

# Biotinylated Human Integrin alpha V beta 8 (ITGAV&ITGB8) Heterodimer Protein, His,Avitag™&Tag Free (MALS verified)

Catalog # IT8-H82W5



BIOSYSTEMS  
**Acro**

## Synonym

Integrin alpha V beta 8,ITGAV&ITGB8

## Source

Biotinylated Human ITGAV&ITGB8 Heterodimer Protein, His,Avitag&Tag Free(IT8-H82W5) is expressed from human 293 cells (HEK293). It contains AA Phe 31 - Val 992 (ITGAV) & Glu 43 - Arg 684 (ITGB8) (Accession # [NP\\_002201.1](#) (ITGAV) & [NP\\_002205.1](#) (ITGB8)).

Predicted N-terminus: Phe 31 (ITGAV) & Glu 43 (ITGB8)

## Molecular Characterization

ITGAV (Phe 31 - Val 992) NP_002201.1	Acidic Tail	Poly-his	Avi
ITGB8 (Glu 43 - Arg 684) NP_002205.1	Basic Tail		

Biotinylated Human ITGAV&ITGB8 Heterodimer Protein, His,Avitag&Tag Free, produced by co-expression of ITGAV and ITGB8, has a calculated MW of 114.7 kDa (ITGAV) and 76.5 kDa (ITGB8). 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 ITGB8 contains no tag but a basic tail at the C-terminus. The non-reducing (NR) protein migrates as 135 kDa (ITGAV) and 80 kDa (ITGB8) 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.

>90% as determined by SEC-MALS.

## Formulation

Lyophilized from 0.22 µm filtered solution in 50 mM Tris, 150 mM NaCl, pH8.0 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

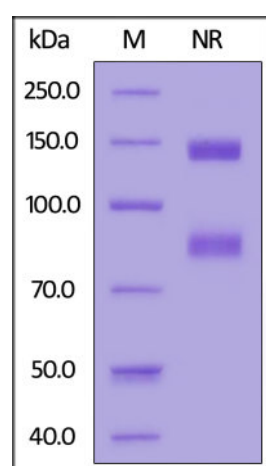
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

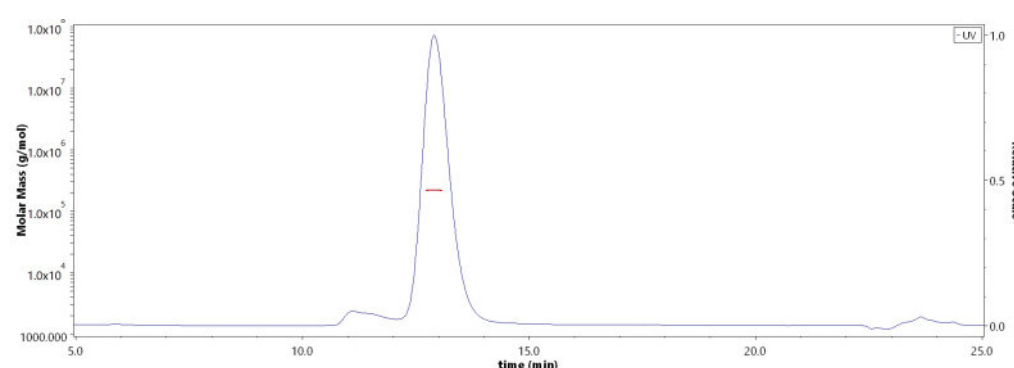
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

## SDS-PAGE



Biotinylated Human ITGAV&ITGB8 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%.

## SEC-MALS



The purity of Biotinylated Human ITGAV&ITGB8 Heterodimer Protein, His,Avitag&Tag Free (Cat. No. IT8-H82W5) is more than 90% and the

Discounts, Gifts,  
and more!



➤ [www.acrobiosystems.com](http://www.acrobiosystems.com)

11/29/2023

# Biotinylated Human Integrin alpha V beta 8 (ITGAV&ITGB8) Heterodimer Protein, His,Avitag™&Tag Free (MALS verified)

Catalog # IT8-H82W5



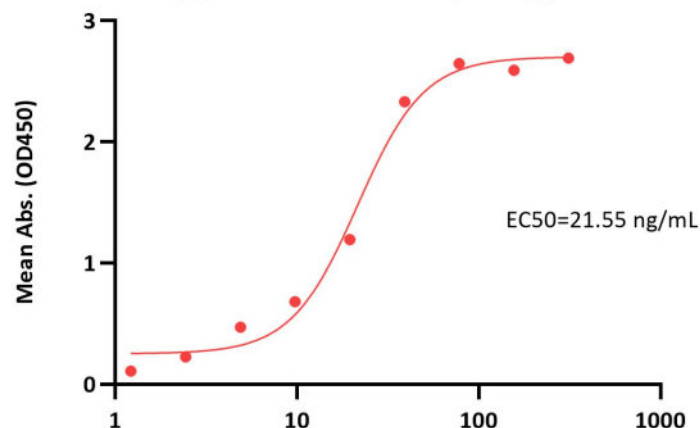
BIOSYSTEMS  
**Acro**

molecular weight of this protein is around 195-240 kDa verified by SEC-MALS.

