

Cytokines

Human Recombinant IL-10, ACF



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Interleukin 10, animal component-free

Catalog #	78144	10 µg
	78144.1	100 µg
	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 T regulatory 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:	B-TCGF, CSIF, Cytokine synthesis inhibitory factor, Interleukin-10, TGIF
Accession Number:	P22301
Amino Acid Sequence:	MSPGQGTQSE NSCTHFPGNL PNMLRDLRDA FSRVKTFFQM KDQLDNL LLLK ESLLDFKGY LGCQALSEMI QFYLEEVMPPQ AENQDPDIKA HVNSLGENLK TLRLRLRRCH RFLPCENKSK AVEQVKNAFN KLQEKGIYKA MSEFDIFINY IEAYMTMKIR N
Predicted Molecular Mass:	18.8 kDa
Species:	Human
Cross Reactivity:	Mouse, Monkey
Formulation:	Lyophilized from a sterile-filtered aqueous solution containing sodium phosphate, pH 7.5
Source:	E. coli

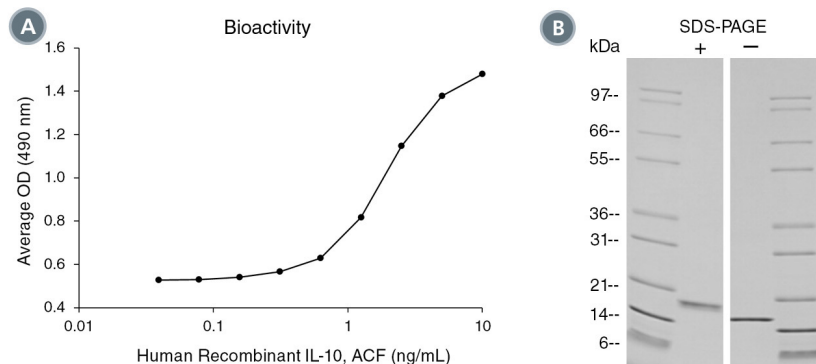
Specifications

Activity:	The specific activity is $\geq 2.0 \times 10^5$ units/mg ($EC_{50} \leq 5$ ng/mL) as determined by proliferation of MC/9 cells.
Purity:	$\geq 95\%$
Endotoxin Level:	Measured by kinetic Limulus amoebocyte lysate (LAL) analysis and is ≤ 1 EU/µg 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. Resuspend the product in sterile water containing 0.1% bovine serum albumin (BSA) to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. Store at 2 - 8°C for up to 1 month or at -20°C to -80°C for up to 3 months. Avoid repeated freeze-thaw cycles. NOTE: If reconstituted product will be used immediately, BSA is not required.

Data



(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 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 1.95 ng/mL.

(B) 1 µg of Human Recombinant IL-10, ACF was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining.

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

- 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.

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