

IL-21R Protein, Cynomolgus, Rhesus, Recombinant (hFc)

General Information

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| Synonyms: | interleukin 21 receptor |
| Protein Construction: | A DNA sequence encoding the cynomolgus / rhesus IL21R (XP_005591578.1) (Met1-Pro236) was expressed with the Fc region of human IgG1 at the C-terminus. Cynomolgus and Rhesus IL21R sequences are identical. Predicted N terminal: Cys 20 |
| Species: | Cynomolgus,Rhesus |
| Expression Host: | HEK293 Cells |
| Accession: | A0A2K5U8A7 |
| Molecular Weight: | 52 kDa (predicted) |

QC Testing

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| Biological Activity: | 1. Measured by its binding ability in a functional ELISA. 2. Immobilized human IL21 at 10 µg/mL (100 µL/well) can bind Cynomolgus IL21R-Fc. The EC50 of Cynomolgus IL21R-Fc is 0.11-0.25 µg/mL. |
| Purity: | > 90 % as determined by SDS-PAGE. |
| Endotoxin: | < 1.0 EU/µg of the protein as determined by the LAL method. |
| Formulation: | Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization. |

Preparation and Storage

Reconstitution:
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Interleukin-21 receptor, also known as IL-21 receptor, IL-21R, Novel interleukin receptor, IL21R, and NILR, is a single-pass type I membrane protein that belongs to the type I cytokine receptor family and Type 4 subfamily. Interleukin-21 (IL-21) belongs to a family of cytokines that bind to a composite receptor consisting of a private

receptor (IL-21R) and the common cytokine receptor gamma chain (gamma(C)). The IL-21R is discovered as a novel member of the class-I-cytokine-receptor family and is selectively expressed in lymphoid tissues. IL-21R shows strong sequence homologies to the interleukin-4 receptor alpha chain gene (IL-4RA). The WSXWS motif of IL-21R appears to be necessary for proper protein folding and thereby efficient intracellular transport and cell-surface receptor binding. The box 1 motif of IL-21R is required for JAK interaction and/or activation. The IL-21R is widely distributed on lymphohematopoietic cells and IL21 impacts some cell types, including CD8+ memory T cells, NK cells, and subsets of CD4 memory T cells. Increased IL21 production is characteristic of certain autoimmune diseases and is likely to contribute to autoantibody production as well as pathological features of autoimmune disease. The critical role of IL21 in promoting humoral immune responses makes it an important focus of potential therapeutic interventions in conditions characterized by the overproduction of pathogenic autoantibodies.

Reference

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): 1-5.

Wu Z, et al. (2005) Interleukin-21 receptor gene induction in human T cells is mediated by T-cell receptor-induced Sp1 activity. *Mol Cell Biol.* 25(22): 9741-52.

De Toter D, et al. (2006) Interleukin-21 receptor (IL-21R) is up-regulated by CD40 triggering and mediates proapoptotic signals in chronic lymphocytic leukemia B cells. *Blood.* 107(9): 3708-15.

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481