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Human Interleukin-10 (hIL-10)

For Research Use Only. Not for Use in Diagnostic Procedures.

MW (kDa):	UniProt ID:	Entrez-Gene Id:
18	#P22301	3586

Background

IL-10 is an anti-inflammatory cytokine that is produced by T cells, NK cells and macrophages (1,2). IL-10 initiates signal transduction by binding to a cell surface receptor complex consisting of IL-10 RI and IL-10 RII (1). Binding of IL-10 leads to the activation of Jak1 and Tyk2, which phosphorylates Stat-3 (1,3). The anti-inflammatory activity of IL-10 is due to its ability to block signaling through other cytokine receptors, notably IFN γ receptor, by upregulating expression of SOCS-1 (1,3). In addition, IL-10 promotes T cell tolerance by inhibiting tyrosine phosphorylation of CD28 (4,5). IL-10 is an important negative regulator of the immune response, which allows for maintenance of pregnancy (1). In contrast, increased IL-10 levels contribute to persistent *Leishmania major* infections (6).

Endotoxin

Less than 0.01 ng endotoxin/1 μ g hIL-10.

Purity

>98% as determined by SDS-PAGE of 6 μ g reduced (+) and non-reduced (-) recombinant hIL-10. All lots are greater than 98% pure.

Source / Purification

Recombinant human IL-10 (hIL-10) Ser19 - Asn178 (Accession # NM_000572) was produced in *E. coli* in Cell Signaling Technology.

Bioactivity

The bioactivity of recombinant hIL-10 was determined in a MC/9 cell proliferation assay. The ED₅₀ of each lot is between 0.3-1.3 ng/ml.

Background References

1. Pestka, S. et al. (2004) *Immunol Rev* 202, 8-32.
2. Akuffo, H. et al. (1999) *Clin Exp Immunol* 117, 529-34.
3. O'Shea, J.J. and Murray, P.J. (2008) *Immunity* 28, 477-87.
4. Akdis, C.A. and Blaser, K. (2001) *Immunology* 103, 131-6.
5. Akdis, C.A. et al. (2000) *FASEB J* 14, 1666-8.
6. Von Stebut, E. (2000) *Eur J Dermatol* 17, 115-22.

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