

Recombinant Human IL-6

Information

Gene ID	3569
Accession #	P05231
Alternate Names	BSF-2, CDF, Hybridoma growth factor, IFN-beta-2.
Source	<i>Escherichia coli</i> .
M.Wt	Approximately 20.8 kDa, a single non-glycosylated polypeptide chain containing 183 amino acids.
AA Sequence	VPPGEDSKDV AAPHRQPLTS SERIDKQIRY ILDGISALRK ETCNKS NMCE SSKEALAENN LNLPKMAEKD GCFQSGFNEE TCLVKIITGL LEFEVYLEYL QNRFESSEEQ ARAVQMSTKV LIQFLQKKAK NLDAITTPDP TTNASLLTKL QAQNQWLQDM TTHLILRSFK EFLQSSLRAL RQM
Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. - 12 months from date of receipt, -20 to -70 °C as supplied. - 1 month, 2 to 8 °C under sterile conditions after reconstitution. - 3 months, -20 to -70 °C under sterile conditions after reconstitution.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.4.
Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.
Biological Activity	Assay #1: Fully biologically active when compared to standard. The ED ₅₀ as determined by a cell proliferation assay using IL-6-dependent murine 7TD1 cells is less than 0.1 ng/ml, corresponding to a specific activity of > 1.0 × 10 ⁷ IU/mg. Assay #2: Fully biologically active when compared to standard. The ED ₅₀ as determined by a cell proliferation assay using IL-6-dependent murine T1165 cells is less than 0.8 ng/ml, corresponding to a specific activity of > 1.25 × 10 ⁶ IU/mg.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	5 µg	100 µg	500 µg
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Recombinant Human IL-6	5 µg	100 µg	500 µg
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Quality Control

Purity	> 96 % by SDS-PAGE and HPLC analyses.
Endotoxin	Less than 1.0 EU/µg of rHuIL-6 as determined by LAL method.

Description

Interleukin-6 (IL-6) is an interleukin that in humans is encoded by the IL-6 gene and acts as both a pro-inflammatory and anti-inflammatory cytokine. It is secreted by T cells and macrophages to stimulate immune response. Furthermore, It plays an essential role in the final differentiation of B-cells into Ig-secreting cells involved in lymphocyte and monocyte differentiation. It also induces myeloma and plasmacytoma growth and induces nerve cells differentiation acts on B-cells, T-cells, hepatocytes, hematopoietic progenitor cells and cells of the CNS. The human IL-6 is a single non-glycosylated polypeptide chain containing 183 amino acids and it signals through a cell-surface type I cytokine receptor complex consisting of the ligand-binding IL-6Rα chain (CD126), and the signal- transducing component gp130 (also called CD130). The human IL-6 shares about 40% a.a. sequence identity with mouse and rat IL-6 and it is equally active on mouse and rat cells.

Reference

1. Ferguson-Smith AC, Chen YF, Newman MS, et al. 1988. Genomics. 2:203-8.
2. van der Poll T, Keogh CV, Guirao X, et al. 1997. J Infect Dis. 176:439-44.
3. Ming JE, Cernetti C, Steinman RM, et al. 1989. J Mol Cell Immunol. 4:203-11; discussion 211-2.
4. Bastard JP, Jardel C, Delattre J, et al. 1999. Circulation. 99:2221-2.
5. Heinrich PC, Behrmann I, Muller-Newen G, et al. 1998. Biochem J. 334 (Pt 2):297-314.

APEX BIO Technology

www.apexbt.com

7505 Fannin street, Suite 410, Houston, TX 77054.

Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com