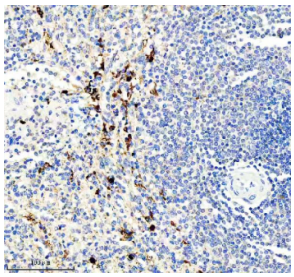
IL21R Antibody / Interleukin-21 receptor (FY13110)

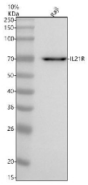
Catalog No.	Formulation	Size
FY13110	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

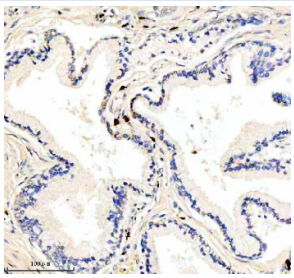
Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9HBE5
Localization	Cytoplasm, cell membrane
Applications	Western Blot : 0.25-0.5ug/ml Immunohistochemistry : 2-5ug/ml Flow Cytometry : 1-3ug/million cells
Limitations	This IL21R antibody is available for research use only.



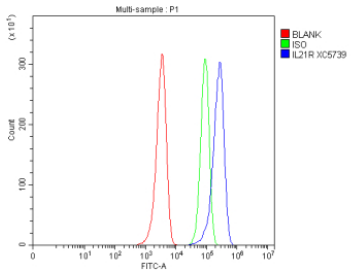
Immunohistochemical staining of IL21R using anti-IL21R antibody. IL21R was detected in a paraffin-embedded section of human spleen tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-IL21R antibody overnight at 4oC. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37oC. The tissue section was developed using an HRP secondary and DAB substrate.



Western blot analysis of IL21R using anti-IL21R antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human Raji whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-IL21R antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using an ECL Plus Western Blotting Substrate. IL21R antibody detects a single band at ~70 kDa in Raji lysate. Although the calculated mass of IL21R is ~59 kDa, this type I cytokine receptor is heavily N-glycosylated and commonly migrates at ~68-80 kDa.



Immunohistochemical staining of IL21R using anti-IL21R antibody. IL21R was detected in a paraffin-embedded section of human prostate cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-IL21R antibody overnight at 4oC. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37oC. The tissue section was developed using an HRP secondary and DAB substrate.



Flow Cytometry analysis of HEL cells using anti-IL21R antibody. Overlay histogram showing HEL cells stained with (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-IL21R antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

Description

IL21R antibody detects Interleukin-21 receptor, a type I cytokine receptor that mediates signaling of interleukin-21, a key regulator of immune cell proliferation and differentiation. The UniProt recommended name is Interleukin-21 receptor (IL21R). This transmembrane receptor pairs with the common gamma chain (IL2RG) to form a heterodimeric signaling complex that activates the JAK/STAT pathway in lymphoid cells.

Functionally, IL21R antibody identifies a 538-amino-acid receptor composed of an extracellular cytokine-binding domain, a single transmembrane segment, and a cytoplasmic tail containing Box1 and Box2 motifs that recruit Janus kinases (JAK1 and JAK3). IL21R engagement by IL21 triggers STAT1 and STAT3 phosphorylation, promoting differentiation of B cells, T follicular helper cells, and cytotoxic CD8+ T cells.

The IL21R gene is located on chromosome 16p11.2 and is expressed primarily in lymphocytes, including B cells, natural killer cells, and T cells. Through IL21 signaling, IL21R regulates immunoglobulin production, cytotoxicity, and inflammatory cytokine release. It plays a key role in maintaining immune homeostasis and supporting antibody-mediated immunity.

Pathologically, mutations or altered expression of IL21R are associated with primary immunodeficiency, autoimmune diseases, and lymphoproliferative disorders. Loss of IL21R function impairs B and T cell responses, while overactivation contributes to chronic inflammation. Research using IL21R antibody supports studies in immunology, cytokine signaling, and immune regulation.

IL21R antibody is validated for use in western blotting, flow cytometry, and immunohistochemistry to detect receptor expression and signaling status. NSJ Bioreagents provides high-quality IL21R antibody reagents optimized for cytokine signaling, immunotherapy, and immune cell differentiation research.

Structurally, Interleukin-21 receptor shares homology with other gamma-chain cytokine receptors, featuring fibronectin type III-like domains for ligand binding. This antibody enables detailed analysis of IL21R's function in immune communication and adaptive responses.

Application Notes

Optimal dilution of the IL21R antibody should be determined by the researcher.

Immunogen

A synthetic peptide corresponding to a sequence in the middle region of human IL21R was used as the immunogen for the IL21R antibody.

Storage

After reconstitution, the IL21R antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.