

# Cytokines

## Human Recombinant IL-15



Scientists Helping Scientists™ | [WWW.STEMCELL.COM](http://WWW.STEMCELL.COM)

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

[INFO@STEMCELL.COM](mailto:INFO@STEMCELL.COM) • [TECHSUPPORT@STEMCELL.COM](mailto:TECHSUPPORT@STEMCELL.COM)

FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

### Interleukin 15

Catalog #	78031.1	10 µg
	78031	100 µg
	78031.2	500 µg
	78031.3	1000 µg

## Product Description

Interleukin 15 (IL-15) is a four-alpha helix bundle cytokine with many similar properties to IL-2, with which it shares components of its receptor. The IL-15 receptor is a heterotrimeric receptor composed of IL-15Ra (the high-affinity receptor for IL-15) as well as IL-2/15Rb (CD122) and common gamma chain (CD132). IL-15 binds to IL-15R $\alpha$  receptor and can then be presented in trans to IL-2/15Rb and common gamma chain on other cells. Trans-presentation is thought to be the major mechanism by which IL-15-mediated responses occur in mice, although may not be necessary in humans (Castillo et al.). The cytoplasmic domains of IL-2/15Rb and common gamma chain mediate signaling to activate JAK/STAT and PI3K pathways. IL-15 supports the survival and proliferation of naïve CD4+ and CD8+ T cells, and promotes homeostasis of memory T cells. IL-15 also promotes the survival and differentiation of NK cells and regulates their cytolytic activity (Ma et al.).

## Product Information

Alternative Names:	IL-T, Interleukin-15
Accession Number:	P40933
Amino Acid Sequence:	MNWNVISDL KKIEDLIQSM HIDATLYTES DVHPSCKVTA MKCFLEELQV ISLESGDASI HDTVENLIIL ANNLSSSNGN VTESGCKECE ELEEKNIKEF LQSFVHIVQM FINTS
Predicted Molecular Mass:	12.9 kDa
Species:	Human
Cross Reactivity:	Mouse, Rat, Monkey
Formulation:	Lyophilized from a sterile-filtered aqueous solution containing sodium bicarbonate, pH 8.5.
Source:	E. coli

## Specifications

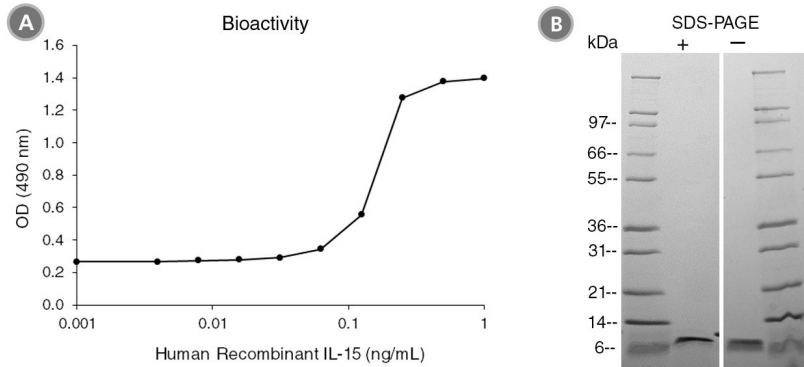
Activity:	The specific activity is $\geq 2 \times 10^5$ units/mg ( $EC_{50} \leq 5$ ng/mL) as determined by a cell proliferation assay using CTLL-2 cells.
Purity:	$\geq 95\%$
Endotoxin Level:	Measured by kinetic Limulus amoebocyte lysate (LAL) analysis and is $\leq 1$ EU/ $\mu$ g protein.

## 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 -80°C for more than 3 months. Avoid repeated freeze-thaw cycles.

## Data



(A) The biological activity of Human Recombinant IL-15 was tested by its ability to promote the proliferation of CTLL-2 cells growing in the presence of other cytokines and stimuli. Cell proliferation was measured after 65 hours of culture 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 0.13 - 0.19 ng/mL.

(B) 1  $\mu$ g of Human Recombinant IL-15 was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant IL-15 has a predicted molecular mass of 12.9 kDa.

## Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, visit [www.stemcell.com/cytokines](http://www.stemcell.com/cytokines) or contact us at [techsupport@stemcell.com](mailto:techsupport@stemcell.com).

## References

- Castillo et al. (2012) Regulating the immune system via IL-15 trans-presentation. *Cytokine* 59(3): 479.  
Ma A et al. (2006) Diverse functions of IL-2, IL-15, and IL-7 in lymphoid homeostasis. *Annu Rev Immunol* 24: 657-79.

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 © 2019 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.