Recombinant Human IL-21R Protein (His Tag)

Catalog Number: PKSH031111

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

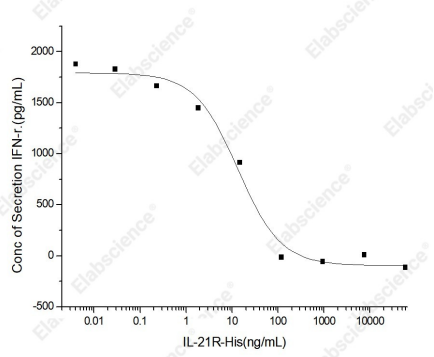
Description

Species	Human
Source	HEK293 Cells-derived Human IL-21R protein Met 1-Pro 236, with an C-terminal His
Calculated MW	26.5 kDa
Accession	Q9HBE5-1
Bio-activity	1. Measured by its ability to bind human IL-21 in a functional ELISA. 2. Measured by its ability to inhibit IL21-induced Interferon gamma secretion by human natural killer lymphoma NK-92 cells. The ED_{50} for this effect is typically 1-5 ng/ml in the presence of 10 ng/ml of recombinant human IL23. Measured by its ability to inhibit IL21-induced Interferon gamma secretion by human natural killer lymphoma NK-92 cells. The ED_{50} for this effect is typically 50-200 pg/mL in the presence of 1 ng/ml of recombinant human IL21.

Properties

Purity	> 92% as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS, pH 7.4 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



Measured by its ability to inhibit IL-21-induced Interferon gamma secretion by human natural killer lymphoma NK-92 cells. The ED_{50} for this effect is typically 4-25 ng/mL in the presence of 2ng/mL of recombinant human IL-21.

Background

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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 which 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 clas s-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 lympho-haematopoietic cells and IL21 impacts a number of 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 characterised by overproduction of pathogenic autoantibodies.

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