



## Synonym

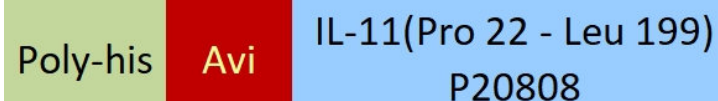
IL-11, Interleukin-11, AGIF, Oprelvekin, IL11

## Source

Cynomolgus IL-11 Protein, His,Avitag(IL1-C82Q3) is expressed from human 293 cells (HEK293). It contains AA Pro 22 - Leu 199 (Accession # [P20808](#)).

Predicted N-terminus: His

## Molecular Characterization



This protein carries a polyhistidine tag at the N-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 23 kDa. The protein migrates as 25-29 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

## Labeling

*Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.*

## Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

## Endotoxin

Less than 1.0 EU per µg by the LAL method.

## Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-HPLC.

## Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

## Reconstitution

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

## Storage

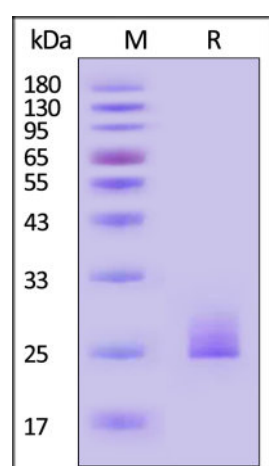
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

