

Biotinylated Cynomolgus Integrin alpha V beta 8 (ITGAV&ITGB8) Heterodimer Protein,

His,Avitag™&Tag Free (MALS verified)

Catalog # IT8-C82W3



BIOSYSTEMS
Acro

Surprise Inside!

Synonym

Integrin alpha V beta 8, ITGAV&ITGB8

Source

Biotinylated Cynomolgus ITGAV&ITGB8 Heterodimer Protein, His,Avitag&Tag Free (IT8-C82W3) is expressed from human 293 cells (HEK293). It contains AA Phe 31 - Pro 993 (ITGAV) & Glu 43 - Ser 681 (ITGB8) (Accession # [A0A2K5WCD3-1](#) (ITGAV) & [G7P0S0-1](#) (ITGB8)).

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

Molecular Characterization

ITGAV (Phe 31 - Pro 993) A0A2K5WCD3-1	Acidic Tail	Poly-his	Avi
ITGB8 (Glu 43 - Ser 681) G7P0S0-1	Basic Tail		

Biotinylated Cynomolgus ITGAV&ITGB8 Heterodimer Protein, His,Avitag&Tag Free, produced by co-expression of ITGAV and ITGB8, has a calculated MW of 115.1 kDa (ITGAV) & 76.0 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 95 kDa and 130 kDa, 150-170 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

The protein is designed as a heterodimer.

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

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 µm filtered solution in 20 mM HEPES, 150 mM NaCl 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.

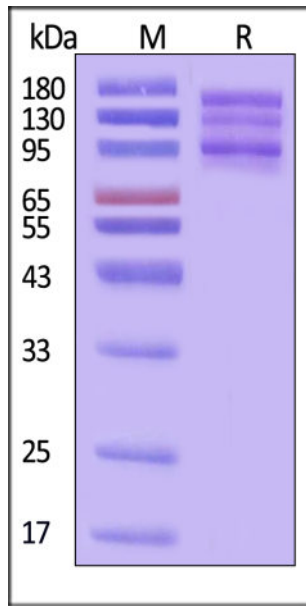
This product is stable after storage at:

- -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

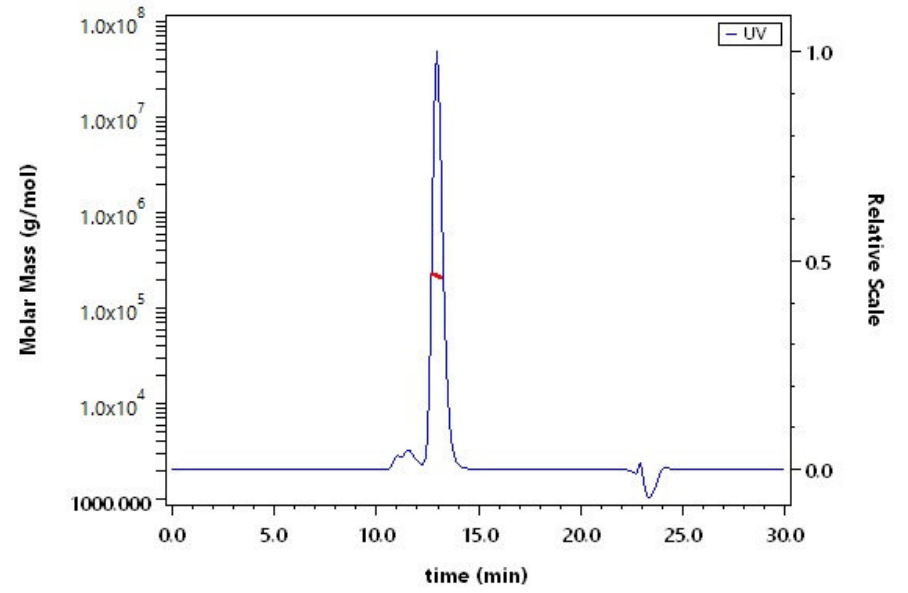
- [QMS\(ISO, GMP\)](#).
- [Quality Advantages](#)
- [Quality Control Process](#)

SDS-PAGE



Biotinylated Cynomolgus ITGAV&ITGB8 Heterodimer Protein, His,Avitag&Tag Free on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

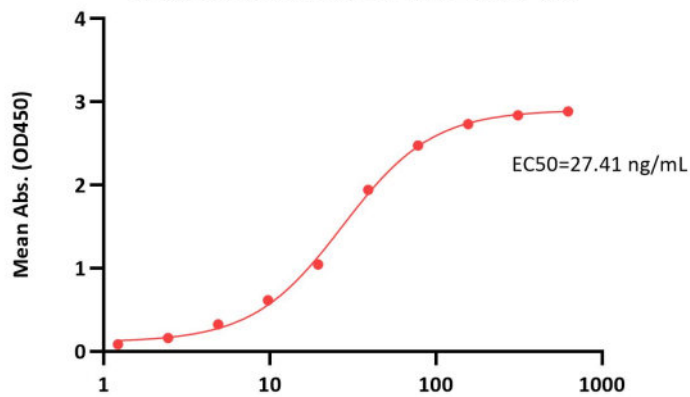
SEC-MALS



The purity of Biotinylated Cynomolgus ITGAV&ITGB8 Heterodimer Protein, His,Avitag&Tag Free (Cat. No. IT8-C82W3) is more than 90% and the molecular weight of this protein is around 195-240 kDa verified by SEC-MALS.

Bioactivity-ELISA

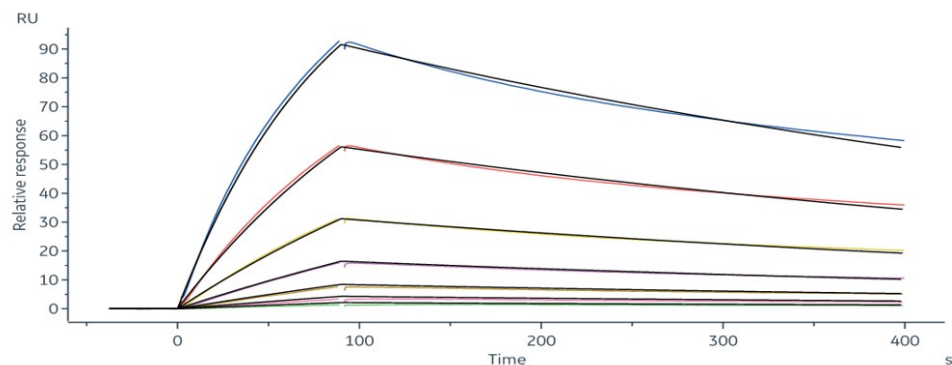
Biotinylated Cynomolgus ITGAV&ITGB8 Heterodimer Protein, His,Avitag&Tag Free ELISA
0.5 µg of Human Latent TGFβ1, His Tag per well



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

Immobilized Human Latent TGFβ1, His Tag (Cat. No. TG1-H524x) at 5 µg/mL (100 µL/well) can bind Biotinylated Cynomolgus ITGAV&ITGB8 Heterodimer Protein, His,Avitag&Tag Free (Cat. No. IT8-C82W3) with a linear range of 1-78 ng/mL (QC tested).

Bioactivity-SPR



Human Latent TGFβ1, His Tag (Cat. No. TG1-H524x) immobilized on CM5 Chip can bind Biotinylated Cynomolgus ITGAV&ITGB8 Heterodimer Protein, His,Avitag&Tag Free (Cat. No. IT8-C82W3) with an affinity constant of 71.9 nM as determined in a SPR assay (Biacore 8K) (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.

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