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Product Data Sheet

Recombinant Human IL-10 (carrier-free)

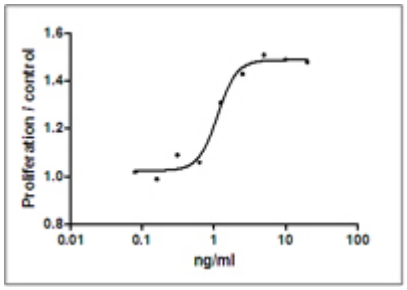
Catalog # / Size: 571002 / 10 µg
571004 / 25 µg
571006 / 100 µg
571008 / 500 µg

Source: Human IL-10, amino acids Ser19-Asn178 (Accession # NM_000572), was expressed in E. coli.

Molecular Mass: The 160 amino acid recombinant protein has a predicted molecular mass of 18,647 Da. The DTT-reduced protein migrates at approximately 18kDa and the non-reduced protein migrates at approximately 15kDa by SDS-PAGE. The N-terminal amino acid is Serine.

Purity: Purity is >98%, as determined by Coomassie stained SDS-PAGE.

Endotoxin Level: Endotoxin level is < 0.1 EU/µg (< 0.01ng/µg) protein as determined by the LAL method.



MC/9 cell proliferation induced by hIL-10.

Activity: ED50 = 0.8 - 1.5 ng/ml corresponding to a specific activity of 1.25 - 0.66 x 10^6 units/mg, as determined by the dose dependent stimulation of MC/9 cell proliferation.

Preparation: 10-100 µg sizes are bottled at 200 µg/mL. 500 µg sizes and larger are bottled at the concentration indicated on the vial.

Formulation: 0.22 µm filtered protein solution is in 10mM NaH_2PO_4, 150mM NaCl, pH 7.2.

Storage: Unopened vial can be stored at 4°C for three months, at -20°C for six months, or at -70°C for one year. For maximum results, quick spin vial prior to opening. Stock solutions should be prepared at no less than 10 µg/mL in buffer containing carrier protein such as 1% BSA or HSA or 10% FBS. For long term-storage, aliquot into polypropylene vials and store in a manual defrost freezer. **Avoid repeated freeze/thaw cycles.**

Applications:

Applications: Bioassay

Description: IL-10 was first described as a cytokine that is produced by T helper 2 (Th2)cell clones. It inhibits interferon (IFN)-γ synthesis in Th1 cell, and therefore it was initially called cytokine synthesis inhibiting factor(CSIF). Macrophages are the main source of IL-10 and its secretion can be stimulated by endotoxin (via Toll-like receptor 4, NF-κB dependent), tumor necrosis factor TNF-α (via TNF receptor p55, NF-κB-dependent), catecholamines, and IL-1. IL-10 controls inflammatory processes by suppressing the expression of proinflammatory cytokines, chemokines, adhesion molecules, as well as antigen-presenting and costimulatory molecules in monocytes/macrophages, neutrophils, and T cells. IL-10 inhibits the production of proinflammatory mediators by monocytes and macrophages such as endotoxin- and IFN-γ-induced release of IL-1α, IL-6, IL-8, G-CSF, GM-CSF, and TNF-α. In addition, it enhances the production of anti-inflammatory mediators such as IL-1RA and soluble TNFα receptors. IL-10 inhibits the capacity of monocytes and macrophages to present antigen to T cells. This is realized by down-regulation of constitutive and IFNγ-induced cell surface levels of MHC class II, of costimulatory molecules such as CD86 and of some adhesion molecules such as CD58.

Antigen References:
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2. Ho AS, *et al. P. Natl. Acad. Sci. USA* 90:11267-11271 1993.
3. Hart PH, *et al. J Immunol* 157:3672-3680 1996.
4. Asadullah K, *et al. Pharmacol Rev* 55:241-269 2003.
5. Mosser DM and Zhang X *Immunol Rev* 226:205-218 2008.
6. Maynard CL and Weaver CT *Immunol Rev* 226:219-233 2008.

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