Recombinant Mouse IL-10 Protein

Catalog No.: RP01465

Sequence Information

Species
Mouse

Gene ID
16153

Swiss Prot
P18893

Tags
C-His

Synonyms
IL-10, CSIF, If2a, Il-10,IL10,il10

Product Information

Source
HEK293 cells

Purification
≥ 92 % as determined by SDS-PAGE.

Calculated MW
19.59 kDa

Observed MW
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 stablizer (e.g. 0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.

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.

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.

Activity
Measured in a cell proliferation assay using MC/9-2 mouse mast cells. The ED_{50} 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.

Shipping
Lyophilized proteins are shipped at ambient temperature.
Liquid proteins are shipped at frozen temperature with dry ice.
Upon receipt, store it immediately at the temperature recommended below.

Storage
Store at -20℃

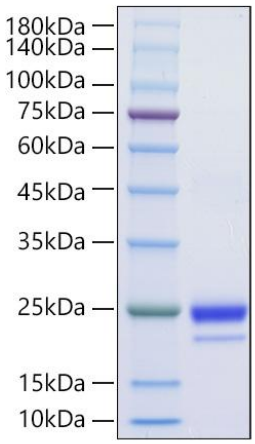
Operational Notes
For your safety and health, please wear a lab coat and disposable gloves for handling.

Contact

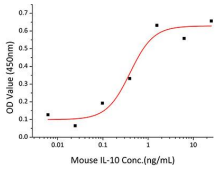
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Validation Data



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 ED_{50} 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.