Product Description

Interleukin 6 (IL-6) is a pleiotropic growth factor with the wide range of biological activities in immune regulation, hematopoiesis, and oncogenesis. IL-6 is produced by a variety of cell types including T cells, B cells, monocytes and macrophages, fibroblasts, hepatocytes, vascular endothelial cells, and various tumor cell lines. On its own or in combination with other factors such as IL-2 and interferon-γ, IL-6 stimulates the proliferation of B cells, T cells, and hybridoma cells (Hirano et al.; Mihara et al.; Tanaka et al). In combination with cytokines such as IL-3, GM-CSF and SCF, IL-6 has been shown to promote hematopoietic progenitor cell proliferation and differentiation in vitro. IL-6 signals through a cell surface type I cytokine receptor complex consisting of the ligand-binding IL-6α (CD126) and the signal-transducing gp130 subunits. The binding of IL-6 to its receptor system induces activation of JAK/STAT signaling pathway (Mihara et al.; Peters et al.; Tanaka et al.).

Product Information

Alternative Names: B cell differentiation factor, BSF-2, IFN-β2, Interleukin-6
Accession Number: P05231
Amino Acid Sequence: MPVPPGEDSK DVAAHPHQPL TSSERIDKOI RYILDGISAL RKETCNKNM CESSKEALAE NNLNLPKMAE KDGCFCQSGFN EETCLVKIIT GLLEFEVYLE YLQNRFESSE EQARAVQMST KVLIQFLQKK AKNLDAITTP DPTTNASLLT KLQAQNQWLO DMTTHLILRS FKEFLQSSLR ALROM
Predicted Molecular Mass: 21 kDa
Species: Human
Cross Reactivity: Mouse, Rat, Monkey
Formulation: Lyophilized from a sterile-filtered aqueous solution containing sodium phosphate, pH 7.5.
Source: E. coli

Specifications

Activity: The specific activity is ≥ 4 x 10^7 units/mg (EC50 ≤ 25 pg/mL) as determined by a cell proliferation assay using B9 cells.
Purity: ≥ 95%
Endotoxin Level: Measured by kinetic Limulus amebocyte lysate (LAL) analysis and is ≤ 1 EU/µg protein.

Preparation and Storage

Storage: Store at -20°C to -80°C.
Stability: Stable as supplied for 12 months from date of receipt.
Preparation: Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex.

OPTIONAL: After reconstitution, if product will not be used immediately, dilute with concentrated bovine serum albumin (BSA) to a final BSA concentration of 0.1%. The effect of storage of stock solution on product performance should be tested for each application. As a general guide, do not store at 2 - 8°C for more than 1 month or at -20°C to -80°C for more than 3 months. Avoid repeated freeze-thaw cycles.
(A) The biological activity of Human Recombinant IL-6 was tested by its ability to promote the proliferation of B9 cells. Cell proliferation was measured using a fluorometric assay method. The EC50 is defined as the effective concentration of the growth factor at which cell proliferation is at 50% of maximum. The EC50 in the above example is 3.31 pg/mL.

(B) 1 μg of Human Recombinant IL-6 was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant IL-6 has a predicted molecular mass of 21 kDa.

Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/cytokines or contact us at techsupport@stemcell.com.

References


