

# Cytokines

## Human Recombinant IL-10



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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)

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### Interleukin 10

Catalog #	78024.1	10 µg
	78024	50 µg
	78024.2	1000 µg

## Product Description

Interleukin 10 (IL-10) is the founding member of the IL-10 family of class II cytokines. All of the IL-10 cytokine family members have a four-helix bundle consisting of  $\alpha$ -helical folds. Upon binding to its receptor, IL-10 activates signaling through JAK1 and STAT3. It is produced by dendritic cells, macrophages, and CD4+ T cells, as well as mast cells, NK cells, neutrophils, and B cells, under specific stimulating conditions (Saraiva & O'Garra). IL-10 can inhibit the expression of pro-inflammatory cytokines and promote healing processes, and is important for the function of regulatory T cells. IL-10 also enhances B cell proliferation, immunoglobulin secretion, and class II MHC expression, while IL-10 produced by macrophages inhibits activation of neighboring macrophages, thus allowing a level of self-regulation (Ouyang et al.).

## Product Information

Alternative Names:	B-TCGF, CSIF, Cytokine synthesis inhibitory factor, Interleukin-10, TGIF
Accession Number:	P22301
Amino Acid Sequence:	SPGQGTQSEN SCTHFPGNLP NMLRDLRDAF SRVKTFQMK DQLDNLLLKE SLLEDFKGYL GCQALSEMIQ FYLEEVMQA ENQDPDIKAH VNSLGENLKT LRLRLRCHR FLPCENSKA VEQVKNAFNK LQEKGIYKAM SEFDIFINYI EAYMTMKIRN
Predicted Molecular Mass:	18.6 kDa
Species:	Human
Cross Reactivity:	Mouse, Monkey
Formulation:	Lyophilized after dialysis against phosphate-buffered saline.
Source:	CHO

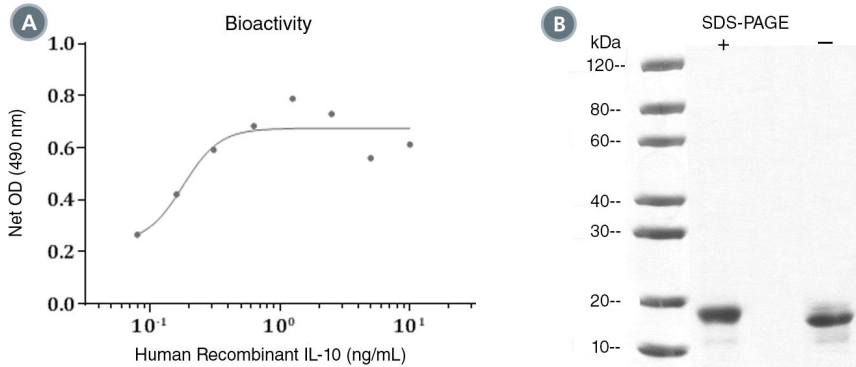
## Specifications

Activity:	The specific activity is $\geq 5 \times 10^6$ units/mg ( $EC_{50} \leq 0.2$ ng/mL) as determined by a cell proliferation assay using MC/9 cells.
Purity:	$\geq 95\%$
Endotoxin Level:	Measured by kinetic Limulus amoebocyte lysate (LAL) analysis and is $\leq 0.2$ EU/ $\mu$ g protein.

## Preparation and Storage

Storage:	Store at $-80^{\circ}\text{C}$ .
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 $-20^{\circ}\text{C}$ for more than 2 months. Avoid repeated freeze-thaw cycles.

## Data



(A) The biological activity of Human Recombinant IL-10 was tested by its ability to promote the proliferation of MC/9 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 less than 0.2 ng/mL.

(B) 5 µg of Human Recombinant IL-10 was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant IL-10 has a predicted molecular mass of 18.6 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

- Ouyang W et al. (2011) Regulation and functions of the IL-10 family of cytokines in inflammation and disease. *Annu Rev Immunol* 29(1): 71–109.
- Saraiva M & O'Garra A. (2010) The regulation of IL-10 production by immune cells. *Nature Reviews Immunology* 10(3):170.

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