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Elabscience Biotechnology Inc.

Elabscience®

Recombinant Human IL-10/Interleukin-10 Protein (Active)

Catalog No. PKSH031972

Description

Synonyms	Interleukin-10, IL-10, Cytokine synthesis inhibitory factor, CSIF, IL10, RP11-262N9.1, IL10A, MGC126450, MGC126451, TGIF
Species	Human
Expression_host	E.coli
Sequence	Ser 19-Asn 178
Accession	NP_000563.1
Mol_Mass	18.6 kDa
AP_Mol_Mass	18 kDa
Tag	None
Bio_activity	1. Immobilized human IL10 at 10 μg/mL (100 μl/well) can bind Cynomolgus IL10RA-Fc, The EC50 of Cynomolgus IL10RA-Fc is 0.24-0.56 μg/mL. 2. Measured in a cell proliferation assay using MC/9-2 mouse mast cells. The ED50 for this effect is typically 0.2-1. 2 ng/mL.

Properties

Purity	> 95 % as determined by reducing SDS-PAGE.
Endotoxin	Please contact us for more information.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile 20mM Tris, 20mM NaCl, pH 8.7. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Background

IL-10 is a anti-inflammatory cytokine which belongs to the IL-10 family. It is produced by a variety of cell lines, including T-cells, macrophages, mast cells and other cell types, while it is produced primarily by monocytes and to a lesser extent by lymphocytes. IL-10 is mainly expressed in monocytes and Type 2 T helper cells (TH2), mast cells, CD4+CD25+Foxp3+ regulatory T cells, and also in a certain subset of activated T cells and B cells. IL-10 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. IL-10 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. The importance of interleukin 10 for counteracting excessive immunity in the human body is revealed by the fact that patients with Crohn's disease react favorably towards treatment with bacteria producing recombinant IL-10. IL-10 inhibits the synthesis of a number of cytokines, including IFN-gamma, IL-2, IL-3, TNF and GM-CSF produced by activated macrophages and by helper T-cells. It also displays a potent ability to suppress the antigen-presentation capacity of antigen presenting cells.

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However, it is also stimulatory towards certain T cells and mast cells and stimulates B cell maturation and antibody production.

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