

IL 10 Human

Description: Interleukin-10 Human Recombinant produced in E.coli is a single non-glycosylated polypeptide chains containing 161 amino acids each and having a molecular mass of 18.6kDa. The IL-10 is purified by proprietary chromatographic techniques.

Synonyms: B-TCGF, CSIF, TGIF, IL-10, IL10A, MGC126450, MGC126451, Cytokine synthesis inhibitory factor.

Source: Escherichia Coli.

Physical Appearance: Sterile Filtered White lyophilized (freeze-dried) powder.

Amino Acid Sequence: MSPGQGTQSE NSCTHFPGNL PNMLRDLRDA FSRVKTFFQM
KDQLDNLLK ESLLDFKGY LGCQALSEMI QFYLEEVMPQ AENQDPDIKA HVNSLGENLK
TLRLRLRRCH RFLPCENKSK AVEQVKNAFN KLQEKGIYKA MSEFDIFINY IEAYMTMKIR N.

Purity: Greater than 97.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

Formulation:

Lyophilized from a 0.2

Stability:

Lyophilized Interleukin-10 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution IL10 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

Solubility:

It is recommended to reconstitute the lyophilized Interleukin-10 in sterile 18M-cm H₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

Introduction:

IL10 is a cytokine produced primarily by monocytes and to a lesser extent by lymphocytes. This cytokine has pleiotropic effects in immunoregulation and inflammation. It down-regulates the expression of Th1 cytokines, MHC class II Ags, and costimulatory molecules on macrophages. It also enhances B cell survival, proliferation, and antibody production. This cytokine can block NF-kappa B activity, and is involved in the regulation of the JAK-STAT signaling pathway. Knockout studies in mice suggested the function of this cytokine as an essential immunoregulator in the intestinal tract.

Biological Activity:

The ED₅₀ as determined by the dose-dependent co-stimulation (with murine IL-4) of MC/9 cells was found to be less than 2.0ng/ml, corresponding to a specific activity of 5.0

References:

1. Title: Activated signal transducer and activator of transcription-3 (STAT3) is a poor regulator of tumour necrosis factor- production by human monocytes. Publication: Article first published online: 9 JAN 2007
DOI: 10.1111/j.1365-2249.2006.03291.x Link: <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2249.2006.03291.x/full>
2. Title: Suppressor of cytokine signalling-3 at pathological levels does not regulate lipopolysaccharide or interleukin-10 control of tumour necrosis factor- production by human monocytes. Publication: Article first published online: 11 MAY 2006 DOI: 10.1111/j.1365-2567.2006.02383.x Link: <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2567.2006.02383.x/full>
3. Title: The Tyrosine Sulfate-rich Domains of the LRR Proteins Fibromodulin and Osteoadherin Bind Motifs of Basic Clusters in a Variety of Heparin-binding Proteins, Including Bioactive Factors*. Publication: First Published on August 21, 2009, doi: 10.1074/jbc.M109.047076 October 16, 2009 The Journal of Biological Chemistry, 284, 28543-28553. Link: <http://www.jbc.org/content/284/42/28543.full>

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