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

Catalog # IT8-M52W7

Synonym

Integrin alpha V beta 8, ITGAV&ITGB8

Source

Biotinylated Mouse ITGAV&ITGB8 Heterodimer Protein (IT8-M52W7) is expressed from human 293 cells (HEK293). It contains AA Phe 31 - Val 988 & Gly 22 - Leu 681 (Accession # P43406-1 & Q0VBD0-1).
Predicted N-terminus: Phe 31 | Gly 22

Molecular Characterization

Other Tags and Version Biotin & Other Labeled Version

Biotinylated Mouse ITGAV&ITGB8 Heterodimer Protein is produced by co-expression of ITGAV and ITGB8, has a calculated MW of 114.2 kDa (ITGAV) & 77.5 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 protein migrates as 135-145 kDa (ITGAV) and 75-85 kDa (ITGB8) 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.

Purity

>95% as determined by SDS-PAGE.

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:

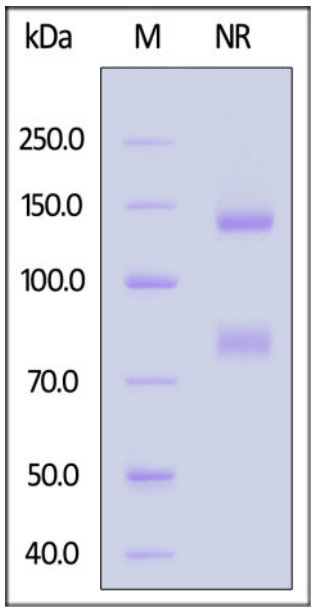
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

ACRO Quality Management System

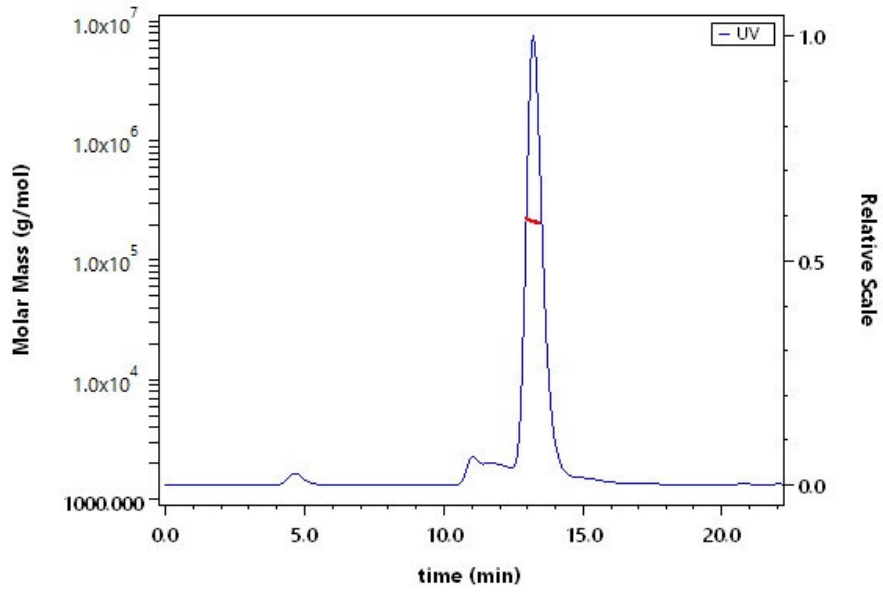
- QMS(ISO, GMP)
- Quality Advantages
- Quality Control Process

SDS-PAGE

SEC-MALS

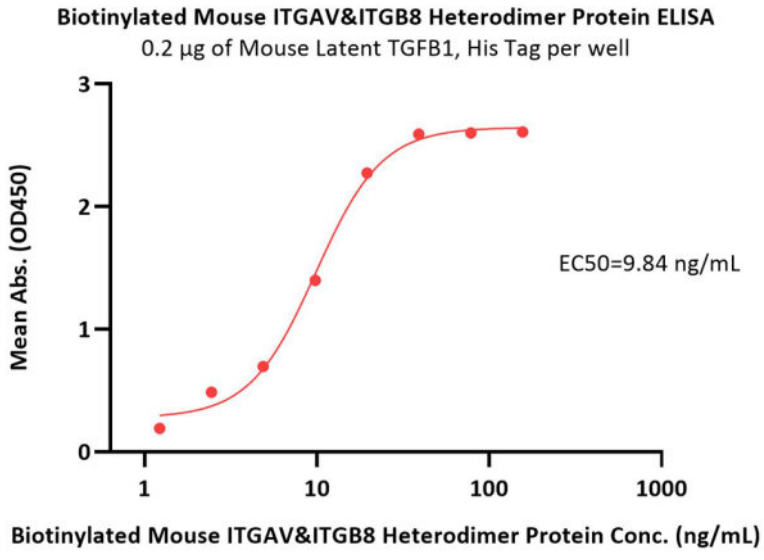


Biotinylated Mouse ITGAV&ITGB8 Heterodimer Protein on SDS-PAGE under non-reducing (NR) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

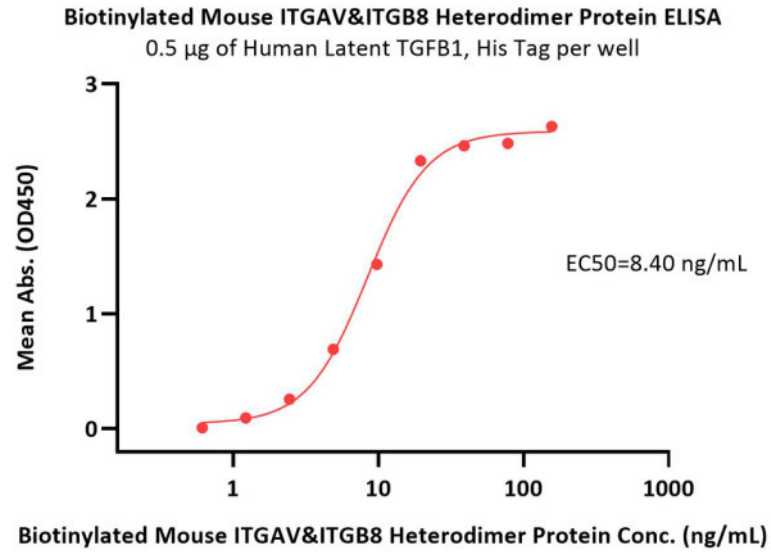


The purity of Biotinylated Mouse ITGAV&ITGB8 Heterodimer Protein (Cat. No. IT8-M52W7) is more than 85% and the molecular weight of this protein is around 195-245 kDa verified by SEC-MALS.

Bioactivity-ELISA



Immobilized Mouse Latent TGFB1, His Tag (Cat. No. TG1-M5245) at 2 μg/mL (100 μL/well) can bind Biotinylated Mouse ITGAV&ITGB8 Heterodimer Protein (Cat. No. IT8-M52W7) with a linear range of 1-20 ng/mL (QC tested).



Immobilized Human Latent TGFB1, His Tag (Cat. No. TG1-H524x) at 5 μg/mL (100 μL/well) can bind Biotinylated Mouse ITGAV&ITGB8 Heterodimer Protein (Cat. No. IT8-M52W7) with a linear range of 2-20 ng/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.