

GMP Grade, Recombinant Human Interleukin-7 (rHuIL-7)

Cat#: C-BETA005

Size: 100µg, 1mg

Source: *Escherichia coli*.

Product Information

Molecular Weight: Approximately 17.5 kDa, a single non-glycosylated polypeptide chain containing 152 amino acids.

Description : Accession # P13232.1, Asp26-His177, with an 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-7 as determined by kinetic Limulus Amoebocyte Lysate (LAL) assay.

Biological Activity: Recombinant human IL-7 bioactivity is measured in a cell proliferation assay using human peripheral blood mononuclear cell (PBMC), the EC50 for this effect is 2.195-16.67 ng/mL.

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

Formulation: Lyophilized from a 0.2 µm filtered solution in PBS with trehalose.

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.**

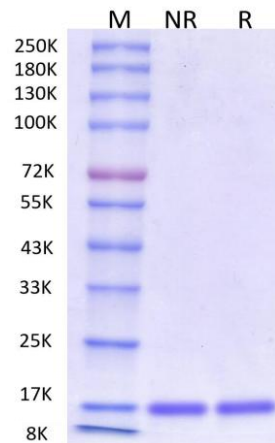
Shipping: 2°C to 8°C. Upon receipt, store it immediately at the temperature recommended below.

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

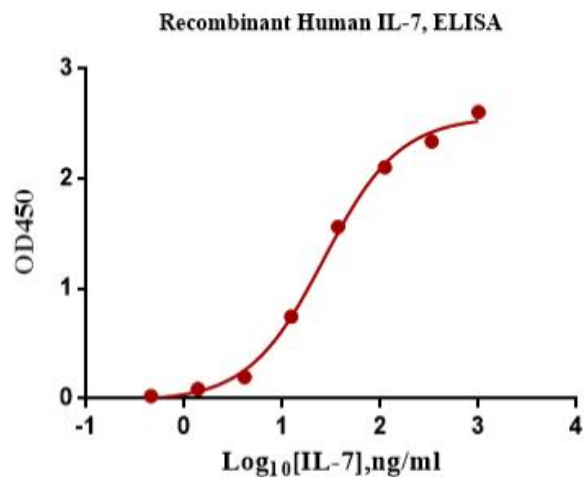
Usage: Biogradetech IL-7 product can be used for a variety of ex vivo cell culture applications such as research or further manufacturing.

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.

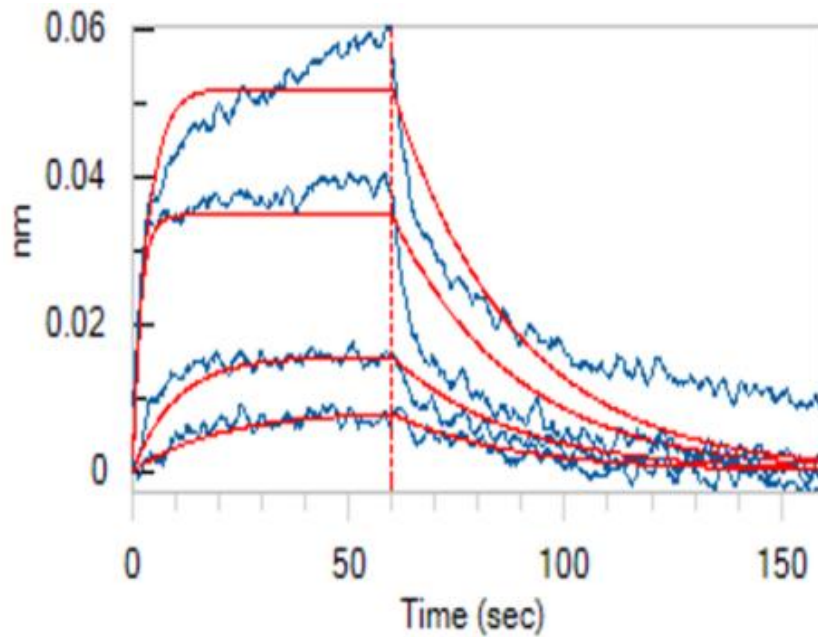
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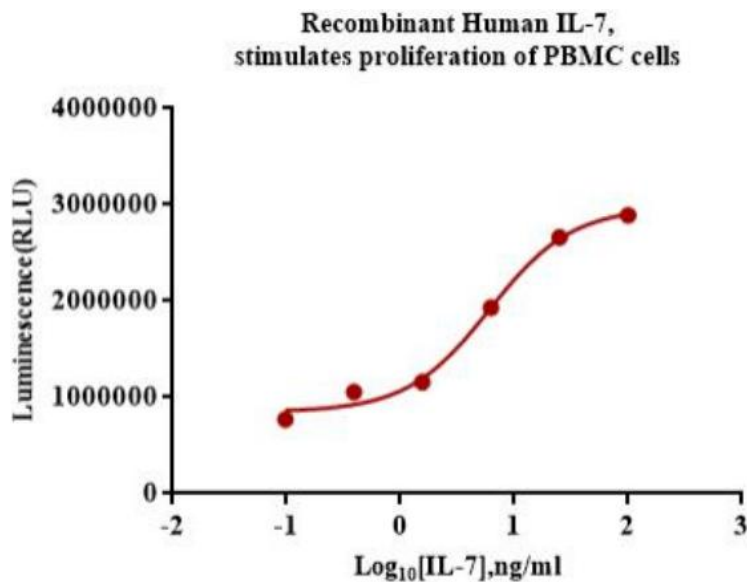
SDS-PAGE: Recombinant Human IL-7 Protein SDS-PAGE 1 µg/lane of Recombinant Human IL-7 (Catalog# C-BETA005) was resolved with SDS-PAGE under reducing (R) and nonreducing (NR) conditions visualized by coomassie staining showing a single band at 17 kDa.



Bioactivity-ELISA: Immobilized Recombinant Human IL-7(Catalog# C-BETA005) at 0.2 µg/well can bind human IL-7 R alpha with a linear range of 22.54 to 31.26 ng/mL.



Bioactivity-BLI: Loaded Human IL-7 R alpha, can bind Recombinant Human IL-7(Catalog# C-BETA005) with an affinity constant of 69.4 nM as determined in BLI assay (Octet Red96e).



Bioactivity-Cell based assay: Recombinant Human IL-7(Catalog# C-BETA005) stimulates proliferation of PHA-P-activated human peripheral blood mononuclear cell (PBMC). The EC₅₀ for this effect is 2.195-16.67 ng/mL.

References

1. Barata JT, Silva A, Abecasis M, Carlesso N, Cumano A, Cardoso AA. Molecular and functional evidence for activity of murine IL-7 on human lymphocytes. *Exp Hematol*. 2006 Sep;34(9):1133-42.
2. Chen D, Tang TX, Deng H, Yang XP, Tang ZH. Interleukin-7 Biology and Its Effects on Immune Cells: Mediator of Generation, Differentiation, Survival, and Homeostasis. *Front Immunol*. 2021 Dec 2;12:747324

Note:

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