# Biotinylated Human Integrin alpha V beta 1 (ITGAV&ITGB1) Heterodimer Protein, His,Avitag™&Tag Free

Catalog # IT1-H82W6

## Synonym

Integrin alpha V beta 1,ITGAV&ITGB1

## Source

Biotinylated Human ITGAV&ITGB1 Heterodimer Protein, His,Avitag&Tag Free(IT1-H82W6) is expressed from human 293 cells (HEK293). It contains AA Phe 31 - Val 992 (ITGAV) & Gln 21 - Asp 728 (ITGB1) (Accession # NP_002201.1 (ITGAV) & NP_002202.2 (ITGB1)).
Predicted N-terminus: Phe 31 (ITGAV) & Gln 21 (ITGB1)

## Molecular Characterization




Biotinylated Human ITGAV&ITGB1 Heterodimer Protein, His,Avitag&Tag Free, produced by co-expression of ITGAV and ITGB1, has a calculated MW of 114.7 kDa (ITGAV) and 83.7 kDa (ITGB1). 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 ITGB1 contains no tag but a basic tail at the C-terminus. The non-reducing (NR) protein migrates as 135-150 kDa (ITGAV) and 100-115 kDa (ITGB1) 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

>95% as determined by SDS-PAGE.

## Formulation

Lyophilized from 0.22 μm filtered solution in 50 mM Tris, 150 mM NaCl, pH 7.5 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

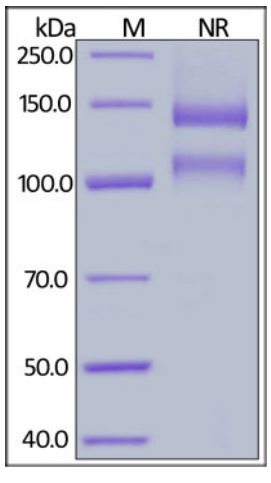
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

***Please avoid repeated freeze-thaw cycles.***

This product is stable after storage at:

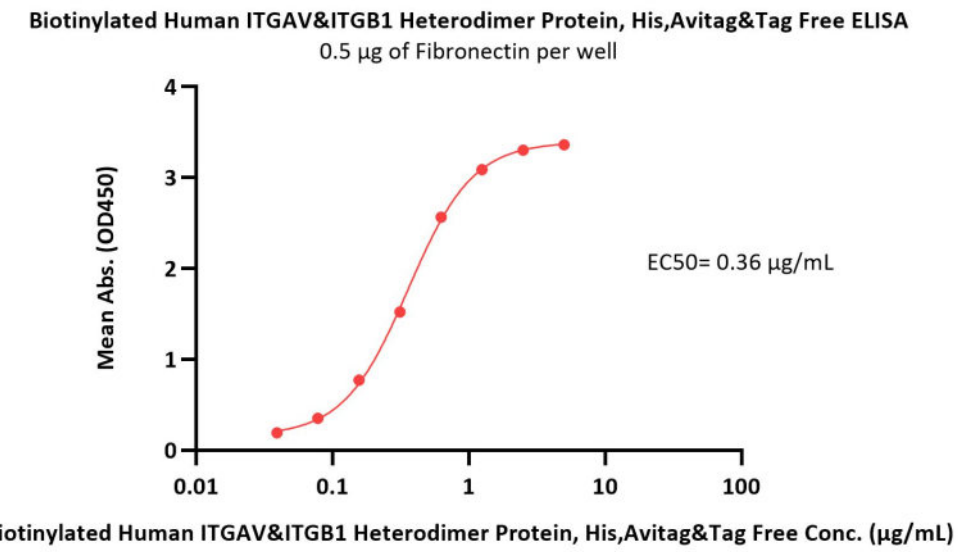
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

## SDS-PAGE




Biotinylated Human ITGAV&ITGB1 Heterodimer Protein, His,Avitag&Tag Free on SDS-PAGE under non-reducing (NR) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

## Bioactivity-ELISA




Immobilized Fibronectin at 5 μg/mL (100 μL/well) can bind Biotinylated Human ITGAV&ITGB1 Heterodimer Protein, His,Avitag&Tag Free (Cat. No. IT1-H82W6) with a linear range of 0.039-0.625 μg/mL (QC tested).

## Background

Integrin alpha-5/beta-1 is a receptor for ibrinogen. Integrin alpha-1/beta-1, alpha-2/beta-1, alpha-6/beta-1 and alpha-7/beta-1 are receptors for lamimin. Integrin alpha-4/beta-1 is a receptor for VCAM1. It recognizes the sequence Q-I-D-S in VCAM1. Integrin alpha-9/beta-1 is a receptor for VCAM1, cytotactin and osteopontin. It recognizes the sequence A-E-I-D-G-I-E-L in cytotactin. Integrin alpha-V/beta-1 is also a receptor for vitronectin. Beta-1 integrins recognize the sequence R-G-D in a wide array of ligands. Isoform 2 interferes with isoform 1 resulting in a dominant negative effect on cell adhesion and migration (in vitro). When associated with alpha-7/beta-1 integrin, regulates cell adhesion and laminin matrix deposition.

## Clinical and Translational Updates

Please contact us via TechSupport@acrobiosystems.com if you have any question on this product.