

# IL-15R $\alpha$ (H-107): sc-9172

## 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 3 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., 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  $\beta$  chain of the interleukin-2 receptor. *Science* 264: 965-968.
- Giri, J.G., et al. 1994. Utilization of the  $\beta$  and  $\gamma$  chains of the IL-2 receptor by the novel cytokine IL-15. *EMBO J.* 13: 2822-2830.
- Anderson, D.M., et al. 1995. Chromosomal assignment and genomic structure of IL-15. *Genomics* 25: 701-706.
- 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

IL-15R $\alpha$  (H-107) is a rabbit polyclonal antibody raised against amino acids 24-130 of IL-15R $\alpha$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

Store at 4 $^{\circ}$  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.

## APPLICATIONS

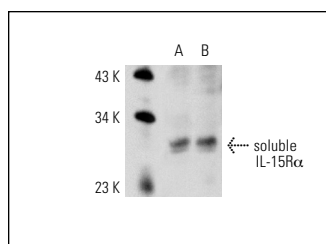
IL-15R $\alpha$  (H-107) is recommended for detection of IL-15R $\alpha$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 $\alpha$  siRNA (h): sc-40051, IL-15R $\alpha$  siRNA (m): sc-40052, IL-15R $\alpha$  shRNA Plasmid (h): sc-40051-SH, IL-15R $\alpha$  shRNA Plasmid (m): sc-40052-SH, IL-15R $\alpha$  shRNA (h) Lentiviral Particles: sc-40051-V and IL-15R $\alpha$  shRNA (m) Lentiviral Particles: sc-40052-V.

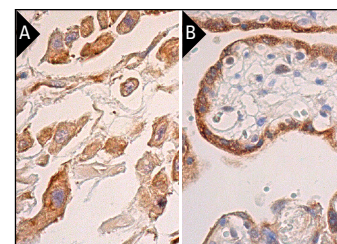
Molecular Weight of IL-15R $\alpha$ : 30 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Raji whole cell lysate: sc-364236 or Caco-2 cell lysate: sc-2262.

## DATA



IL-15R $\alpha$  (H-107): sc-9172. Western blot analysis of soluble IL-15R $\alpha$  expression in Raji (A) and K-562 (B) whole cell lysates.



IL-15R $\alpha$  (H-107): sc-9172. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of decidual (A) and trophoblastic (B) cells.

## SELECT PRODUCT CITATIONS

- Ruckert, R., et al. 2003. Dendritic cell-derived IL-15 controls the induction of CD8 T cell immune responses. *Eur. J. Immunol.* 33: 3493-3503.
- Kuniyasu, H., et al. 2003. Production of interleukin-15 by human colon cancer cells is associated with induction of mucosal hyperplasia, angiogenesis, and metastasis. *Clin. Cancer Res.* 9: 4802-4810.
- Xu, Q., et al. 2004. CD56<sup>+</sup> cells induce steroid resistance in B cells exposed to IL-15. *J. Immunol.* 172: 7110-7115.
- Giron-Michel, J., et al. 2012. Interleukin-15 plays a central role in human kidney physiology and cancer through the  $\gamma$ c signaling pathway. *PLoS ONE* 7: e31624.

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Try **IL-15R $\alpha$  (G-3): sc-374023** or **IL-15R $\alpha$  (G-7): sc-271366**, our highly recommended monoclonal alternatives to IL-15R $\alpha$  (H-107).