

Cytokines

Human Recombinant IL-10



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Catalog # 78024.1
78024

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 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.).

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 LRLRLRRCHR FLPCENKSKA VEQVKNAFNK LQEKGIYKAM SEFDIFINYI EAYMTMKIRN
Predicted Molecular Mass: 18 - 19 kDa
Species: Human
Cross Reactivity: Mouse, Monkey
Formulation: Lyophilized after dialysis against phosphate-buffered saline.
Source: E. coli

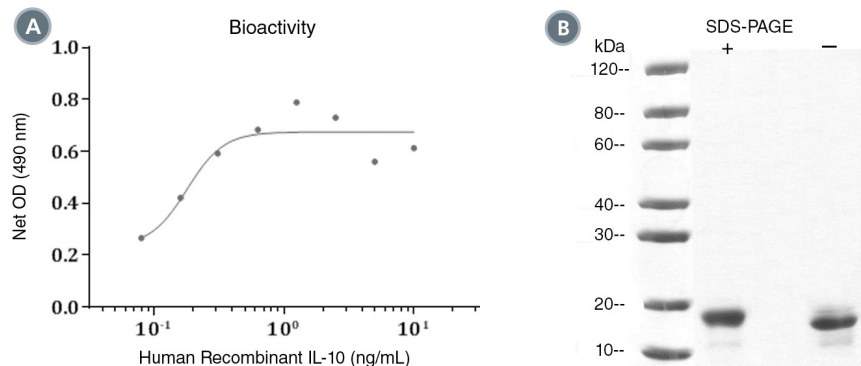
Specifications

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 ≤ 0.2 EU/µg protein.

Preparation and Storage

Storage: Store at -80°C .
Stability: Stable as supplied for 12 months from date of receipt.
Reconstitution: Centrifuge vial before opening. Resuspend the product in sterile water or phosphate-buffered saline 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 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 example above 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 - 19 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 and O'Garra (2010) The regulation of IL-10 production by immune cells. *Nature Reviews Immunology* 10(3):170.

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