

IL-7 (H-151): sc-7921

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.

CHROMOSOMAL LOCATION

Genetic locus: IL7 (human) mapping to 8q21.12; Il7 (mouse) mapping to 3 A1.

SOURCE

IL-7 (H-151) is a rabbit polyclonal antibody raised against amino acids 27-177 of IL-7 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.

APPLICATIONS

IL-7 (H-151) is recommended for detection of IL-7 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-7 siRNA (h): sc-39629, IL-7 siRNA (m): sc-39630, IL-7 shRNA Plasmid (h): sc-39629-SH, IL-7 shRNA Plasmid (m): sc-39630-SH, IL-7 shRNA (h) Lentiviral Particles: sc-39629-V and IL-7 shRNA (m) Lentiviral Particles: sc-39630-V.

Molecular Weight of IL-7: 25 kDa.

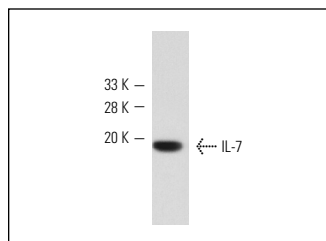
RECOMMENDED SECONDARY REAGENTS

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.

STORAGE

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

DATA



IL-7 (H-151): sc-7921. Western blot analysis of human recombinant IL-7.

SELECT PRODUCT CITATIONS

- Liao, X., et al. 2004. Glycogen synthase kinase-3 β activity is required for androgen-stimulated gene expression in prostate cancer. *Endocrinology* 145: 2941-2949.
- Haugen, F., et al. 2010. IL-7 is expressed and secreted by human skeletal muscle cells. *Am. J. Physiol., Cell Physiol.* 298: C807-C816.
- Bikker, A., et al. 2010. Increased expression of interleukin-7 in labial salivary glands of patients with primary Sjögren's syndrome correlates with increased inflammation. *Arthritis Rheum.* 62: 969-977.
- Pickens, S.R., et al. 2011. Characterization of IL-7 and IL-7R in the pathogenesis of rheumatoid arthritis. *Arthritis Rheum.* 63: 2884-2893.
- Sorrentino, C., et al. 2011. Androgen deprivation boosts prostatic infiltration of cytotoxic and regulatory T lymphocytes and has no effect on disease-free survival in prostate cancer patients. *Clin. Cancer Res.* 17: 1571-1581.
- Jana, M., et al. 2014. Interleukin-12 (IL-12), but not IL-23, induces the expression of IL-7 in microglia and macrophages: implications for multiple sclerosis. *Immunology* 141: 549-563.
- Zhang, Y., et al. 2015. Mutual enhancement of IL-2 and IL-7 on DNA vaccine immunogenicity mainly involves regulations on their receptor expression and receptor-expressing lymphocyte generation. *Vaccine* 33: 3480-3487.

RESEARCH USE

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

MONOS
Satisfaction
Guaranteed

Try **IL-7 (D-9): sc-365306** or **IL-7 (NyrhIL7): sc-73320**, our highly recommended monoclonal alternatives to IL-7 (H-151).