

IL-10

Interleukin 10

human, recombinant, Chinese Hamster Ovary (CHO) cells

Cat. No.	Amount
PR-470	10 µg

For *in vitro* use only
Quality guaranteed for 12 months
Store at -20°C

Avoid freeze / thaw cycles

Form

Lyophilized. Interleukin-10 was lyophilized from a 1 mg/ml solution containing 60 mM PBS pH 6.5, 50 mg BSA and 100 mM NaCl.

Solubility

It is recommended to reconstitute the lyophilized IL-10 in bidest H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

Activity

ED₅₀: < 2 ng/ml, corresponding to a specific activity 1.5 x 10⁷ IU/mg, determined by the dose-dependent co-stimulation with murine IL-4 of MC-9 cells.

Molecular Weight

18.6 kDa

Purity

≥ 95% by SDS-PAGE and RP-HPLC

Description

Interleukin-10 is produced by murine T-cells following their stimulation by lectins. The main source for B-cell derived Interleukin-10 in mice are Ly-1 B-cells that express CD5 and CD11. Murine keratinocytes also produce IL10.

In humans IL-10 is produced by activated CD8⁺ peripheral blood T-cells, by T-helper CD4⁺ T-cell clones (resembling Th0, Th1, and Th2) after both antigen-specific and polyclonal activation, by B-cell lymphomas, and by monocytes following cell activation by bacterial lipopolysaccharides and mast cells. B-cell lines derived from patients with acquired immunodeficiency syndrome and Burkitt's lymphoma constitutively secrete large quantities of IL-10 into the conditioned medium. The synthesis of IL-10 by monocytes is inhibited by IL-4 and IL-10.

Recombinant human Interleukin-10 produced in CHO is a non-covalent dimer of 2 polypeptide chains containing 161 amino acids each.

Amino acid sequence

The sequence of the first five N-terminal amino acids was determined and was found to be Ser-Pro-Gly-Gln-Thr.

Selected References:

- Azar *et al.* (2004) Increased secretion patterns of interleukin-10 and tumor necrosis factor-alpha in cervical squamous intraepithelial lesions. *Hum. Pathol.* **35**:1376.
- Schwerbrock *et al.* (2004) Interleukin 10-deficient mice exhibit defective colonic Muc2 synthesis before and after induction of colitis by commensal bacteria. *Inflamm. Bowel Dis.* **10**:811.
- Luik *et al.* (2004) Autoregulatory role of interleukin-10 in hepatitis C patients treated with IFN-alpha. *J. Interferon Cytokine Res.* **24**:585.
- Burgess *et al.* (2004) Longitudinal decline in lung function: evaluation of interleukin-10 genetic polymorphisms in firefighters. *J. Occup. Environ. Med.* **46**:1013.
- Salvati *et al.* (2005) Recombinant human interleukin 10 suppresses gliadin dependent T cell activation in ex vivo cultured coeliac intestinal mucosa. *Gut.* **54**:46.
- Bouton *et al.* (2004) Costimulation with interleukin-4 and interleukin-10 induces mast cell apoptosis and cell-cycle arrest: the role of p53 and the mitochondrion. *Exp. Hematol.* **32**:1137.