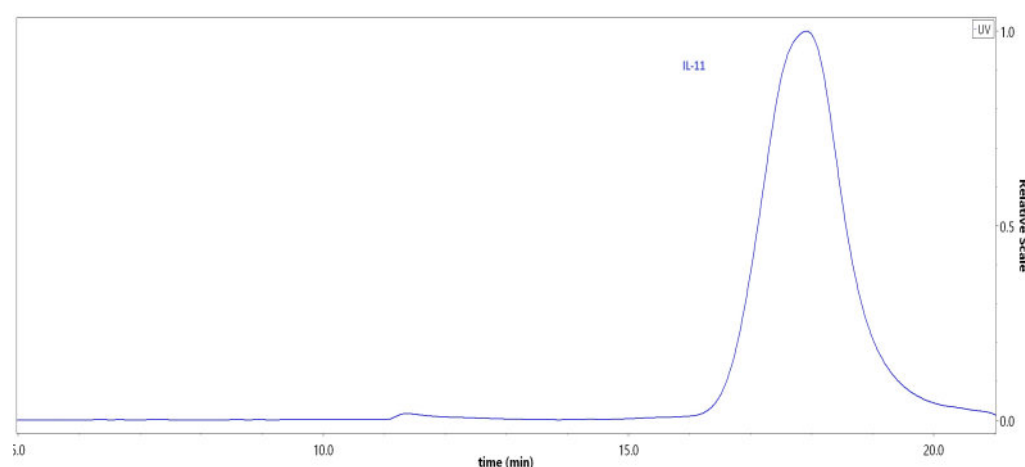
## SDS-PAGE



Cynomolgus IL-11 Protein, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

## Bioactivity-ELISA

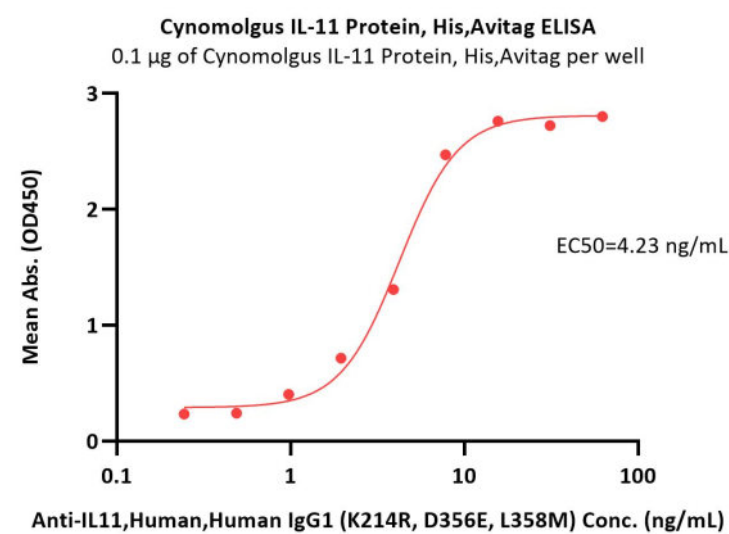
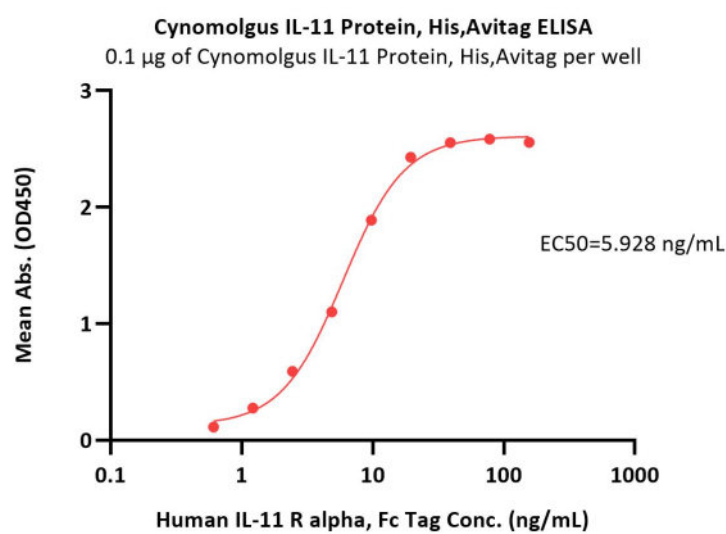
## SEC-HPLC



The purity of Cynomolgus IL-11 Protein, His,Avitag (Cat. No. IL1-C82Q3) was greater than 90% as determined by SEC-HPLC.

Discounts, Gifts,  
and more!





Immobilized Cynomolgus IL-11 Protein, His,Avitag (Cat. No. IL1-C82Q3) at 1 µg/mL (100 µL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 µg/well) plate can bind Human IL-11 R alpha, Fc Tag (Cat. No. ILR-H5256) with a linear range of 0.6-10 ng/mL (QC tested).

Immobilized Cynomolgus IL-11 Protein, His,Avitag (Cat. No. IL1-C82Q3) at 1 µg/mL (100 µL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 µg/well) plate can bind Anti-IL11,Human,Human IgG1 (K214R, D356E, L358M) with a linear range of 0.6-10 ng/mL (Routinely tested).

## Background

IL-11 (Interleukin 11) is a pleiotropic cytokine in the IL-6 family, which also includes LIF, CNTF, Oncostatin M, Cardiotrophin-1, IL-27 and IL-31 (1-3). In humans, IL-11 was also independently discovered as an adipogenesis inhibitory factor (AGIF) (3). The human IL-11 cD encodes a 199 amino acid (aa) precursor, which generates a 178 aa, 19 kDa mature unglycosylated protein. Mature human IL-11 shares 88%, 88%, and 96% aa sequence identity with mouse, rat and canine IL-11, respectively. IL-11 is secreted by osteoblasts, synoviocytes, fibroblasts, chondrocytes, intestinal myofibroblasts, and trophoblasts, among other cell types (1). It is found in the plasma mainly during inflammation, such as that associated with viral infection, cancer, or inflammatory arthritis, and is considered to be primarily anti-inflammatory (1). It stimulates hematopoiesis and thrombopoiesis, regulates macrophage differentiation, and confers mucosal protection in the intestine (1). It has also been found to enhance T cell polarization toward Th2, promote B cell IgG production, increase osteoclast bone absorption, protect endothelial cells from oxidative stress, and regulate epithelial proliferation and apoptosis (1). IL-11 synergizes with several other cytokines to produce these effects, and its effects overlap with those of IL-6 (1). IL-11 receptor activation requires formation of a complex of two IL-11 molecules with two molecules of the ligand-binding IL-11 R alpha subunit and two molecules of the ubiquitously expressed cell signaling beta subunit, gp130 (4). A soluble form of IL-11 R alpha can bind IL-11 and either form a signaling complex with gp130 on the cell surface, or inhibit cell surface IL-11 R alpha /gp130 signaling (5-7).

## Clinical and Translational Updates

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.

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