

# Sus scrofa (Pig) IL10 / Interleukin-10 Protein



Sino Biological Inc.

Biological Solution Specialist

Catalog Number: 62000-WNAE

## General Information

### Gene Name Synonym:

IL10

### Protein Construction:

A DNA sequence encoding the porcine IL10 (Q29055) (Ser19-Asn175) was expressed with an initial Met at the N-terminal.

**Source:** Sus scrofa (Pig)

**Expression Host:** E. coli

## QC Testing

**Purity:** > 95 % as determined by SDS-PAGE

## Bio-Activity

1. Immobilized porcine IL10 at 10 µg/ml (100 µl/well) can bind Cynomolgus IL10RA-Fc (Cat:90125-C02H), The EC50 of Cynomolgus IL10RA-Fc (Cat:90125-C02H) is 0.14-0.34 µg/ml.
2. Measured in a cell proliferation assay using MC/9-2 mouse mast cells. The ED50 for this effect is typically 1-5 ng/mL.

## Endotoxin:

Please contact us for more information.

## Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Met

## Molecular Mass:

The recombinant porcine IL10 consists of 158 amino acids and has a predicted molecular mass of 18.2 kDa. The apparent molecular mass of it is approximately 18 kDa in SDS-PAGE under reducing conditions.

## Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

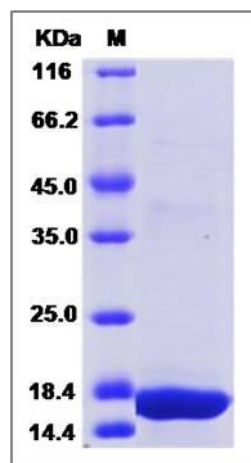
## Usage Guide

### Storage:

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

## SDS-PAGE:



## Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## Protein Description

Interleukin-10, also known as cytokine synthesis inhibitory factor, CSIF and IL-10, is a secreted protein which belongs to the IL-10 family. Interleukin-10 / IL-10 is produced by a variety of cell lines, including T-cells, macrophages, mast cells and other cell types. It can also be produced by monocytes upon PD-1 triggering in these cells. Interleukin-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. Interleukin-10 / IL-10 has pleiotropic effects in immunoregulation and inflammation. It down-regulates the expression of Th1 cytokines, MHC class II antigens, and costimulatory molecules on macrophages. It also enhances B cell survival, proliferation, and antibody production. This cytokine can block NF-κB activity, and is involved in the regulation of the JAK-STAT signaling pathway. Knockout studies suggested the function of Interleukin-10 / IL-10 as an essential immunoregulator in the intestinal tract. Patients with Crohn's disease react favorably towards treatment with bacteria producing recombinant interleukin-10, showing the importance of interleukin-10 for counteracting excessive immunity in the human body.

## References

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4. Braat H. et al., 2006, Clin Gastroenterol Hepatol. 4 (6): 754-9.
5. Grimbaldston MA. et al., 2007, Nat Immunol. 8 (10): 1095-104.
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