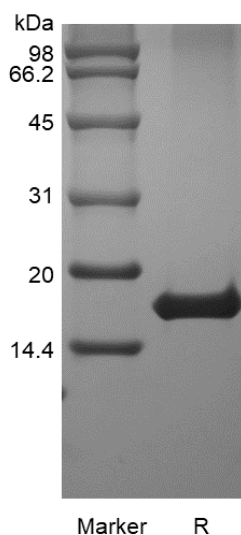
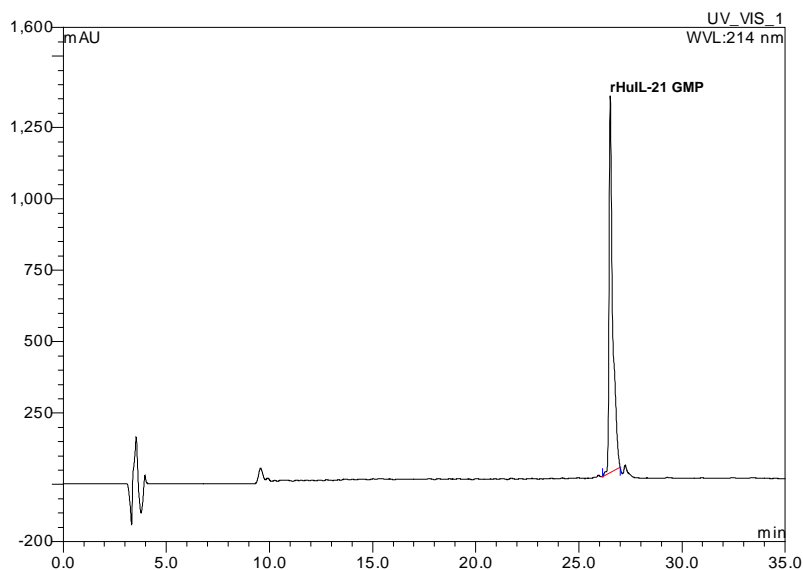


<b>Catalog Number:</b>	GMP-101-21
<b>Source:</b>	<i>Escherichia coli</i>
<b>Molecular Weight:</b>	Approximately 15.4 kDa, a single non-glycosylated polypeptide chain containing 133 amino acids.
<b>Size:</b>	5 µg/100 µg/1 mg
<b>Sequence:</b>	QGQDRHMIRM RQLDIVDQL KNYVNDLVPE FLPAPEDVET NCEWSAFSCF QKAQLKSANT GNNERIINVS IKKLKRKPPS TNAGRRQKHR LTCPSCDSYE KKPPKEFLER FKSLLQKMIH QHLSRTHGS EDS
<b>Purity:</b>	> 98% by SDS-PAGE and HPLC analyses.
<b>Biological Activity:</b>	Fully biologically active when compared to standard. Measured by its ability to enhance IFN-gamma secretion in NK-92 human natural killer lymphoma cells. The ED <sub>50</sub> for this effect is ≤ 2 ng/mL. The specific activity of recombinant human IL-21 > 5.0 × 10 <sup>5</sup> U/mg.
<b>Physical Appearance:</b>	Sterile filtered white lyophilized (freeze-dried) powder.
<b>Formulation:</b>	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.0.
<b>Endotoxin:</b>	Less than 0.01 EU/µg of rHuIL-21 GMP as determined by LAL method.
<b>Sterility:</b>	Negative.
<b>Mycoplasma:</b>	Negative.
<b>Host Cell Protein:</b>	Less than 0.05% when tested by ELISA.
<b>Host Cell DNA:</b>	Less than 20 ng/mg when tested by qPCR.
<b>In Vitro Virus Assay:</b>	Negative.
<b>Reconstitution:</b>	Prior to opening, it is recommended to centrifuge the vial briefly to bring the contents down the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1% BSA to a concentration of 0.1-1.0 mg/mL. If animal-origin-free condition is expected in your product, then sterile distilled water is recommended. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.
<b>Shipping:</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage:</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"><li>● A minimum of 12 months from date of receipt, when stored at ≤ -20 °C as supplied.</li><li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li><li>● 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li><li>● Refer to lot-specific CoA for the Expiry Date.</li></ul>
<b>Usage:</b>	This material is offered by Shanghai PrimeGene Bio-Tech for research, laboratory, or further evaluation purposes. <b>NOT FOR HUMAN USE.</b>
<b>Quality Statement:</b>	<b>The manufacturing and testing of these products comply with ICH Q7 guidelines.</b>

SDS-PAGE



HPLC



**Background:**

Human IL-21 is encoded by *IL21* gene located on Chr. 4. It is a pleiotropic cytokine produced by CD4<sup>+</sup> 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/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.

Rev. 06/13/2023 V.7