

IL-15R α (G-7): sc-271366

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 β 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 γ subunit.

REFERENCES

- Burton, J.D., et al. 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.
- Grabstein, K.H., et al. 1994. Cloning of a T cell growth factor that interacts with the β chain of the interleukin-2 receptor. *Science* 264: 965-968.
- Giri, J.G., et al. 1994. Utilization of the β and γ chains of the IL-2 receptor by the novel cytokine IL-15. *EMBO J.* 13: 2822-2830.
- Armitage, R.J., et al. 1995. IL-15 has stimulatory activity for the induction of B cell proliferation and differentiation. *J. Immunol.* 154: 483-490.
- Mohamadzadeh, M., et al. 1995. Ultraviolet B radiation upregulates the expression of IL-15 in human skin. *J. Immunol.* 155: 4492-4496.
- Anderson, D.M., et al. 1995. Chromosomal assignment and genomic structure of IL-15. *Genomics* 25: 701-706.
- Doherty, T.M., et al. 1996. Induction and regulation of IL-15 expression in murine macrophages. *J. Immunol.* 156: 735-741.

CHROMOSOMAL LOCATION

Genetic locus: IL15RA (human) mapping to 10p15.1.

SOURCE

IL-15R α (G-7) is a mouse monoclonal antibody raised against amino acids 24-130 of IL-15R α of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

IL-15R α (G-7) is recommended for detection of IL-15R α of human origin by Western Blotting (starting dilution 1:100, 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-15R α siRNA (h): sc-40051, IL-15R α shRNA Plasmid (h): sc-40051-SH and IL-15R α shRNA (h) Lentiviral Particles: sc-40051-V.

Molecular Weight of IL-15R α : 30 kDa.

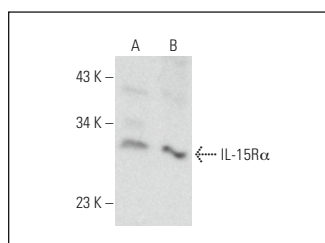
Positive Controls: Ramos cell lysate: sc-2216, Jurkat whole cell lysate: sc-2204 or Raji whole cell lysate: sc-364236.

RECOMMENDED SUPPORT REAGENTS

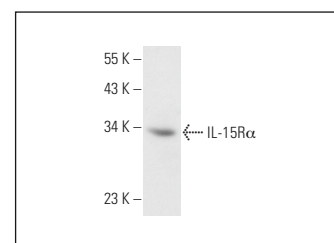
To ensure optimal results, the following support reagents are recommended:

- Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.
- Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



IL-15R α (G-7): sc-271366. Western blot analysis of IL-15R α expression in Ramos (A) and Jurkat (B) whole cell lysates.



IL-15R α (G-7): sc-271366. Western blot analysis of IL-15R α expression in Raji whole cell lysate.

SELECT PRODUCT CITATIONS

- Pérez-López, A., et al. 2018. Skeletal muscle IL-15/IL-15R α and myofibrillar protein synthesis after resistance exercise. *Scand. J. Med. Sci. Sports* 28: 116-125.

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.