SANTA CRUZ BIOTECHNOLOGY, INC.

IL-21R (H-213): sc-32902

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The IL-21 receptor (also designated IL-21R, NILR or novel interleukin receptor) is a type I cytokine receptor that forms a complex with the cytokine receptor γ chain, γ_c, and mediates IL-21 signaling. IL-21R is present on the surface of natural killer, B and T cell populations with high levels in spleen and thymus. IL-21 and IL-21R influence lymphoid proliferation and early lymphoid development in the transition between innate and adaptive immunity. Tumor necrosis factor (TNF) upregulates IL-21R, and combinations of TNF and IL-21 can have synergistic effects on myeloma cell proliferation through pathways involving phosphorylation of JAK1, Stat3 and Erk1/2. The human IL21R gene maps to chromosome 16p12.1 and encodes a 538 amino acid protein that is closely related to human IL-2Rβ and shares 62% sequence identity to mouse IL-21R.

REFERENCES

1. Parrish-Novak, J., et al. 2000. Interleukin-21 and its receptor are involved in NK cell expansion and regulation of lymphocyte function. Nature 408: 57-63.
2. Asao, H., et al. 2001. Cutting edge: the common γ-chain is an indispensable subunit of the IL-21 receptor complex. J. Immunol. 167: 1-5.

CHROMOSOMAL LOCATION

Genetic locus: IL21R (human) mapping to 16p12.1; Il21r (mouse) mapping to 7 F3.

SOURCE

IL-21R (H-213) is a rabbit polyclonal antibody raised against amino acids 20-232 mapping near the N-terminus of IL-21R of human origin.

PRODUCT

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

APPLICATIONS

IL-21R (H-213) is recommended for detection of IL-21R of mouse, rat and 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-21R siRNA (h): sc-40053, IL-21R siRNA (m): sc-40054, IL-21R shRNA Plasmid (h): sc-40053-SH, IL-21R shRNA Plasmid (m): sc-40054-SH, IL-21R shRNA (h) Lentiviral Particles: sc-40053-V and IL-21R shRNA (m) Lentiviral Particles: sc-40054-V.

Molecular Weight (predicted) of IL-21R: 59 kDa.

Molecular Weight (observed) of unglycosylated IL-21R: 58 kDa.

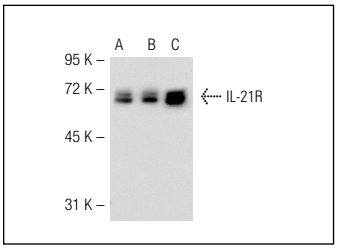
Molecular Weight (observed) of glycosylated IL-21R: 68-100 kDa.

Positive Controls: IL-21R (m): 293T Lysate: sc-127005 or Raji whole cell lysate.

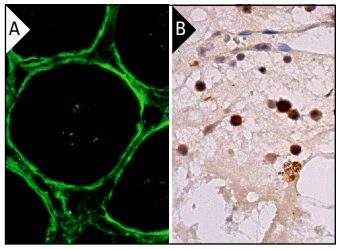
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



IL-21R (H-213): sc-32902. Western blot analysis of IL-21R expression in non-transfected 293T: sc-117752 (**A**), mouse IL-21R transfected 293T: sc-127005 (**B**) and Raji (**C**) whole cell lysates.



IL-21R (H-213): sc-32902. Immunofluorescence staining of normal mouse intestine frozen section showing membrane staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human bone marrow tissue showing cytoplasmic staining of hematopoietic cells (**B**).

SELECT PRODUCT CITATIONS

1. Lamprecht, B., et al. 2008. Aberrant expression of the Th2 cytokine IL-21 in Hodgkin lymphoma cells regulates Stat3 signaling and attracts Treg cells via regulation of MIP-3α. Blood 112: 3339-3347.
2. Eriksen, K.W., et al. 2009. The combination of IL-21 and IFN-α boosts STAT3 activation, cytotoxicity and experimental tumor therapy. Mol. Immunol. 46: 812-820.

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.