[Report](#)

## Bioactivity-ELISA

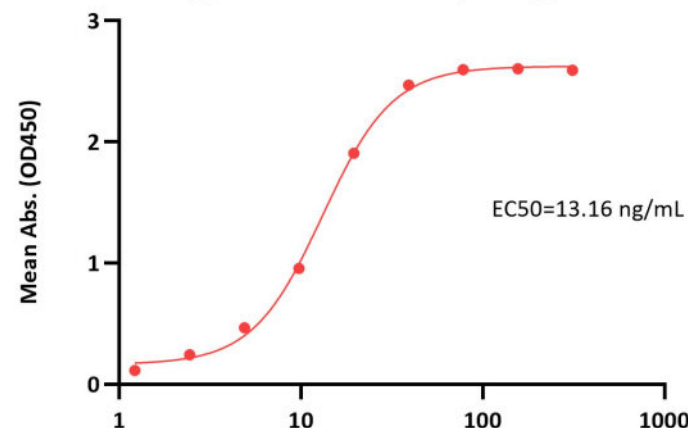
Biotinylated Human ITGAV&ITGB8 Heterodimer Protein, His,Avitag&Tag Free ELISA  
0.5 µg of Human Latent TGFB1, His Tag per well



Biotinylated Human ITGAV&ITGB8 Heterodimer Protein, His,Avitag&Tag Free Conc. (ng/mL)

Immobilized Human Latent TGFB1, His Tag (Cat. No. TG1-H524x) at 5 µg/mL (100 µL/well) can bind Biotinylated Human ITGAV&ITGB8 Heterodimer Protein, His,Avitag&Tag Free (Cat. No. IT8-H82W5) with a linear range of 1-39 ng/mL (QC tested).

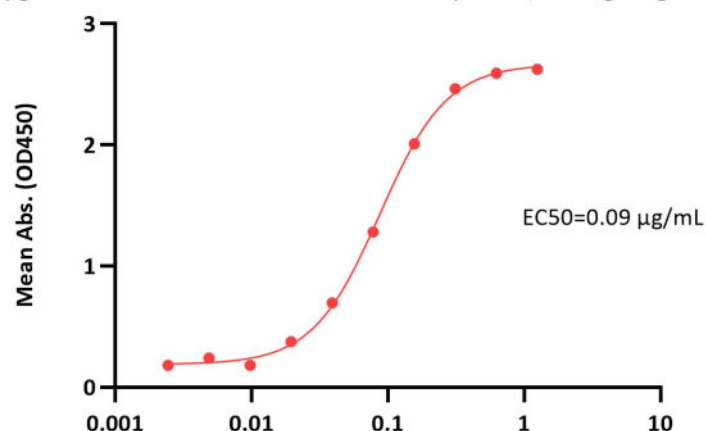
Biotinylated Human ITGAV&ITGB8 Heterodimer Protein, His,Avitag&Tag Free ELISA  
0.2 µg of Mouse Latent TGFB1, His Tag per well



Biotinylated Human ITGAV&ITGB8 Heterodimer Protein, His,Avitag&Tag Free Conc. (ng/mL)

Immobilized Mouse Latent TGFB1, His Tag (Cat. No. TG1-M5245) at 2 µg/mL (100 µL/well) can bind Biotinylated Human ITGAV&ITGB8 Heterodimer Protein, His,Avitag&Tag Free (Cat. No. IT8-H82W5) with a linear range of 1-39 ng/mL (Routinely tested).

Biotinylated Human ITGAV&ITGB8 Heterodimer Protein, His,Avitag&Tag Free ELISA  
0.1 µg of Human LRRC32&TGFB1 Heterotrimer protein, His Tag&Tag Free per well



Biotinylated Human ITGAV&ITGB8 Heterodimer Protein, His,Avitag&Tag Free Conc. (µg/mL)

Immobilized Human LRRC32&TGFB1 Heterotrimer protein, His Tag&Tag Free (Cat. No. GA1-H52W9) at 1 µg/mL (100 µL/well) can bind Biotinylated Human ITGAV&ITGB8 Heterodimer Protein, His,Avitag&Tag Free (Cat. No. IT8-H82W5) with a linear range of 0.002-0.313 µg/mL (Routinely tested).

## Background

Integrin alpha V beta 8 (ITGAV & ITGB8 or ITGAVB8) is expressed in yolk sac, placenta, brain perivascular astrocytes, Schwann cells, renal glomerular mesangial cells and pulmonary epithelial cells. Unlike other alpha V integrins, ITGAVB8 does not appear to assume different activation states, and the cytoplasmic tail does not connect to the cytoskeleton. It binds ligands containing an RGD motif, including vitronectin, fibrin and the latency associated peptide (LAP) of the latent TGF-beta complex. High affinity binding of alpha V beta 8 to LAP allows proteolytic cleavage by MT1-MMP, which releases active TGF-beta. This mechanism differs from that of alpha V beta 6, the other alpha V integrin which can activate TGF-beta from latency through non-proteolytic mechanisms. Downstream effects of TGF-beta activation include control of cell growth and associated vascularization.

## Clinical and Translational Updates

Discounts, Gifts,  
and more!



➤ [www.acrobiosystems.com](http://www.acrobiosystems.com)

11/29/2023

**Biotinylated Human Integrin alpha V beta 8 (ITGAV&ITGB8) Heterodimer Protein,  
His,Avitag™&Tag Free (MALS verified)**

Catalog # IT8-H82W5



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

**Discounts, Gifts,  
and more!**



**»» [www.acrobiosystems.com](http://www.acrobiosystems.com)**