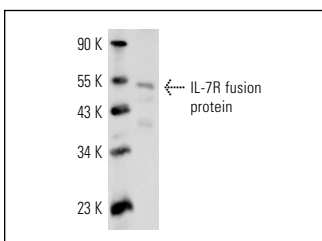
Molecular Weight of IL-7 α subunit: 76 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, WEHI-231 whole cell lysate: sc-2213 or Daudi cell lysate: sc-2415.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



IL-7R (E-17): sc-31341. Western blot analysis of human recombinant IL-7R fusion protein.

RESEARCH USE

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

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Try **IL-7R (G-11): sc-514445**, our highly recommended monoclonal alternative to IL-7R (E-17).