
Human Recombinant IL-10, ACF

Catalog #78144	10 µg
Catalog #78144.1	100 µg
Catalog #78144.2	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 α -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.). This product is animal component-free.

Product Information

Alternative Names:	BTCGF, CSIF, Cytokine synthesis inhibitory factor, Interleukin10, TGIF
Accession Number:	P22301
Amino Acid Sequence:	MSPGQGTQSE NSCTHFPGNL PNMLRDLRDA FSRVKTFQK KDQLDNLLK ESLEDFKGY LGCQALSEMI QFYLEEVMPQ AENQDPDIKA HVNSLGENLK TLRRLRRCH RFLPCENKSK AVEQVKNAFN KLQEKGIYKA MSEFDIFINY IEAYMTMKIR N
Predicted Molecular Mass:	18.8 kDa
Species:	Human
Product Formulation:	Lyophilized from a sterile-filtered aqueous solution containing sodium phosphate, pH 7.5.
Source:	E. coli
Purity:	≥ 97%

Specifications

Activity:	The EC50 is ≤ 5 ng/mL, as determined by a cell proliferation assay using MC/9 cells. The specific activity is approximately 5.4×10^3 IU/μg, as calibrated against the human recombinant IL-10 WHO International Standard (NIBSC code: 93/722).
Endotoxin Level:	Measured by kinetic Limulus amoebocyte lysate (LAL) analysis and is ≤ 1 EU/μg protein.

Preparation and Storage

Stability and Storage:	Store at -20 to -80°C. 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

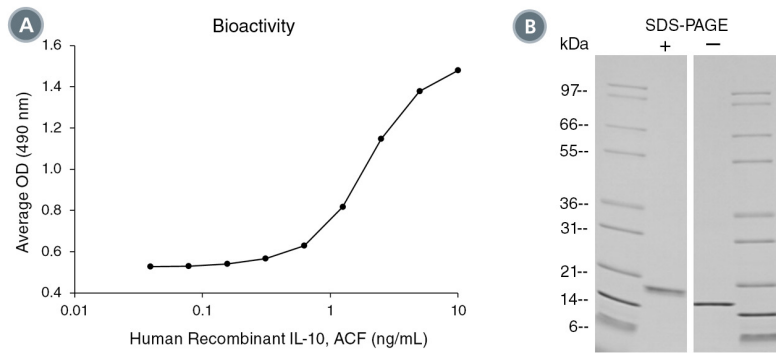


Figure 1. Biological Activity and Molecular Mass of Human Recombinant IL-10, ACF

(A) The biological activity of Human Recombinant IL-10, ACF was tested by its ability to promote the proliferation of MC/9 cells in the presence of human IL-4. Cell proliferation was measured after 48 hours of culture. 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 1.95 ng/mL. (B) 1 μ g of Human Recombinant IL-10, ACF was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant IL10, ACF has a predicted molecular mass of 18.8 kDa.

Related Products

For a complete list of cytokines or peptide pools, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/cytokines or contact us at 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): 170–81.

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

Copyright © 2024 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.