

## GMP Recombinant Human IL21 protein

**Cat. No.** IL21-4334HG    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant Human IL21 protein was expressed in Escherichia coli. This product is produced under cGMP guidelines.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>ProteinLength</b>    | 133                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Description</b>      | <p>Human IL-21 is encoded by IL-21 gene located on Chr. 4. It is a pleiotropic cytokine produced by CD4+ T cells in response to antigenic stimulation and can regulating immune system cells, for instance cytotoxin T cells and natural killer cells. Additionally, it can induce target cells division or proliferation. IL-21 elicits its effect through binding to IL-21R, which also contains the gamma chain found in other cytokine receptors such as IL-2, IL-4, IL-7, IL-9 and IL-15. IL-21/IL-21R interaction triggers a cascade of events which includes activation of the tyrosine kinases JAK1 and JAK3, followed by activation of the transcription factors STAT1 and STAT3. IL-21 shows having much relation with clinical illnesses, including cancer immunotherapy, viral infections and allergies.</p> |
| <b>Form</b>             | Lyophilized from a 0.2µm filtered concentrated solution in PBS, pH 7.4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Bio-activity</b>     | Fully biologically active when compared to standard. The ED50 as determined by a cell proliferation assay using human N1186 T cells is less than 20 ng/ml, corresponding to a specific activity of > 5.0 ×                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

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|                       |                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       | 10 <sup>4</sup> IU/mg.                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Molecular Mass</b> | Approximately 15.4 kDa, a single non-glycosylated polypeptide chain containing 133 amino acids.                                                                                                                                                                                                                                                                                             |
| <b>AA Sequence</b>    | QGQDRHMIRMRLIDIVDQLKNYVNDLVPEFLPAPEDVETNCEWSAFSCFQKAQLK<br>SANTGNNERIINVSIIKKLKRKPPSTNAGRQKHRLTCPSCDSYEKKPPKEFLERFKSL<br>LQKMIHQHLSSRTHGSEDS                                                                                                                                                                                                                                                |
| <b>Endotoxin</b>      | Less than 0.01 EU/g of rHuIL-21 GMP as determined by LAL method.                                                                                                                                                                                                                                                                                                                            |
| <b>Purity</b>         | >98% by SDS-PAGE and HPLC analysis.                                                                                                                                                                                                                                                                                                                                                         |
| <b>Storage</b>        | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.                                                                                             |
| <b>Reconstitution</b> | We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-0.5 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤-20 centigrade. Further dilutions should be made in appropriate buffered solutions. |

## GENE INFORMATION

|                        |                                                                                   |
|------------------------|-----------------------------------------------------------------------------------|
| <b>Gene Name</b>       | IL21                                                                              |
| <b>Official Symbol</b> | IL21                                                                              |
| <b>Synonyms</b>        | IL21; interleukin 21; interleukin-21; IL 21; Za11; interleukin-21 isoform; IL-21; |

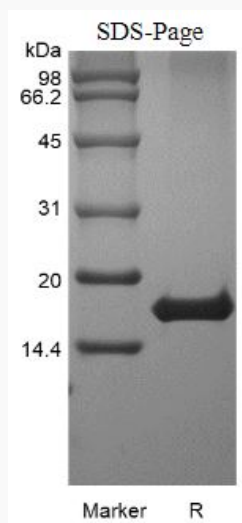
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|----------------|--------------|
| Gene ID        | 59067        |
| mRNA Refseq    | NM_001207006 |
| Protein Refseq | NP_001193935 |
| MIM            | 605384       |
| UniProt ID     | Q9HBE4       |

**SDS-PAGE of IL21-4334HG**



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### HPLC of IL21- 4334HG

