Biotinylated Mouse IL-11 Protein, His,Avitag™ (HPLC verified)

Catalog # IL1-M82Q8

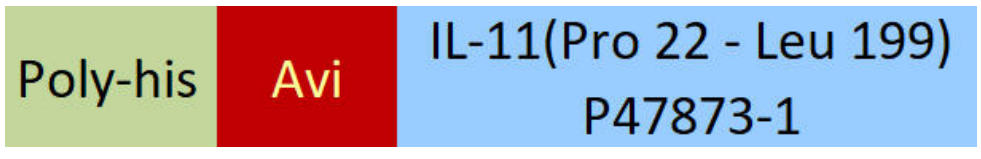
Synonyms

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

Source

Biotinylated Mouse IL-11 Protein, His,Avitag (IL1-M82Q8) is expressed from human 293 cells (HEK293). It contains AA Pro 22 - Leu 199 (Accession # P47873-1).

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 22.9 kDa. The protein migrates as 25-28 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.

Purity

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, 10 mM citric acid, pH5.5 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.

Shipping and Storage

This product is shipped at ambient temperature.

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

Please avoid repeated freeze-thaw cycles.

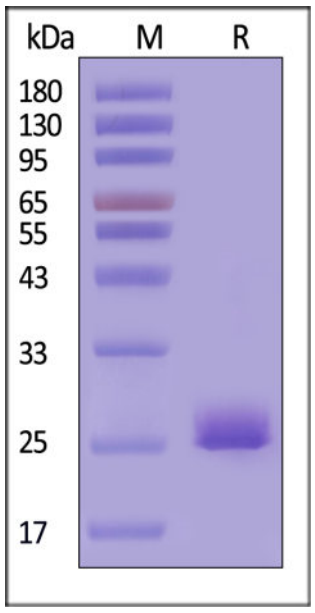
This product is stable after storage at:

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

ACRO Quality Management System

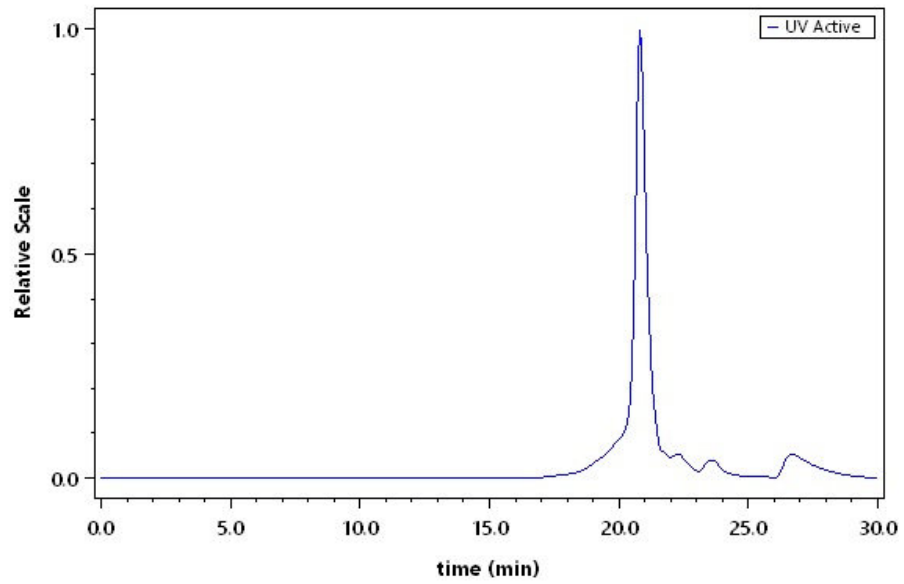
- QMS(ISO, GMP)
- Quality Advantages
- Quality Control Process

SDS-PAGE



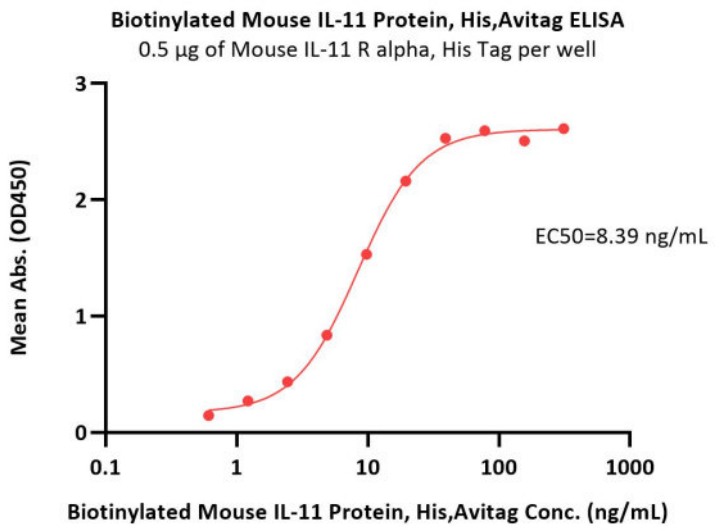
Biotinylated Mouse IL-11 Protein, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With Star Ribbon Pre-stained Protein Marker).

SEC-HPLC



The purity of Biotinylated Mouse IL-11 Protein, His,Avitag (Cat. No. IL1-M82Q8) was greater than 85% as determined by SEC-HPLC.

Bioactivity-ELISA



Immobilized Mouse IL-11 R alpha, His Tag (Cat. No. ILR-M52H9) at 5 μg/mL (100 μL/well) can bind Biotinylated Mouse IL-11 Protein, His,Avitag (Cat. No. IL1-M82Q8) with a linear range of 0.6-20 ng/mL (QC 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. In humans, IL-11 was also independently discovered as an adipogenesis inhibitory factor (AGIF). The human IL-11 cDNA 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. It is found in the plasma mainly during inflammation, such as that associated with viral infection, cancer, or inflammatory arthritis, and is traditionally considered primarily anti-inflammatory. It stimulates hematopoiesis and thrombopoiesis, regulates macrophage differentiation, and confers mucosal protection in the intestine. It has also been found to enhance T cell polarization toward Th2, promote B cell IgG production, increase osteoclast bone resorption, protect endothelial cells from oxidative stress, and regulate epithelial proliferation and apoptosis. IL-11 synergizes with several other cytokines to produce these effects, and its effects overlap with those of IL-6. IL-11 receptor activation requires formation of a complex of two IL-11 molecules with two molecules of the ligand-binding IL-11Rα and two molecules of the ubiquitously expressed signaling subunit gp130. A soluble form of IL-11Rα can bind IL-11 and either form a signaling complex with gp130 on the cell surface, or inhibit signaling mediated by the cell-surface IL-11Rα/gp130 complex.