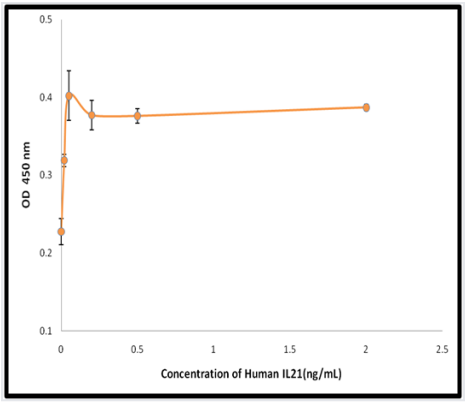
IL21 Human Active Protein

PRODUCT OVERVIEW

Product Name	IL21, Active Protein
Full Product Name	Recombinant Human IL21
Product Gene Name	IL21 active protein
Product Synonym Names	IL-21; Za11; Recombinant Human Interleukin-21 (IL21)
Host	E Coli
Form/Format	Lyophilized from a 0.2 um filtered PBS solution pH 7.5.
Purity/Purification	>95% as determined by SDS-PAGE
Preparation and Storage	The lyophilized protein is stable for at least one year from date of receipt at-70 degree C. Upon reconstitution, this cytokine can be stored in working aliquots at 2-8 degree C for one month, or at-20 degree C for six months, with a carrier protein without detectable loss of activity. Avoid repeated freeze/thaw cycles.
Molecular Weight	15.0 kDa
OMIM	605384
3D Structure	ModBase 3D Structure for Q9HBE4
Active Protein Note	Protein activity can be an ambiguous term. Please refer to the data sheet or inquire with Technical Support to determine the definition of activity for this product.
Bioactivity	The ED(50) was determined by the dose-dependent proliferation of HuT-78 Cells and was found to be <0.05ng/mL.
Endotoxin Level	<1.0 EU/ug of recombinant protein as determined by the LAL method.
Reconstitution	A quick spin of the vial followed by reconstitution in distilled water to a concentration not less than 0.1 mg/mL. This solution can then be diluted into other buffers.
Related Product Information for IL21 active protein	IL-21 stimulates proliferation of B cell stimulated by crosslinking of the CD40 antigen. It inhibits proliferation stimulated by IL-4 plus anti-IgM. IL-21 augments stimulation of the proliferation of naive CD45RA(+) but not memory CD45R0(+) T cells mediated by engagement of CD3. IL-21 stimulates the proliferation of bone marrow progenitor cells and the expression of the natural killer cell marker CD56 in the presence of IL-15. The Interleukin-21 receptor is closely related to human IL-2 beta receptor. The receptor contains a WSXWS motif in the extracellular region, typical of type 1 cytokine receptors. The receptor is expressed on natural killer cells, T cells, and B cell line. The functional signaling complex activates Janus kinases JAK1, JAK3, and the STAT proteins STAT1, and STAT3.
Other Notes	Small volumes of IL21 active protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for IL21 purchase	MBS4159677 is an active protein targeting IL21. Also known as Recombinant Human IL21. Host: E Coli.



Testing Data of IL21 active protein

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for IL21. It may not necessarily be applicable to this product.

NCBI GI #	333033767
NCBI GeneID	59067
NCBI Accession #	NP_001193935.1
UniProt Primary Accession #	Q9HBE4
UniProt Related Accession #	Q9HBE4
GenBank Nucleotide #	NP_001193935.1
NCBI Official Full Name	interleukin-21 isoform 2
NCBI Official Synonym Full Names	interleukin 21
NCBI Official Symbol	IL21
NCBI Official Synonym Symbols	Za11; IL-21; CVID11
UniProt Protein Name	Interleukin-21
UniProt Synonym Protein Names	Za11
Protein Family	Interleukin
UniProt Gene Name	IL21
UniProt Synonym Gene Names	IL-21
UniProt Entry Name	IL21_HUMAN
NCBI Protein Information	interleukin-21
NCBI Summary for IL21	This gene encodes a member of the common-gamma chain family of cytokines with immunoregulatory activity. The encoded protein plays a role in both the innate and adaptive immune responses by inducing the differentiation, proliferation and activity of multiple target cells including macrophages, natural killer cells, B cells and cytotoxic T cells. Dysregulation of this gene plays a role in multiple immune-mediated diseases including lupus, psoriasis and chronic inflammatory diseases. Alternatively spliced transcript variants encoding multiple isoforms have been observed for this gene. [provided by RefSeq, Dec 2011]

UniProt Comments for IL21	IL21: Cytokine with immunoregulatory activity. May promote the transition between innate and adaptive immunity. Induces the production of IgG(1) and IgG(3) in B-cells. May play a role in proliferation and maturation of natural killer (NK) cells in synergy with IL15. May regulate proliferation of mature B- and T-cells in response to activating stimuli. In synergy with IL15 and IL18 stimulates interferon gamma production in T-cells and NK cells. During T-cell mediated immune response may inhibit dendritic cells (DC) activation and maturation. Belongs to the IL-15/IL-21 family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Apoptosis; Secreted, signal peptide; Secreted; Cytokine; Cell development/differentiation Chromosomal Location of Human Ortholog: 4q26-q27 Cellular Component: extracellular space Molecular Function: hematopoietin/interferon-class (D200-domain) cytokine receptor binding; interleukin-2 receptor binding; cytokine activity Biological Process: positive regulation of interleukin-17 production; positive regulation of natural killer cell cytokine production; cell maturation; signal transduction; positive regulation of natural killer cell mediated cytotoxicity; positive regulation of interleukin-10 production; positive regulation of tyrosine phosphorylation of Stat3 protein; positive regulation of natural killer cell differentiation; positive regulation of tyrosine phosphorylation of Stat1 protein; positive regulation of tissue remodeling; positive regulation of cell proliferation; positive regulation of B cell proliferation; positive regulation of T cell proliferation; immune response; positive regulation of interferon-gamma biosynthetic process; positive regulation of inflammatory response Disease: Immunodeficiency, Common Variable, 11
Research Articles on IL21	**1.** This study suggests, for the first time that IL-21 enhances TLR2/4-mediated cytokine production in human monocytic THP-1 cells by activating the STAT3, PI3K/Akt and p38 MAPK signalling pathways.
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