Biotinylated Human GDF-15 / MIC-1 Protein, Avitag™, Fc Tag (MALS verified)

Catalog # GD5-H82F9

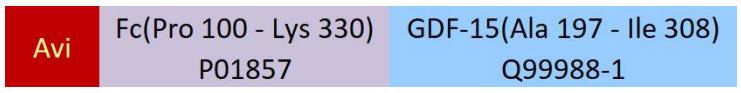
Synonym

GDF15,GDF-15,MIC-1,MIC1,NAG-1,PDF,PLAB,PTGFB,NRG-1

Source

Biotinylated Human GDF-15, Avitag, Fc Tag(GD5-H82F9) is expressed from human 293 cells (HEK293). It contains AA Ala 197 - Ile 308 (Accession # Q99988-1).
Predicted N-terminus: Gly

Molecular Characterization



This protein carries an Avi tag (Avitag™) at the N-terminus, followed by a human IgG1 Fc tag.

The protein has a calculated MW of 40.4 kDa. The protein migrates as 50-55 kDa under reducing (R) condition, and 80-90 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under non-reducing (NR) 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

>90% as determined by SDS-PAGE.

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

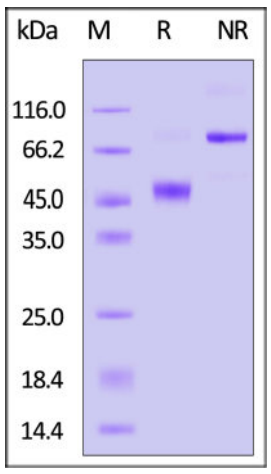
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

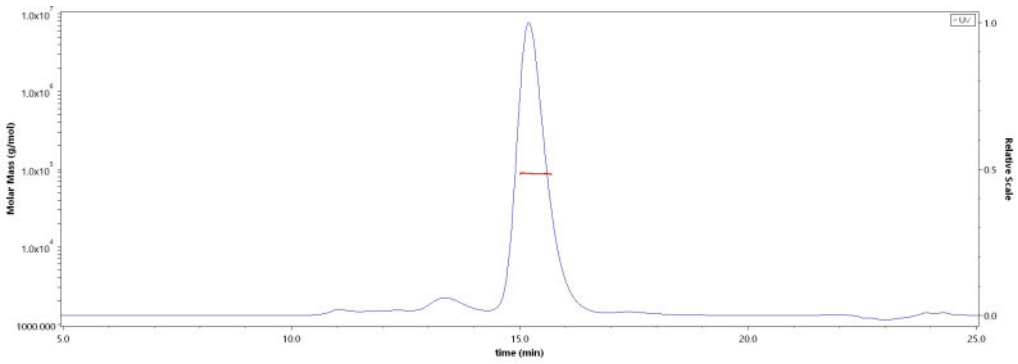
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



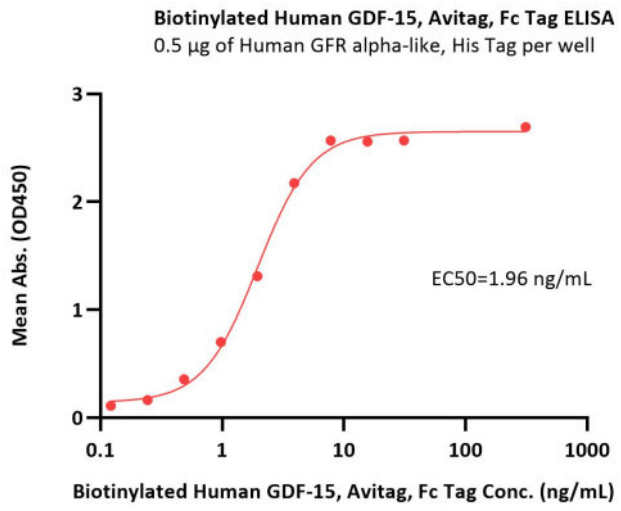
Biotinylated Human GDF-15, Avitag, Fc Tag on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With Star Ribbon Pre-stained Protein Marker).

SEC-MALS



The purity of Biotinylated Human GDF-15, Avitag, Fc Tag (Cat. No. GD5-H82F9) is more than 85% and the molecular weight of this protein is around 80-95 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA



Immobilized Human GFR alpha-like, His Tag (Cat. No. GFA-H52H3) at 5 μg/mL (100 μL/well) can bind Biotinylated Human GDF-15, Avitag, Fc Tag (Cat. No. GD5-H82F9) with a linear range of 0.2-8 ng/mL (QC tested).

Background

Growth Differentiation Factor 15 (GDF-15), also called Macrophage Inhibitory Cytokine 1 (MIC-1). Expression of MIC-1 mRNA in monocytoid cells is up-regulated by a variety of stimuli associated with activation, including interleukin 1β, tumor necrosis factor α (TNF-α), interleukin 2, and macrophage colony-stimulating factor but not interferon γ, or lipopolysaccharide (LPS). It is highly expressed in cardiomyocytes, adipocytes, macrophages, endothelial cells, and vascular smooth muscle cells in normal and pathological condition. GDF-15 increases during tissue injury and inflammatory states and is associated with cardiometabolic risk. Increased GDF-15 levels are associated with cardiovascular diseases such as hypertrophy, heart failure, atherosclerosis, endothelial dysfunction, obesity, insulin resistance, diabetes, and chronic kidney diseases in diabetes. Increased GDF-15 level is linked with the progression and prognosis of the disease condition.

Clinical and Translational Updates