

IL-7R (C-20): sc-662

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: IL7R (human) mapping to 5p13.2; Il7r (mouse) mapping to 15 A1.

SOURCE

IL-7R (C-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus 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-662 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

IL-7R (C-20) is recommended for detection of IL-7R 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), 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).

IL-7R (C-20) is also recommended for detection of IL-7R in additional species, including equine, canine, bovine and porcine.

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.

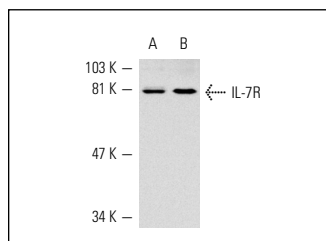
STORAGE

Store at 4 $^{\circ}$ C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

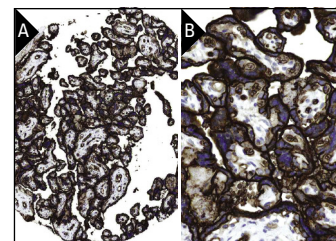
RESEARCH USE

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

DATA



IL-7R (C-20): sc-662. Western blot analysis of IL-7 receptor expression in K-562 (A) and WEHI-231 (B) whole cell lysates.



IL-7R (C-20): sc-662. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing membrane staining of decidual and trophoblastic cells at low (A) and high (B) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

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- Ming, J., et al. 2009. Interleukin 7/interleukin 7 receptor induce c-Fos/c-Jun-dependent vascular endothelial growth factor-D up-regulation: a mechanism of lymphangiogenesis in lung cancer. *Eur. J. Cancer* 45: 66-873.
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- Ming, J., et al. 2011. Interleukin-7 up-regulates cyclin D1 via activator protein-1 to promote proliferation of cell in lung cancer. *Cancer Immunol. Immunother.* 61: 79-88.
- 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.
- Chen, Z., et al. 2013. The novel role of IL-7 ligation to IL-7 receptor in myeloid cells of rheumatoid arthritis and collagen-induced arthritis. *J. Immunol.* 190: 5256-5266.



Try **IL-7R (G-11): sc-514445**, our highly recommended monoclonal alternative to IL-7R (C-20).