

Cytokines

Mouse Recombinant IL-10



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

INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM

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Interleukin 10

Catalog # 78079 10 µg
78079.1 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 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 regulatory 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 healing process. Specifically, this cytokine is important for the function of T regulatory 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 LNSLGEKLT LRMRLRRCHR FLPCENKSKA VEQVKSDFNK LQDQGVYKAM NEFDIFINCI EAYMMIKMKS
Predicted Molecular Mass: 21 - 23 kDa
Species: Mouse
Cross Reactivity: Human, Rat
Formulation: Lyophilized after dialysis against phosphate-buffered saline.
Source: CHO

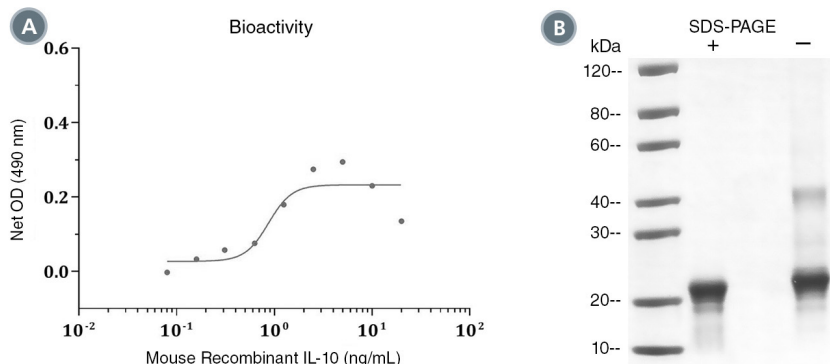
Specifications

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 of MC/9 cells.
Purity: $\geq 95\%$
Endotoxin Level: Measured by kinetic limulus amoebocyte lysate (LAL) analysis and is ≤ 0.2 EU/µg protein.

Preparation and Storage

Storage: Store at -80°C .
Stability: Stable as supplied for 12 months from date of receipt.
Preparation: Centrifuge vial before opening. Resuspend the product in sterile water or phosphate-buffered saline 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 $2 - 8^{\circ}\text{C}$ for up to 1 week 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 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 EC50 is defined as the effective concentration of the growth factor at which cell proliferation is at 50% of maximum. The EC50 in the example above 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 21 - 23 kDa.

Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, please visit our website at 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. *Nat Rev Immunol* 10(3): 170–81.

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