

Recombinant Mouse IL-10 Protein

Catalog No.: RP01465 Recombinant 2 Publications

Sequence Information

Species **Gene ID** **Swiss Prot**
 Mouse 16153 P18893

Tags

C-His

Synonyms

IL-10; CSIF; If2a; II-10; IL10; il10

Background

IL-10 is an anti-inflammatory cytokine that 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 some 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. However, it is also stimulatory towards certain T cells and mast cells and stimulates B cell maturation and antibody production.

Product Information

Source **Purification**
 HEK293 cells $\geq 90\%$ as determined by SDS-PAGE.

Calculated MW **Observed MW**
 19.59 kDa 20-24 kDa

Endotoxin

< 0.1 EU/μg of the protein by LAL method.

Formulation

Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.

Reconstitution

Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid vortex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stabilizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize freeze-thaw cycles.

Basic Information

Description

Recombinant Mouse IL-10 Protein is produced by HEK293 cells expression system. The target protein is expressed with sequence (Ser19-Ser178) of mouse IL10 (Accession #NP_034678.1.) fused with a 6×His tag at the C-terminus.

Bio-Activity

Measured in a cell proliferation assay using MC/9-2 mouse mast cells. The ED₅₀ for this effect is 0.2-0.8 ng/mL, corresponding to a specific activity of $1.25 \times 10^6 - 5 \times 10^6$ units/mg.

Shipping

The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Storage

Store at -20°C. Store the lyophilized protein at -20°C to -80 °C up to 1 year from the date of receipt.

After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

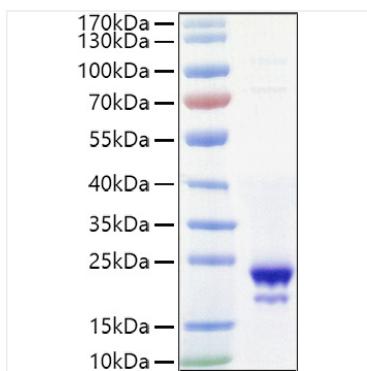
Avoid repeated freeze/thaw cycles.

Operational Notes

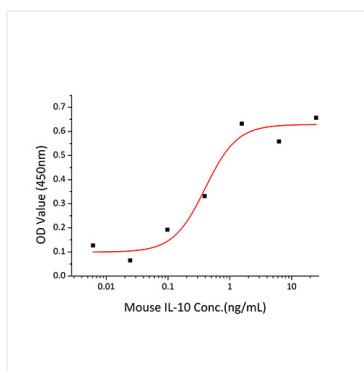
For your safety and health, please wear a lab coat and disposable gloves for handling.

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Validation Data



Recombinant Mouse IL-10 Protein was determined by SDS-PAGE under reducing conditions with Coomassie Blue.



Recombinant Mouse IL-10 promotes proliferation of MC/9 2 mouse mast cells. The ED₅₀ for this effect is 0.2-0.8 ng/mL, corresponding to a specific activity of 1.25×10^6 - 5×10^6 units/mg.