

Cytokines

Human Recombinant IL-3 (CHO-expressed)

Interleukin 3

Catalog # 78194
78194.1

10 µg
50 µg



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

Product Description

Interleukin 3 (IL-3) is a species-specific pleiotropic cytokine that promotes the survival and proliferation of pluripotent hematopoietic stem cells and lineage-committed progenitor cells and their differentiation into mature cells of most lineages, including basophils, neutrophils, eosinophils, macrophages, dendritic cells, erythrocytes, and megakaryocytes (Yang et al.; Dorssers et al.; Broughton et al.). IL-3 is produced by activated T cells and has a physiological role in inflammation and allergies by promoting the secretion of inflammatory mediators such as histamine, IL-4, and IL-6 by basophils and eosinophils (Broughton et al.). The IL-3 receptor consists of a unique alpha subunit (CD123) and a beta common subunit (β c or CD131) that is shared with the receptors for IL-5 and GM-CSF, and is the principal signal transduction subunit for these cytokines. IL-3 binding to the heterodimeric receptor activates JAK/STAT, MAPK, and PI3K signaling pathways (Woodcock et al.).

Product Information

Alternative Names: Hematopoietic growth factor, Interleukin-3, Mast cell growth factor, MCGF, MGC79398, MGC79399, Multi-CSF, Multilineage-colony-stimulating factor, Multiple colony-stimulating factor, Multipotential colony-stimulating factor, P-cell-stimulating factor

Accession Number: Q6GS87

Amino Acid Sequence: APMTQTTPK TSWVNCNMI DEIITHLKQP PLPLDFNNL NGEDQDILME NNLRRPNLEA FNRAVKSLQN ASAIESILKN LLPCLPLATA APTRHPIHIK DGDWNEFRRK LTFYKLTLEN AQAQQTTLSL AIF

Predicted Molecular Mass: 15.1 kDa

Species: Human

Cross Reactivity: Reported to be species-specific

Formulation: Lyophilized after dialysis against phosphate-buffered saline.

Source: CHO

Specifications

Activity: The specific activity is $\geq 1.0 \times 10^7$ units/mg ($EC_{50} \leq 0.1$ ng/mL) as determined by a cell proliferation assay using TF-1 cells.

Purity: $\geq 95\%$

Endotoxin Level: Measured by kinetic Limulus amoebocyte lysate (LAL) analysis and is ≤ 0.2 EU/µg protein.

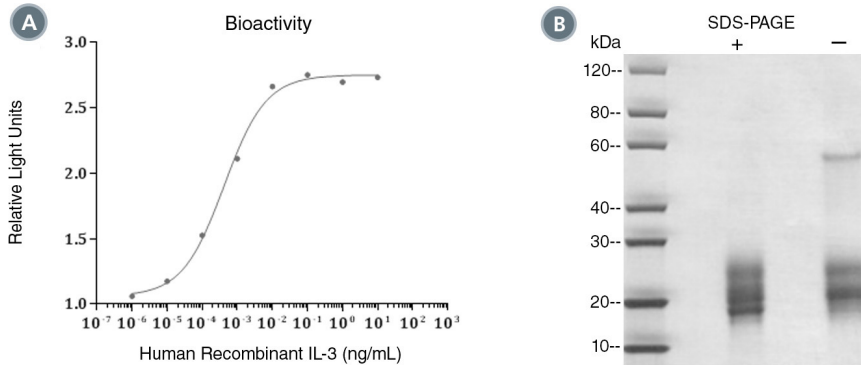
Preparation and Storage

Storage: Store at -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. As a general guide, do not store at $2 - 8^\circ\text{C}$ for more than 1 week or at -20°C for more than 2 months. Avoid repeated freeze-thaw cycles.

Data



(A) The biological activity of Human Recombinant IL-3 (CHO-expressed) was tested by its ability to promote the proliferation of TF-1 cells. Cell proliferation was measured using a fluorometric assay method. The EC₅₀ is defined as the effective concentration of the cytokine at which cell proliferation is at 50% of maximum. The EC₅₀ in the example above is less than 0.1 ng/mL.

(B) 2 µg of Human Recombinant IL-3 (CHO-expressed) was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant IL-3 (CHO-expressed) has a predicted molecular mass of 15.1 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

- Broughton SE et al. (2012) The GM-CSF/IL-3/IL-5 cytokine receptor family: from ligand recognition to initiation of signaling. *Immunol Rev* 250(1): 277–302.
- Dorssers L et al. (1987) Characterization of a human multilineage-colony-stimulating factor cDNA clone identified by a conserved noncoding sequence in mouse interleukin-3. *Gene* 55(1): 115–24.
- Woodcock JM et al. (1999) The functional basis of granulocyte-macrophage colony stimulating factor, interleukin-3 and interleukin-5 receptor activation, basic and clinical implications. *Int J Biochem Cell Biol* 31(10): 1017–25.
- Yang YC et al. (1986) Human IL-3 (multi-CSF): identification by expression cloning of a novel hematopoietic growth factor related to murine IL-3. *Cell* 47(1): 3–10.

STEMCELL TECHNOLOGIES INC.'S QUALITY MANAGEMENT SYSTEM IS CERTIFIED TO ISO 13485. PRODUCTS ARE FOR RESEARCH USE ONLY AND NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES UNLESS OTHERWISE STATED.

Copyright © 2017 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.