

GMP Grade, Recombinant Human Interleukin-6 (IL-6)

Cat#: C-BETA004

Size: 100µg, 1mg

Source: *Escherichia coli*.

Product Information

Molecular Weight: Approximately 20.9 kDa, a single non-glycosylated polypeptide chain containing 184 amino acids.

Description : Accession # Q75MH2, Pro29-Met212, with an N terminal Met.

SDS-PAGE: 21 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-6 as determined by kinetic Limulus Amoebocyte Lysate (LAL) assay.

Biological Activity: Recombinant human IL-6 bioactivity is measured in a cell proliferation assay using TF-1 human erythroleukemic cell line, the EC50 for this effect is 1.259 to 5.459 ng/mL.

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

Formulation: Lyophilized from a 0.2 µm filtered concentrated solution in 20 mM Tris-HCl, pH 8.0, 150 mM NaCl, with 10% 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 0.1-0.2 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.**

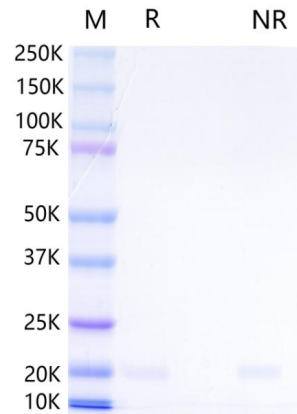
Shipping: 2°C to 8°C. Upon receipt, store it immediately at the temperature recommended below.

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

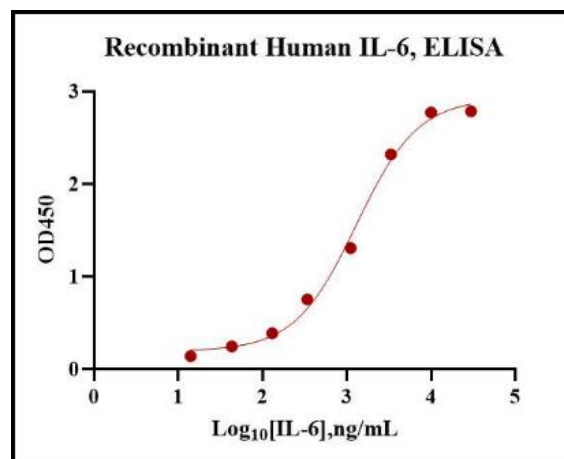
Usage: Biogradetech IL-6 product can be used for a variety of ex vivo cell culture applications such as research or further manufacturing.

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.

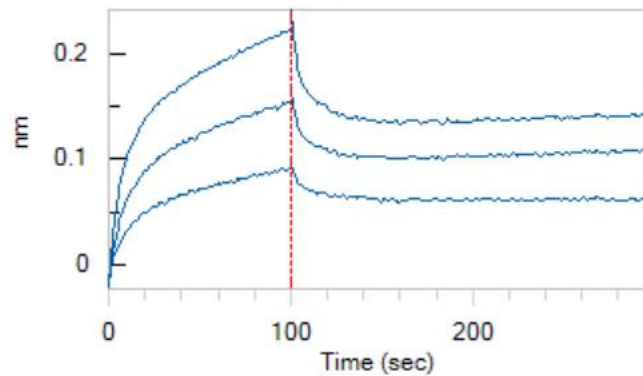
DATA



SDS-PAGE: Recombinant Human IL-6 Protein SDS-PAGE 1 µg/lane of Recombinant Human IL-6(Catalog# C-BETA004) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions visualized by coomassie staining showing a single band at 21kDa.

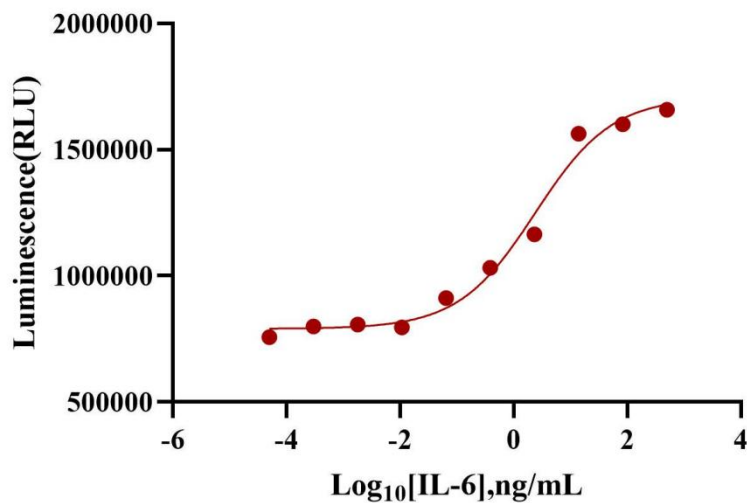


Bioactivity-ELISA: Immobilized Recombinant Human IL-6 (Catalog# C-BETA004) at 0.2 µg/well can bind Human IL-6 R alpha with a linear range of 859.6 to 1996 ng/mL.



Bioactivity-BLI: Loaded Human IL-6 R alpha, can bind Recombinant Human IL-6(Catalog# C-BETA004) with an affinity constant of 1.772 nM as determined in BLI assay(Octet R8).

Recombinant Human IL-6 stimulates proliferation of TF-1 cells



Bioactivity-Cell based assay: Recombinant Human IL-6 (Catalog# C-BETA004) stimulates proliferation of TF-1 human erythroleukemic cell line. The EC₅₀ for this effect is 1.259 to 5.459 ng/mL.

References

1. Mansell, A. and B.J. Jenkins (2013) Cytokine Growth Factor Rev. 24:249.
2. Sujin Kang et al. Historical overview of the interleukin-6 family cytokine.2020. J. Exp. Med. 2020 Vol. 217 No. 5.
3. Xie, F., Wu, C.-F., Liao, Y.-J., Zhou, Y.-Z., Zhang, J.-S., & Deng, Y.-H. (2019). Mesenchymal stem cells modified to express interleukin-6 improve outcomes in Parkinson's disease model rats. CNS Neuroscience & Therapeutics, 25(6), 720–729.
4. S. Kaur et al. A Panoramic Review of IL-6: Structure, Pathophysiological Roles and Inhibitors.2020. Bioorganic & Medicinal Chemistry.

Note:

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