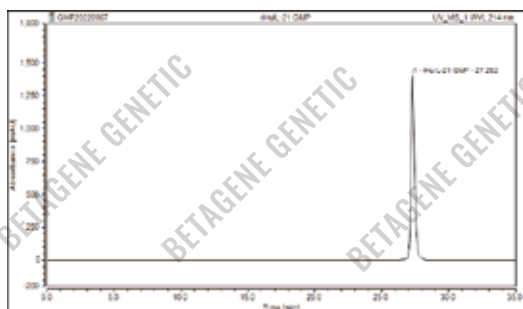


# RECOMBINANT HUMAN IL-21 TAG-FREE GMP

<b>Physical Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Gene ID</b>	59067
<b>Description</b>	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 cytotoxic 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 shows having much relation with clinical illnesses, including cancer immunotherapy, viral infections and allergies.
<b>Catalog Number</b>	GE08.1/GE08.2
<b>Unit Size</b>	50µg/100µg
<b>Source</b>	E. coli
<b>Molecular Weight</b>	Approximately 15.4kDa, a single non-glycosylated polypeptide chain containing 133 amino acid
<b>AA Sequence</b>	QGQDRHMIRMRLIDIVDQLKNYVNDLVPEFLPAPEDVETNCEWSAFSCFQKAQLKSANTGNNERIINVSIKLKRKPPSTNAGRRQKHRLTCPSCDS YEKPPKEFLERFKSLQMIHQHLSRTHGSEDS
<b>Purity (HPLC)</b>	> 97%
<b>Purity (SDS-PAGE)</b>	> 97%
<b>Biological Activity</b>	Assay 1: Measured by its ability to enhance IFN- $\gamma$ secretion in NK-92 human natural killer lymphoma cells. The ED <sub>50</sub> is < 2 ng/mL, corresponding to a specific activity of $\geq 5.0 \times 10^5$ Units/mg. Assay 2: The ED <sub>50</sub> as determined by a cell proliferation assay using human N1186 T cells is < 20 ng/mL, corresponding to a specific activity of $\geq 5.0 \times 10^4$ Units/mg.
<b>Host Cell DNA</b>	< 0.02 ng/µg of protein tested by DNA Fluorescent Staining method.
<b>Host Cell Protein</b>	< 0.5 ng/µg of protein tested by ELISA.
<b>Formulation</b>	Lyophilized from a 0.2µm filtered solution in PBS pH7.4.
<b>Sterility</b>	Negative
<b>Endotoxin</b>	< 0.01EU/µg as determined by LAL gel-clot method.
<b>Mycoplasma</b>	Negative
<b>Reconstitution</b>	Before use this product, please read the direction below carefully. 1. This vial must be briefly centrifuged prior to opening to bring the contents to the bottom. 2. Reconstitute in a sterile aqueous buffer to an appropriate concentration. 3. Stock solutions should be apportioned into working aliquots and stored at $\leq -20$ °C. Further dilutions should be made in appropriate buffered solutions.
<b>Stability &amp; Storage</b>	For long term storage, the product should be stored $\leq -20$ °C. <b>Please avoid repeated freeze-thaw cycles after reconstitution.</b> 1. At least 24 months from date of receipt, $\leq -20$ °C as supplied; 2. 1 month, 2 to 8 °C under sterile conditions after reconstitution; 3. 3 months, -20 to -70 °C under sterile conditions after reconstitution.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended.



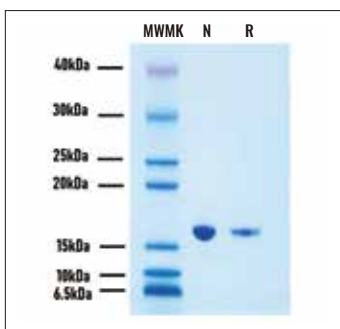
DATA



Purity of Recombinant Human IL-21

HPLC

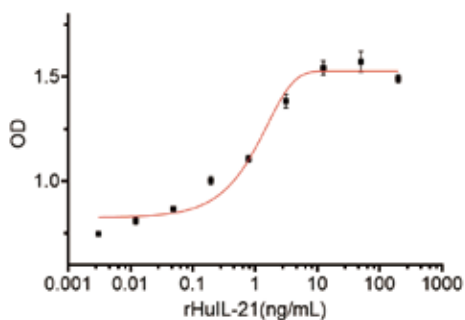
HPLC analysis of Recombinant Human IL-21. The major peak corresponds to the calculated purity of > 97%.



Purity of Recombinant Human IL-21

SDS-PAGE

2 µg/lane of Recombinant Human IL-21 was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing R band at 15.4kDa.



Bioactivity of Recombinant Human IL-21

Recombinant Human IL-21 stimulates cell proliferation using human N1186 T cells and ED<sub>50</sub> as determined is < 2 ng/mL, corresponding to a specific activity of > 5.0 × 10<sup>5</sup> Units/mg.

CONTENTS

Product	Cat. No.	Amount	Storage	Shelf life
Recombinant Human IL-21 (GMP-Grade)	GE08.1 GE08.2	50µg 100µg	≤-20°C	24 months

LIMITED WARRANTY

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