

GMP Grade, Recombinant Human Interleukin-21 (rHuIL-21)

Cat#: C-BETA009

Size: 100µg, 1mg

Source: *Escherichia coli*.

Product Information

Molecular Weight: Approximately 15.4 kDa, a single non-glycosylated polypeptide chain containing 132 amino acids.

Description : Accession # Q9HBE4, Gln32-Ser162 with a N-terminal Met.

SDS-PAGE: 17 kDa, reducing conditions

Purity: > 95 %, as determined by SDS-PAGE, under reducing non-reducing conditions, visualized by coomassie staining.

Endotoxin: Less than 0.01 EU/µg of IL-21 as determined by kinetic Limulus Amoebocyte Lysate (LAL) assay.

Biological Activity: Recombinant Human IL-21 Protein 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.

Physical Appearance: Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation: Lyophilized from a 0.2 µm filtered concentrated solution in 10 mM PBS, pH 7.5 without carrier protein or preservatives.

Reconstitution: 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 H₂O**. 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.**

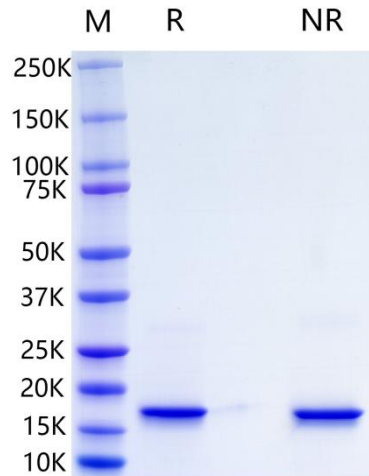
Shipping: 2°C to 8°C. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage: 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

Usage: Biogradetech IL-21 product can be used for a variety of ex vivo cell culture applications such as research or further manufacturing.

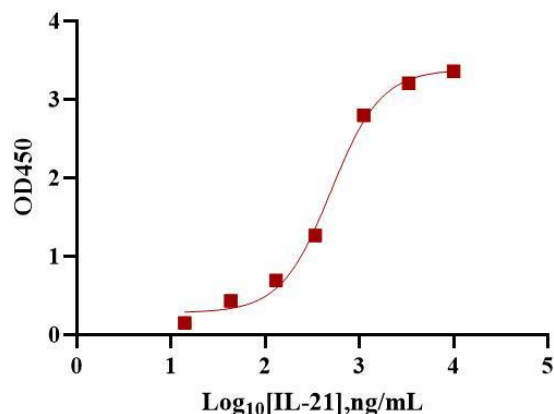
Quality statement: No animal- or human-derived materials were used for the manufacture of this product, unless otherwise stated in the respective Certificate of Origin.

DATA

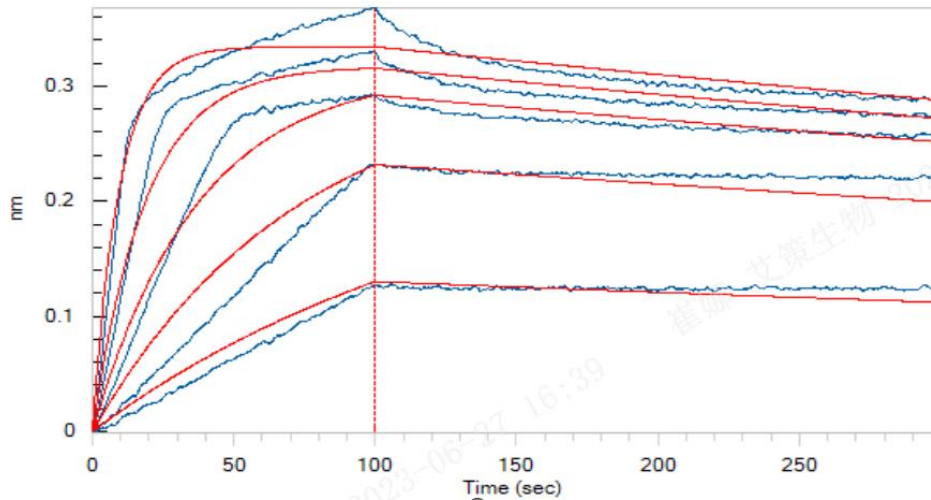


SDS-PAGE: Recombinant Human IL-21 Protein SDS-PAGE 1 μ g/lane of Recombinant Human IL-21(Catalog# C-BETA009) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions visualized by coomassie staining showing a single band at 17kDa.

Recombinant Human IL-21, ELISA

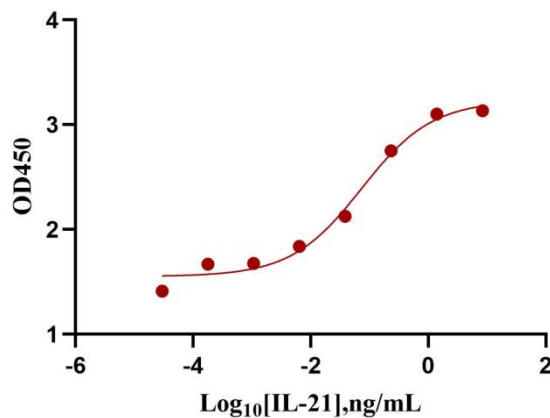


Bioactivity-ELISA: Immobilized Recombinant Human IL-21 (Catalog# C-BETA009) at 0.2 μ g/well can bind Human IL-21R with a linear range of 425.0 to 587.9 ng/mL.



Bioactivity-BLI: Loaded Human IL-21R, can bind Recombinant Human IL-21 (Catalog# C-BETA009) with an affinity constant of 0.714 nM as determined in BLI assay(Octet R8).

Recombinant Human IL-21 stimulates secretion of IFN-gamma by NK-92



Bioactivity-Cell based assay: Recombinant Human IL-21 Protein (Catalog# C-BETA009) 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.

References

1. Parrish-Novak J, Dillon SR, Nelson A, Hammond A, Sprecher C, Gross JA, Johnston J, Madden K, Xu W, West J. Interleukin 21 and its receptor are involved in NK cell expansion and regulation of lymphocyte function. *Nature*. 2000;408:57-63.
2. Habib T, Senadheera S, Weinberg K, et al. The common gamma chain (gamma c) is a required signaling component of the IL-21 receptor and supports IL-21-induced cell proliferation via JAK3. *Biochemistry*, 2002, 41(27):8725-8731.
3. H. Søndergaard & K. Skak. IL-21: roles in immunopathology and cancer therapy. *Immunopharmacology* 2009.

Note:

The product listed herein is for research use only and is not intended for use in human or clinical diagnosis.