# IL-15 (h): 293T Lysate: sc-113632



The Power to Question

#### **BACKGROUND**

Interleukin-15 (IL-15), also designated IL-T, is a cloned cytokine which shares several biological activities but no sequence homology with IL-2. Human, mouse and simian IL-15 cDNA clones have been isolated and characterized. All three species encode a 162 amino acid residue precursor protein containing a 48 amino acid leader that is cleaved to generate the mature form of IL-15. IL-15 stimulates the proliferation of T cells and NK cells, while enhancing B cell expansion and antibody production. Unlike IL-2, IL-15 is not produced by lymphocytes, but appears to be produced by macrophages, epithelial lines, muscle and placenta. IL-15 has also been shown to be a chemoattractant for human blood T lymphocytes and to be able to induce lymphokine-activated killer (LAK) activity in NK cells as well as to be able to induce the generation of cytolytic effector cells. Studies have shown that IL-15 is the only other cytokine that shares the  $\beta$  signaling subunit of the IL-2R. Evidence also suggests that like IL-2, IL-4 and IL-7, IL-15 utilizes the common IL-2R $\gamma$  subunit.

## **REFERENCES**

- Burton, J.D., Bamford, R.N., Peters, C., Grant, A.J., Kurys, G., Goldman, C.K., Brennan, J., Roessler, E. and Waldmann, T.A. 1994. A lymphokine, provisionally designated interleukin T and produced by a human adult T cell leukemia line, stimulates T cell proliferation and the induction of lymphokine-activated killer cells. Proc. Natl. Acad. Sci. USA 91: 4935-4939.
- 2. Grabstein, K.H., Eisenman, J., Shanebeck, K., Rauch, C., Srinivasan, S., Fung, V., Beers, C., Richardson, J., Schoenborn, M.A., Ahdieh, M., Johnson, L., Alderson, M.R., Watson, J.D., Anderson, D.M. and Giri, J.G. 1994. Cloning of a T cell growth factor that interacts with the  $\beta$  chain of the interleukin-2 receptor. Science 264: 965-968.
- 3. Giri, J.G., Ahdieh, M., Eisenman, J., Shanebeck, K., Grabstein, K., Kumaki, S., Namen, A., Park, L.S., Cosman, D. and Anderson, D. 1994. Utilization of the  $\beta$  and  $\gamma$  chains of the IL-2 receptor by the novel cytokine IL-15. EMBO J. 13: 2822-2830.
- 4. Anderson, D.M., Kumaki, S., Ahdieh, M., Bertles, J., Tometsko, M., Loomis, A., Giri, J., Copeland, N.G., Gilbert, D.J., Jenkins, N.A., Valentine, V., Shapiro, D.N., Morris, S.W., Park, L.S. and Cosman, D. 1995. Functional characterization of the human interleukin-15 receptor  $\alpha$  chain and close linkage of IL15RA and IL2RA genes. J. Biol. Chem. 270: 29862-29869.
- Armitage, R.J., Macduff, B.M., Eisenman, J., Paxton, R. and Grabstein, K.H. 1995. IL-15 has stimulatory activity for the induction of B cell proliferation and differentiation. J. Immunol. 154: 483-490.
- Mohamadzadeh, M., Takashima, A., Dougherty, I., Knop, J., Bergstresser, P.R. and Cruz, P.D., Jr. 1995. Ultraviolet B radiation upregulates the expression of IL-15 in human skin. J. Immunol. 155: 4492-4496.
- 7. Doherty, T.M., Seder, R.A. and Sher, A. 1996. Induction and regulation of IL-15 expression in murine macrophages. J. Immunol. 156: 735-741.

## **STORAGE**

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

#### **CHROMOSOMAL LOCATION**

Genetic locus: IL15 (human) mapping to 4q31.21.

## **PRODUCT**

IL-15 (h): 293T Lysate represents a lysate of human IL-15 transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

#### **APPLICATIONS**

IL-15 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive IL-15 antibodies. Recommended use: 10-20  $\mu$ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

## **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.

**Santa Cruz Biotechnology, Inc.** 1.800.457.3801 831.457.3800 fax 831.457.3801 **Europe** +00800 4573 8000 49 6221 4503 0 **www.scbt.com**