

Store at
-20°C

Human IL-6 Recombinant Protein

#48333

20 µg



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Entrez-Gene ID #3569
UniProt ID #P05231

For Research Use Only. Not For Use In Diagnostic Procedures.

Background: Acute phase response is induced by interleukin-6 (IL-6) produced by T cells, macrophages, fibroblasts, endothelial and other cells (1,2). IL-6 induces proliferation or differentiation in many cell types including B cells, thymocytes and T cells. IL-6, in concert with TGF- β , is important for developing Th17 responses. IL-6 binds to IL-6R α and through this association induces gp130 homodimerization (1). gp130 homodimerization triggers the Jak/Stat cascade and the SHP-2/Erk MAP kinase cascade (1,3,4). IL-6 also forms a complex with an IL-6R α splice variant that is nonmembrane-associated (3). The IL-6/soluble IL-6R α complex can then activate the gp130 signaling pathway in cells that express gp130 but not IL-6R α (3). Research studies have shown that IL-6, through increasing expression of proangiogenic VEGF, may also contribute to metastatic breast cancer (5).

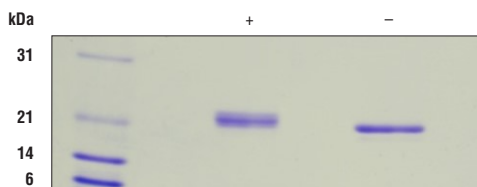
Molecular Weight: 21 kDa

Endotoxin: Endotoxin levels are ≤ 1 EU / 1 µg hIL-6.

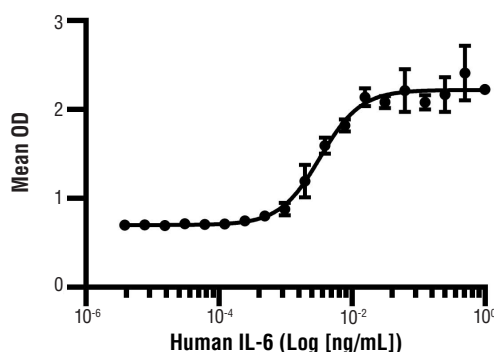
Purity: $\geq 95\%$ purity was determined by SDS-PAGE.

Source/Purification: Recombinant human IL-6 was expressed in *E. coli* and is supplied in a lyophilized form.

Bioactivity: The bioactivity of recombinant hIL-6 was determined in a B9 cell proliferation assay. The ED₅₀ of each lot is ≤ 25 pg/ml.



The purity of Human IL-6 Recombinant Protein was determined by SDS-PAGE of 1 µg reduced (+) and non-reduced (-) recombinant hIL-6 and staining with Coomassie Blue.



Serial dilutions of Human IL-6 Recombinant Protein were added to B9 cells. Cell proliferation was measured and the linear portion of the curve was used to calculate the ED₅₀.

Storage: Human IL-6 Recombinant Protein is supplied as lyophilized material that is very stable at -20°C. It is recommended to reconstitute with sterile water at a concentration of 0.1 mg/ml which can be further diluted in aqueous solutions as needed. Addition of a carrier protein (0.1% HSA or BSA) is recommended for long-term storage.

Background References:

- (1) Heinrich, P.C. et al. (1998) *Biochem J* 334 (Pt 2), 297-314.
- (2) Heinrich, P.C. et al. (1998) *Z Ernährungswiss* 37 Suppl 1, 43-9.
- (3) Jones, S.A. (2005) *J Immunol* 175, 3463-8.
- (4) Jenkins, B.J. et al. (2004) *Mol Cell Biol* 24, 1453-63.
- (5) Hong, D.S. et al. (2007) *Cancer* 110, 1911-28.

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