SANTA CRUZ BIOTECHNOLOGY, INC.

IL-2 (C2-1-hIL2): sc-32295

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. This protein is secreted primarily by helper T cells that have been activated through the T cell receptor complex or by other mitogens. Cells targeted by IL-2 include 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 (human) mapping to 4q27.

SOURCE

IL-2 (C2-1-hIL2) is a mouse monoclonal antibody raised against recombinant IL-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

IL-2 (C2-1-hIL2) is recommended for detection of IL-2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for IL-2 siRNA (h): sc-39619, IL-2 shRNA Plasmid (h): sc-39619-SH and IL-2 shRNA (h) Lentiviral Particles: sc-39619-V.

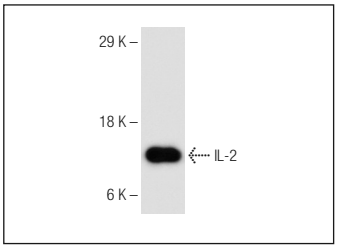
Molecular Weight of IL-2: 15 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HuT 78 whole cell lysate: sc-2208 or CCRF-CEM cell lysate: sc-2225.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



IL-2 (C2-1-hIL2): sc-32295. Western blot analysis of biologically active human recombinant IL-2.

SELECT PRODUCT CITATIONS

1. Voicu, S.N., et al. 2019. Amorphous silica nanoparticles obtained by laser ablation induce inflammatory response in human lung fibroblasts. Materials 12: 1026.

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.