

IL-15R α (G-3): sc-374023

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.

CHROMOSOMAL LOCATION

Genetic locus: IL15RA (human) mapping to 10p15.1; Il15ra (mouse) mapping to 2 A1.

SOURCE

IL-15R α (G-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 21-54 near the N-terminus of IL-15R α of human origin.

PRODUCT

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

IL-15R α (G-3) is available conjugated to agarose (sc-374023 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374023 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374023 PE), fluorescein (sc-374023 FITC), Alexa Fluor[®] 488 (sc-374023 AF488), Alexa Fluor[®] 546 (sc-374023 AF546), Alexa Fluor[®] 594 (sc-374023 AF594) or Alexa Fluor[®] 647 (sc-374023 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-374023 AF680) or Alexa Fluor[®] 790 (sc-374023 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, IL-15R α (G-3) is available conjugated to biotin (sc-374023 B), 200 μ g/ml, for WB, IHC(P) and ELISA.

Blocking peptide available for competition studies, sc-374023 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

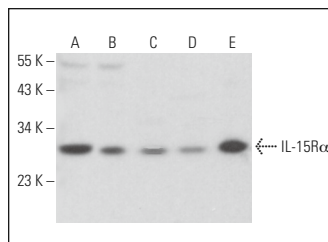
IL-15R α (G-3) is recommended for detection of IL-15R α of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution 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 siRNA (m): sc-40052, IL-15R α shRNA Plasmid (h): sc-40051-SH, IL-15R α shRNA Plasmid (m): sc-40052-SH, IL-15R α shRNA (h) Lentiviral Particles: sc-40051-V and IL-15R α shRNA (m) Lentiviral Particles: sc-40052-V.

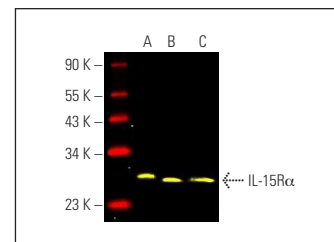
Molecular Weight of IL-15R α : 30 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Daudi cell lysate: sc-2415 or KNRK whole cell lysate: sc-2214.

DATA



IL-15R α (G-3): sc-374023. Western blot analysis of IL-15R α expression in Raji (A), Daudi (B), c4 (C), Sol8 (D) and KNRK (E) whole cell lysates.



IL-15R α (G-3) Alexa Fluor[®] 488: sc-374023 AF488. Direct fluorescent western blot analysis of IL-15R α expression in K-562 (A), Daudi (B) and KNRK (C) whole cell lysates. Blocked with UltraCruz[®] Blocking Reagent: sc-516214. Cruz Marker[™] Molecular Weight Standards detected with Cruz Marker MW Tag-Alexa Fluor[®] 790: sc-516731.

SELECT PRODUCT CITATIONS

- Thi, V.A.D., et al. 2019. Cell-based IL-15:IL-15R α secreting vaccine as an effective therapy for CT26 colon cancer in mice. *Mol. Cells* 42: 869-883.
- Yoshida, S., et al. 2022. Interleukin-15 receptor subunit α regulates interleukin-15 localization and protein expression in skeletal muscle cells. *Exp. Physiol.* 107: 222-232.
- Cho, K.B., et al. 2022. A peptoid interleukin-15 receptor antagonist suppresses inflammation and arthritis in mice. *Clin. Transl. Immunology* 11: e1432.
- Shakiba, Y., et al. 2023. Oncolytic therapy with recombinant vaccinia viruses targeting the interleukin-15 pathway elicits a synergistic response. *Mol. Ther. Oncolytics* 29: 158-168.

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.