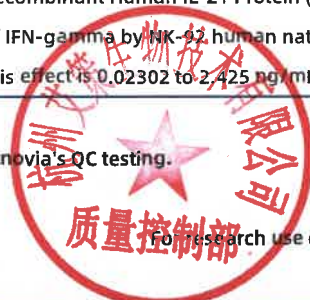


# CERTIFICATE OF ANALYSIS

<b>Product name:</b>	Recombinant Human Interleukin-21 (rHuIL-21)
<b>Catalog:</b>	AC52376
<b>Size :</b>	100 µg
<b>Lot:</b>	1034230423
<b>Source:</b>	<i>Escherichia coli</i> .
<b>Molecular Weight:</b>	Approximately 15.4 kDa, a single non-glycosylated polypeptide chain containing 132 amino acids.
<b>Description:</b>	Accession # Q9HBE4, Gln32-Ser162 with a N-terminal Met.
<b>SDS-PAGE:</b>	17 kDa, reducing conditions
<b>Physical Appearance:</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Formulation:</b>	Lyophilized from a 0.2 µm filtered concentrated solution in 10 mM PBS, pH 7.5 without carrier protein or preservatives.
<b>Reconstitution:</b>	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute to a concentration of 0.1-1.0 mg/mL in sterile distilled H <sub>2</sub> O. Stock solutions should be apportioned into working aliquots and stored at -20 °C to -70 °C. Further dilutions should be made in appropriate buffered solutions. Do not reconstitute in cell culture media directly.
<b>Shipping:</b>	The product is shipped at 2 °C to 8 °C. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage:</b>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. A minimum of 12 months from date of shipping when stored at -20 °C to -70 °C as supplied. 4 weeks at 2 °C to 8 °C under sterile conditions after reconstitution. 4 months at -20 °C to -70 °C under sterile conditions after reconstitution.

Quality control assays		
Test	Standard	Result
Endotoxin	< 0.1EU/µg	Pass
purity	> 95%	Pass
Sterility	Negative	Pass
Biological Activity-ELISA	Immobilized Recombinant Human IL-21 (Catalog # AC52376) at 0.2µg/well can bind Human IL-21R with a linear range of 425.0 to 587.9 ng/mL.	Pass
Biological Activity-BLI	Loaded Human IL-21R, can bind Recombinant Human IL-21 (Catalog # AC52376) with an affinity constant of 0.714nM as determined in BLI assay(Octet R8).	Pass
Biological Activity-Cell based assay	Recombinant Human IL-21 Protein (Catalog # AC52376) stimulates secretion of IFN-gamma by NK-92 human natural killer lymphoma cells, the EC50 for this effect is 0.02302 to 2.425 ng/mL.	Pass

This product lot has passed Acnovia's QC testing.



For research use only.