Biotinylated Human Integrin alpha V beta 5 (ITGAV&ITGB5) Heterodimer Protein, His,Avitag™&Tag Free (MALS verified)

Catalog # IT5-H82Wa

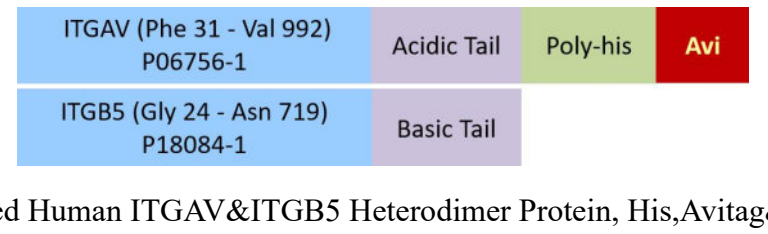
Synonym

Integrin alpha V beta 5,ITGAV&ITGB5

Source

Biotinylated Human ITGAV&ITGB5 Heterodimer Protein, His,Avitag&Tag Free(IT5-H82Wa) is expressed from human 293 cells (HEK293). It contains AA Phe 31 - Val 992 (ITGAV) & Gly 24 - Asn 719 (ITGB5) (Accession # P06756-1 (ITGAV) & P18084-1 (ITGB5)).
Predicted N-terminus: Phe 31 (ITGAV) & Gly 24 (ITGB5)

Molecular Characterization



Biotinylated Human ITGAV&ITGB5 Heterodimer Protein, His,Avitag&Tag Free, produced by co-expression of ITGAV and ITGB5, has a calculated MW of 114.7 kDa (ITGAV) and 81.9 kDa (ITGB5). Subunit ITGAV is fused with an acidic tail at the C-terminus and followed by a polyhistidine tag and an Avi tag (Avitag™) and subunit ITGB5 contains no tag but a basic tail at the C-terminus. The non-reducing (NR) protein migrates as 130-170 kDa (ITGAV) and 85-100 kDa (ITGB5) when calibrated against Star Ribbon Pre-stained Protein Marker respectively 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.

>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 μm filtered solution in 50 mM Tris, 150 mM NaCl, pH7.5 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.

Storage

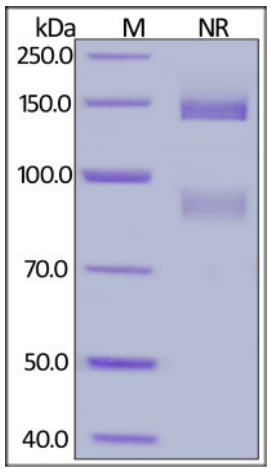
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

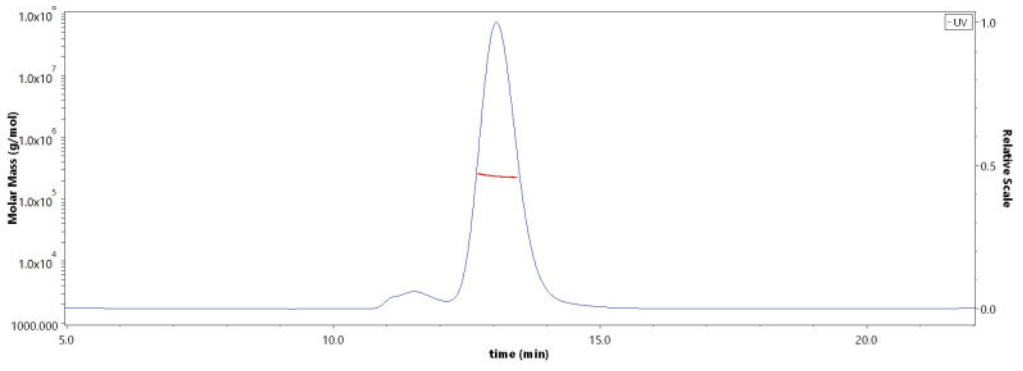
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



Biotinylated Human ITGAV&ITGB5 Heterodimer Protein, His,Avitag&Tag Free on SDS-PAGE under non-reducing (NR) condition. The gel was stained

SEC-MALS

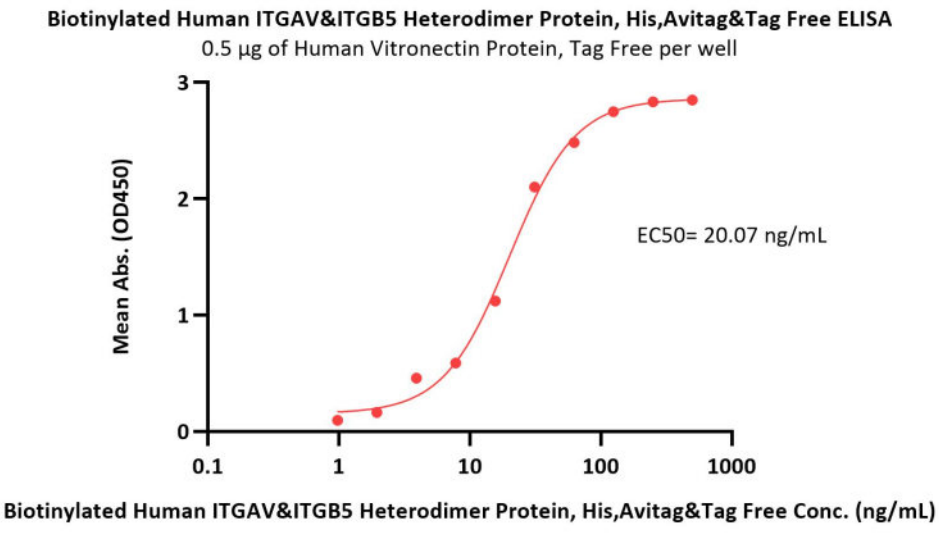


The purity of Biotinylated Human ITGAV&ITGB5 Heterodimer Protein, His,Avitag&Tag Free (Cat. No. IT5-H82Wa) is more than 90% and the

with Coomassie Blue. The purity of the protein is greater than 90% (With Star Ribbon Pre-stained Protein Marker).

molecular weight of this protein is around 215-255 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA



Immobilized Human Vitronectin Protein, Tag Free at 5 μg/mL (100 μL/well) can bind Biotinylated Human ITGAV&ITGB5 Heterodimer Protein, His,Avitag&Tag Free (Cat. No. IT5-H82Wa) with a linear range of 1-31 ng/mL (Routinely tested).

Background

Integrin alpha V beta 5 (ITGAV & ITGB5) is expressed on a wide variety of cell types including keratinocytes, fibroblasts, adhesive monocytes, embryonic stem cells, and select endothelium and epithelium. ITGAV & ITGB5 binds ligands containing an RGD motif, notably vitronectin. Growth factors that increase PKC activity, such as VEGF or TGF alpha, promote ITGAV & ITGB5-mediated angiogenesis while alpha V beta 3, which may be expressed in the same cell, responds to FGF-basic and TNF alpha. An inhibitor of both down regulates tumor angiogenesis. During lung inflammation, up regulation of ITGAV & ITGB5 on myofibroblasts or infiltrating lymphocytes may contribute to fibrosis by freeing TGF beta from latency.

Clinical and Translational Updates