

Cytokines

Mouse Recombinant IL-6

Interleukin 6



Scientists Helping Scientists™ | WWW.STEMCELL.COM

TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713

INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM

FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

Catalog #78052.1
78052
78052.2

10 µg
100 µg
1000 µg

Product Description

Interleukin 6 (IL-6) is a pleiotropic growth factor with a 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. IL-6 signals through a cell surface type I cytokine receptor complex consisting of the ligand-binding IL-6 α (CD126) and the signal-transducing gp130 subunits. The binding of IL-6 to its receptor system includes activation of the JAK/STAT signaling pathway (Mihara et al.; Peters et al.; Tanaka et al.). 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 (Nordan et al.; Van Snick et al.; Gauldie 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.

Product Information

Alternative Names: B cell differentiation factor, BSF-2, IFN- β 2, Interleukin-6
Accession Number: P08505
Amino Acid Sequence: MFPTSQVRRG DFTEDTTPNR PVYTTSQVGG LITHVLWEIV EMRKELCNGN SDCMNND DAL AENNLKLPEI QRNDGICYQTG YNQEICLLKI SSSLLEYHSY LEYMKNNLKD NKKDKARVLQ RDTETLIHIF NQEVKDLHKI VLPTPISNAL LTKLESQKE WLRTKTIQFI LKSLEEF LKV TLRSTRQT
Predicted Molecular Mass: 21.9 kDa
Species: Mouse
Formulation: Lyophilized from a sterile-filtered aqueous solution containing 0.1% trifluoroacetic acid (TFA).
Source: *E. coli*

Specifications

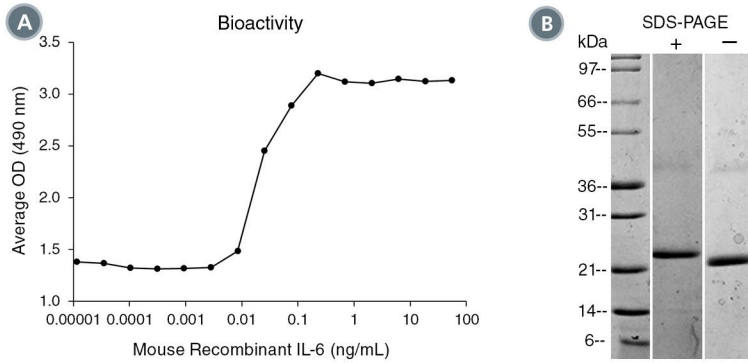
Activity: The specific activity is $\geq 1 \times 10^6$ units/mg ($EC_{50} \leq 50$ pg/mL) as determined by cell proliferation assay using B9 cells.
Purity: $\geq 95\%$
Endotoxin Level: Measured by kinetic Limulus amoebocyte lysate (LAL) analysis and is ≤ 1 EU/ μ g protein.

Preparation and Storage

Storage: Store at -20 to -80°C.
Stability: Stable as supplied for 12 months from date of receipt.
Preparation: Centrifuge vial before opening. Reconstitute the product in 10 mM hydrochloric acid 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 -80°C for more than 3 months. Avoid repeated freeze-thaw cycles.

Data



(A) The biological activity of Mouse Recombinant IL-6 was tested by its ability to promote the proliferation of B9 cells. 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 0.0217 ng/mL.

(B) 1 μ g of Mouse Recombinant IL-6 was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Mouse Recombinant IL-6 has a predicted molecular mass of 21.9 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

- Gauldie J et al. (1987) Interferon beta 2/B-cell stimulatory factor type 2 shares identity with monocyte-derived hepatocyte-stimulating factor and regulates the major acute phase protein response in liver cells. *Proc Natl Acad Sci USA* 84(20): 7251–5.
- Mihara M et al. (2012) IL-6/IL-6 receptor system and its role in physiological and pathological conditions. *Clin Sci (Lond)* 122(4): 143–59.
- Nordan RP et al. (1987) Purification and NH2-terminal sequence of a plasmacytoma growth factor derived from the murine macrophage cell line P388D1. *J Immunol* 139(3): 813–7.
- Peters M et al. (1998) Interleukin-6 and soluble interleukin-6 receptor: direct stimulation of gp130 and hematopoiesis. *Blood* 92(10): 3495–504.
- Tanaka T et al. (2014) IL-6 in inflammation, immunity, and disease. *Cold Spring Harb Perspect Biol* 6(10): a016295.
- Van Snick J et al. (1986) Purification and NH2-terminal amino acid sequence of a T-cell-derived lymphokine with growth factor activity for B-cell hybridomas. *Proc Natl Acad Sci USA* 83(24): 9679–83.

PRODUCTS ARE FOR RESEARCH USE ONLY AND NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES UNLESS OTHERWISE STATED.

Copyright © 2023 by STEMCELL Technologies Inc. All rights reserved including graphics and images. STEMCELL Technologies & Design, STEMCELL Shield Design, and Scientists Helping Scientists are trademarks of STEMCELL Technologies Canada Inc. All other trademarks are the property of their respective holders. While STEMCELL has made all reasonable efforts to ensure that the information provided by STEMCELL and its suppliers is correct, it makes no warranties or representations as to the accuracy or completeness of such information.