# General Information

## Gene Name Synonym:

ICOS

## Protein Construction:

A DNA sequence encoding the rhesus ICOS (NP_001253918.1) (Met1-Lys140) was expressed with a c-terminal Fc region of human IgG1 tagged AVI tag at the C-terminus. The expressed protein was biotinylated in vivo by the Biotin-Protein ligase (BirA enzyme) which is co-expressed.

## Source:

Rhesus

## Expression Host:

Human Cells

## QC Testing

### Biotin/Protein Ratio:

0.7-1 as determined by the HABA assay.

### Purity:

> 90 % as determined by SDS-PAGE.

### Endotoxin:

< 1.0 EU per µg protein as determined by the LAL method.

### Predicted N terminal:

Gly 20

### Molecular Mass:

The recombinant rhesus ICOS consists of 374 amino acids and predicts a molecular mass of 42.2 kDa.

### Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 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

### Stability & Storage:

Samples are stable for twelve months from date of receipt at -20°C to -80°C.

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.

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:

![SDS-PAGE Graph]

## Protein Description

Inducible costimulator (ICOS), also called AILIM (activation-inducible lymphocyte immunomediatory molecule) is a cell-surface receptor, and belongs to the CD28 family of immune costimulatory receptors consisting of CD28, CTLA-4 and PD-1. The interaction of B7-H2/ICOS plays a critical role in Th cell differentiation, T–B cell interactions which is essential for germinal center formation, and humoral immune responses, and as well as the production of cytokine IL-4. In addition, ICOS is more potent in the induction of IL-1 production, a cytokine important for suppressive function of T regulatory cells. The B7-1/B7-2--CD28/CTLA-4 and ICOS-B7RP-1 pathway provides key second signals that can regulate the activation, inhibition and fine-tuning of T lymphocyte responses. ICOS stimulates both Th1 and Th2 cytokine production but may have a preferential role in Th2 cell development. Moreover, The B7-1/B7-2--CD28/CTLA-4 and ICOS-B7RP-1 pathway has been suggested of being involved in the development of airway inflammation and airway hyperresponsiveness.

## References