SANTA CRUZ BIOTECHNOLOGY, INC.

IL-15Rα (N-19): sc-1524

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Interleukin-15 (IL-15), also designated IL-T, is a cloned cytokine that 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 it 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. Research has shown IL-15 to be able to induce lymphokine-activated killer (LAK) activity in NK cells and to induce the generation of cytolytic effector cells. The IL-15 receptor, IL-15Rα, is a trimeric complex composed of a high-affinity binding α chain, specific to IL-15Rα, and the IL-2β and IL-2γ chains common to the IL-2, IL-4, IL-7 and IL-15 receptors.

CHROMOSOMAL LOCATION

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

SOURCE

IL-15Rα (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of IL-15Rα of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1524 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

L-15Rα (N-19) is recommended for detection of IL-15Rα of mouse and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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-15Rα siRNA (h): sc-40051, IL-15Rα siRNA (m): sc-40052, IL-15Rα shRNA Plasmid (h): sc-40051-SH, IL-15Rα shRNA Plasmid (m): sc-40052-SH, IL-15Rα shRNA (h) Lentiviral Particles: sc-40051-V and IL-15Rα shRNA (m) Lentiviral Particles: sc-40052-V.

Molecular Weight of IL-15Rα: 30 kDa.

Positive Controls: mouse heart extract: sc-2254.

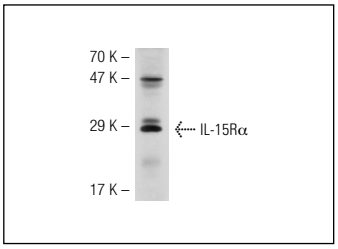
STORAGE

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

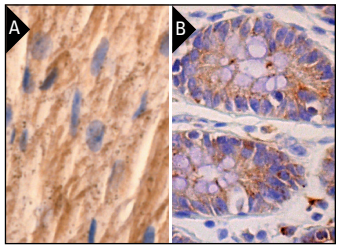
RESEARCH USE

For research use only, not for use in diagnostic procedures.

DATA



IL-15Rα (N-19): sc-1524. Western blot analysis of IL-15Rα expression in mouse heart tissue extract.



IL-15Rα (N-19): sc-1524. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse heart tissue showing membrane localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

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3. Kobayashi, H., et al. 2005. Role of *trans*-cellular IL-15 presentation in the activation of NK cell-mediated killing, which leads to enhanced tumor immunosurveillance. Blood 105: 721-727.
4. Budagian, V., et al. 2005. A promiscuous liaison between IL-15 receptor and Axl receptor tyrosine kinase in cell death control. EMBO J. 24: 4260-4270.
5. Bulanova, E., et al. 2007. Soluble Interleukin IL-15Rα is generated by alternative splicing or proteolytic cleavage and forms functional complexes with IL-15. J. Biol. Chem. 282: 13167-13179.
6. He, Y., et al. 2010. Interleukin-15 receptor is essential to facilitate GABA transmission and hippocampal-dependent memory. J. Neurosci. 30: 4725-4734.
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8. Pan, W., et al. 2011. Potential protective role of IL15Rα during inflammation. J. Mol. Neurosci. 43: 412-423.
9. Stone, K.P., et al. 2011. Rapid endocytosis of interleukin-15 by cerebral endothelia. J. Neurochem. 116: 544-553.