

# Cytokines

## Mouse Recombinant IL-10



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Catalog # 78079  
78079.1

Interleukin 10

10 µg  
50 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+ regulatory T cells, as well as mast cells, NK cells, neutrophils, and regulatory B cells, under specific stimulating conditions (Saraiva & O'Garra). IL-10 can inhibit the activation of certain immune cells, while it promotes the function of B cells and facilitates the healing process. Specifically, this cytokine is important for the function of regulatory T cells as it is a potent suppressor of effector T cell proliferation and cytokine production. Also, IL-10 produced by a subset of macrophages inhibits activation and production of pro-inflammatory cytokines by neighboring macrophages, thus allowing a level of self-regulation. IL-10 enhances B cell proliferation, immunoglobulin secretion, and class II MHC expression (Ouyang et al.).

## Product Information

**Alternative Names:** B-TCGF, CSIF, Cytokine synthesis inhibitory factor, Interleukin-10, TGIF  
**Accession Number:** P18893  
**Amino Acid Sequence:** SRGQYSREDN NCTHFPVGQS HMLLELR TAF SQVKTFQTK DQLDNILLTD SLMQDFKGYL GCQALSEMIQ FYLVEVMPQA EKHGPEIKEH LNSLGEK LKT LRMRLRRCHR FLPCENKSKA VEQVKSDFNK LQDQGVYKAM NEFDIFINCI EAYMMIKMKS  
**Predicted Molecular Mass:** 18.8 kDa  
**Species:** Mouse  
**Cross Reactivity:** Human, Rat  
**Formulation:** Lyophilized after dialysis against phosphate-buffered saline.  
**Source:** CHO

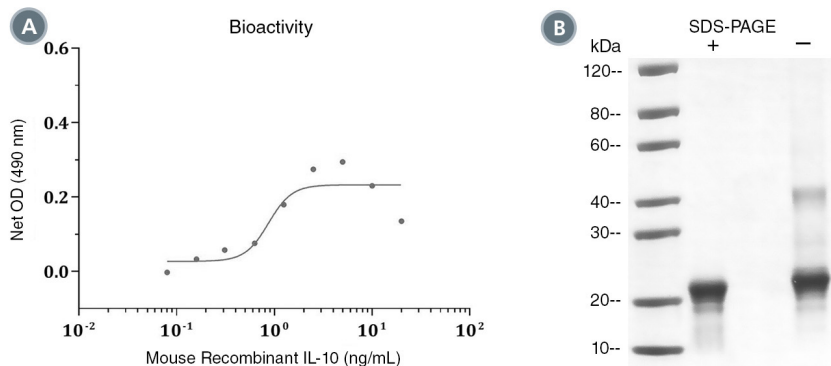
## Specifications

**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/µg 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 3 months. Avoid repeated freeze-thaw cycles.

## Data



(A) The biological activity of Mouse 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 EC<sub>50</sub> is defined as the effective concentration of the growth factor at which cell proliferation is at 50% of maximum. The EC<sub>50</sub> in the above example is less than 0.2 ng/mL.

(B) 2 µg of Mouse Recombinant IL-10 was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Mouse Recombinant IL-10 has a predicted molecular mass of 18.8 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. *Nat Rev Immunol* 10(3): 170–81.

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