

Human IL6 / Interleukin-6 Protein

Catalog Number: GMP-10395-HNAE



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

BSF2; HGF; HSF; IFNB2; IL-6; Interleukin-6

Protein Construction:

A DNA sequence encoding the mature form of human IL6 (NP_000591.1) (Val30-Met212) was expressed with an initial Met at the N-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

1. Measured by its binding ability in a functional ELISA. 2. Immobilized human IL6 (Cat:GMP-10395-HNAE) at 10µg/mL (100µL/well) can bind human IL6R-His (Cat:10398-H08H), the EC₅₀ of human IL6R-His is 0.1-0.5 µg/mL. 3. Measured in a cell proliferation assay using TF?1 human erythroleukemic cells. The ED₅₀ for this effect is 0.2-0.8 ng/mL. The specific activity of recombinant human IL-6 is approximately 3.2 x 10⁵ IU/µg, which is calibrated against human IL-6 WHO International Standard (NIBSC code: 89/548).

Endotoxin:

< 0.01 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant human IL6 consists of 184 amino acids and has a calculated molecular mass of 20.9 kDa.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

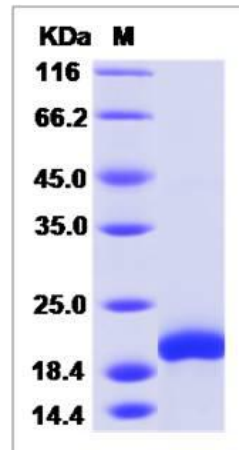
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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. IL-6 protein is secreted by a variety of cell types including T cells and macrophages as phosphorylated and variably glycosylated molecule. It exerts actions through its heterodimeric receptor composed of IL-6R that lacks the tyrosine/kinase domain and binds IL-6 with low affinity, and ubiquitously expressed glycoprotein 13 (gp13) that binds the IL-6. IL-6R complex with high affinity and thus transduces signals. IL-6 is also involved in hematopoiesis, bone metabolism, and cancer progression, and has been defined an essential role in directing transition from innate to acquired immunity.

References

1. Heinrich PC, et al. (2003). Principles of interleukin-6-type cytokine signalling and its regulation. *Biochem J.* 374: 1-20. 2. Rose-John S, et al. (2007) The IL-6/sIL-6R complex as a novel target for therapeutic approaches. *Expert Opin Ther Targets.* 11(5): 613-24. 3. Dinh W, et al. (2009) Elevated plasma levels of TNF-alpha and interleukin-6 in patients with diastolic dysfunction and glucose metabolism disorders. *Cardiovasc Diabetol.* 8:58.

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