

Recombinant Human IL-6 Protein

Catalog No.: RP00004 **Recombinant** **1 Publications**

Sequence Information

| Species | Gene ID | Swiss Prot |
|---------|---------|------------|
| Human | 3569 | P05231 |

Tags

C-His

Synonyms

IL6;BSF-2;BSF2;CDF;HGF;HSF;IFN-beta-2;IFNB2;IL-6

Product Information

| Source | Purification |
|----------------|--------------------|
| <i>E. coli</i> | > 95% by SDS-PAGE. |

Calculated MW **Observed MW**

Endotoxin

< 0.1 EU/μg of the protein by LAL method.

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4. Contact us for customized product form or formulation.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

Contact

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Background

Interleukin-6 (IL-6) is a multifunctional α-helical cytokine that regulates cell growth and differentiation of various tissues, which is known particularly for its role in the immune response and acute phase reactions. The encoded protein has been shown to be an endogenous pyrogen capable of inducing fever in people with autoimmune diseases or infections. The protein is primarily produced at sites of acute and chronic inflammation, where it is secreted into the serum and induces a transcriptional inflammatory response through interleukin 6 receptor, alpha. The functioning of this protein is implicated in a wide variety of inflammation-associated disease states, including susceptibility to diabetes mellitus and systemic juvenile rheumatoid arthritis.

Basic Information

Description

Recombinant Human IL-6 Protein is produced by *E. coli* expression system. The target protein is expressed with sequence (Pro29-Met212) of human IL6 (Accession #NP_000591.1) fused with an initial Met at the N-terminus and a 6×His tag at the C-terminus.

Bio-Activity

1. Measured by its binding ability in a functional ELISA. Immobilized Recombinant Human IL6R at 1 μg/mL (100 μL/well) can bind Recombinant Human IL-6 with a linear range of 20-70 ng/mL. 2. Measured in a cell proliferation assay using TF-1 human erythroleukemic cells. The ED₅₀ for this effect is 0.18-0.74 ng/mL, corresponding to a specific activity of 1.35×10⁶~5.55×10⁶ units/mg..

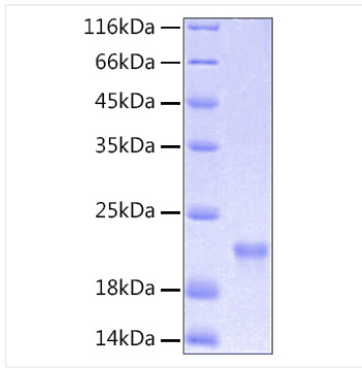
Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

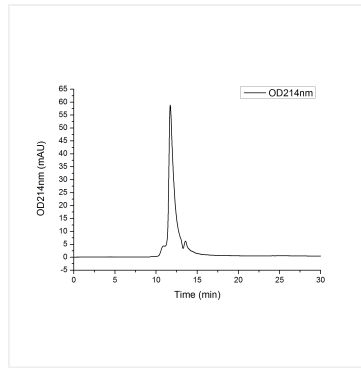
After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

Avoid repeated freeze/thaw cycles.

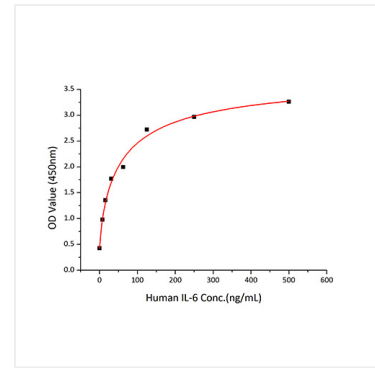
Validation Data



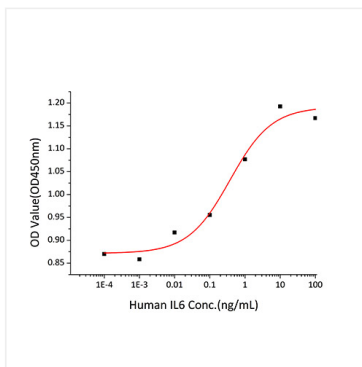
Recombinant Human IL-6 Protein was determined by SDS-PAGE with Coomassie Blue, showing a band at 21 kDa.



The purity of Human IL6 Protein (Cat.RP00004) was greater than 90% as determined by SEC-HPLC.



Immobilized Recombinant Human IL6R at 1 $\mu\text{g/mL}$ (100 $\mu\text{L/well}$) can bind Recombinant Human IL-6 with a linear range of 20-70 ng/mL.



Recombinant Human IL6 stimulates cell proliferation of the TF-1 human erythroleukemic cells. The ED_{50} for this effect is 0.18-0.74 ng/mL, corresponding to a specific activity of 1.35×10^6 – 5.55×10^6 units/mg.