



IL-2 (I2-C7): sc-57285

BACKGROUND

Lymphokines are a group of signaling molecules involved in communication between cells of the immune system. Lymphokines secreted by activated lymphocytes include proteins such as interleukin-2 (IL-2). This protein is secreted primarily by helper T cells that have been activated through the T cell receptor complex or by other mitogens. IL-2 targets activated T helper and cytotoxic T cells, inducing their proliferation. The secretion of IL-2 can also act as a growth factor for B cells. To date, three different IL-2-dependent signal transduction pathways have been identified: the c-Fos/c-Jun induction pathway mediated by Src family protein-tyrosine kinases, the c-Myc induction pathway and the Rapamycin-sensitive pathway, all of which result in the induction of Bcl-2. In addition, the transcription factor NFAT has been shown to play a major role in the regulation of IL-2 transcription and correlates to an age-related decline in the expression of IL-2.

REFERENCES

1. Smith, K.A. 1980. T-cell growth factor. *Immunol. Rev.* 51: 337-357.
2. Taniguchi, T., et al. 1983. Structure and expression of a cloned cDNA for human interleukin-2. *Nature* 302: 305-310.
3. Lowenthal, J.W., et al. 1985. Similarities between interleukin-2 receptor number and affinity on activated B and T lymphocytes. *Nature* 315: 669-672.
4. Guy, G.R., et al. 1990. Lymphokine signal transduction. *Prog. Growth Factor Res.* 2: 45-70.
5. Germann, T., et al. 1991. Components of an antigen-/T cell receptor-independent pathway of lymphokine production. *Eur. J. Immunol.* 21: 1857-1861.
6. Miyazaki, T., et al. 1995. Three distinct IL-2 signaling pathways mediated by Bcl-2, c-Myc, and Lck cooperate in hematopoietic cell proliferation. *Cell* 81: 223-231.
7. Eljaafari, A., et al. 1995. Contribution of p56^{lck} to the upregulation of cytokine production and T cell proliferation by IL-2 in human CD3-stimulated T cell clones. *Cell. Immunol.* 160: 152-156.
8. Pahlavani, M.A., et al. 1995. The age-related decline in the induction of IL-2 transcription is correlated to changes in the transcription factor NFAT. *Cell. Immunol.* 165: 84-91.

CHROMOSOMAL LOCATION

Genetic locus: Il2 (mouse) mapping to 3 B.

SOURCE

IL-2 (I2-C7) is a rat monoclonal antibody raised against full length IL-2 of mouse origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

IL-2 (I2-C7) is recommended for detection of IL-2 of mouse origin by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IL-2 siRNA (m): sc-39620, IL-2 shRNA Plasmid (m): sc-39620-SH and IL-2 shRNA (m) Lentiviral Particles: sc-39620-V.

Molecular Weight of IL-2: 15 kDa.

STORAGE

Store at 4° 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.

PROTOCOLS

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