

# IL-21R (H-11): sc-137120

## 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  $\gamma$  chain,  $\gamma_c$  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 IL-21R gene maps to chromosome 16p12.1 and encodes a 538 amino acid protein that is closely related to human IL2RB and shares 62% sequence identity to mouse IL21r.

## 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  $\gamma$ -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-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 473-509 near the N-terminus of IL-21R of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>3</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

IL-21R (H-11) is available conjugated to agarose (sc-137120 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-137120 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-137120 PE), fluorescein (sc-137120 FITC), Alexa Fluor<sup>®</sup> 488 (sc-137120 AF488), Alexa Fluor<sup>®</sup> 546 (sc-137120 AF546), Alexa Fluor<sup>®</sup> 594 (sc-137120 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-137120 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-137120 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-137120 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-137120 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## APPLICATIONS

IL-21R (H-11) is recommended for detection of IL-21R of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) 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.

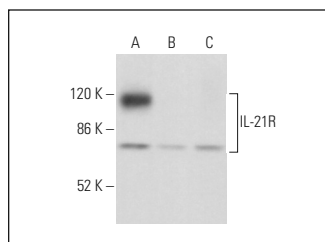
Molecular Weight (predicted) of IL-21R: 59 kDa.

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

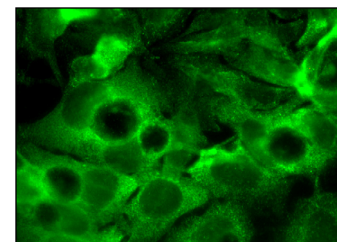
Molecular Weight (observed) of glycosylated IL-21R: 68-100 kDa.

Positive Controls: Raji whole cell lysate: sc-364236, K-562 whole cell lysate: sc-2203 or U-698-M whole cell lysate: sc-364799.

## DATA



IL-21R (H-11): sc-137120. Western blot analysis of IL-21R expression in Raji (A), K-562 (B) and U-698-M (C) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



IL-21R (H-11): sc-137120. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Wang, L.N., et al. 2015. Interleukin 21 and its receptor play a role in proliferation, migration and invasion of breast cancer cells. *Cancer Genomics Proteomics* 12: 211-221.
2. Wang, Y., et al. 2018. Detection of Treg/Th17 cells and related cytokines in peripheral blood of chronic hepatitis B patients combined with thrombocytopenia and the clinical significance. *Exp. Ther. Med.* 16: 1328-1332.

## RESEARCH USE

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

Alexa Fluor<sup>®</sup> is a trademark of Molecular Probes, Inc., Oregon, USA