Cynomolgus Integrin alpha V beta 8 (ITGAV&ITGB8) Heterodimer Protein, His Tag&Tag Free (MALS verified)

Catalog # IT8-C52W9

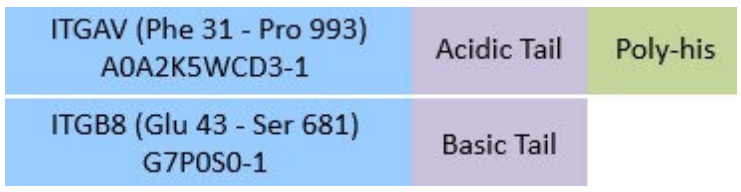
Synonym

Integrin alpha V beta 8,ITGAV&ITGB8

Source

Cynomolgus ITGAV&ITGB8 Heterodimer Protein, His Tag&Tag Free(IT8-C52W9) 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



Cynomolgus Integrin alpha V beta 8 (ITGAV&ITGB6) Heterodimer Protein, produced by co-expression of ITGAV and ITGB8, has a calculated MW of 113.1 kDa (ITGAV) and 76.0 kDa (ITGB8). Subunit ITGAV is fused with an acidic tail at the C-terminus and followed by a polyhistidine tag and subunit ITGB8 contains no tag but a basic tail at the C-terminus. The predicted N-terminus is Phe 31 (ITGAV) & Glu 43 (ITGB8). The non-reducing (NR) protein migrates as 135-150 kDa (ITGAV) & 75-85 kDa (ITGB8) respectively due to glycosylation.

Endotoxin

Less than 1.0 EU per μg by the LAL method / rFC 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, 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

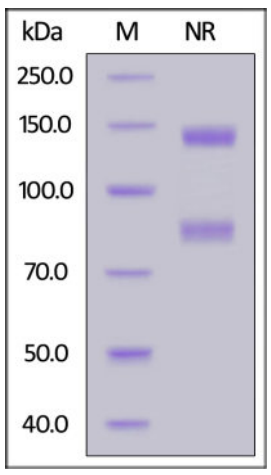
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

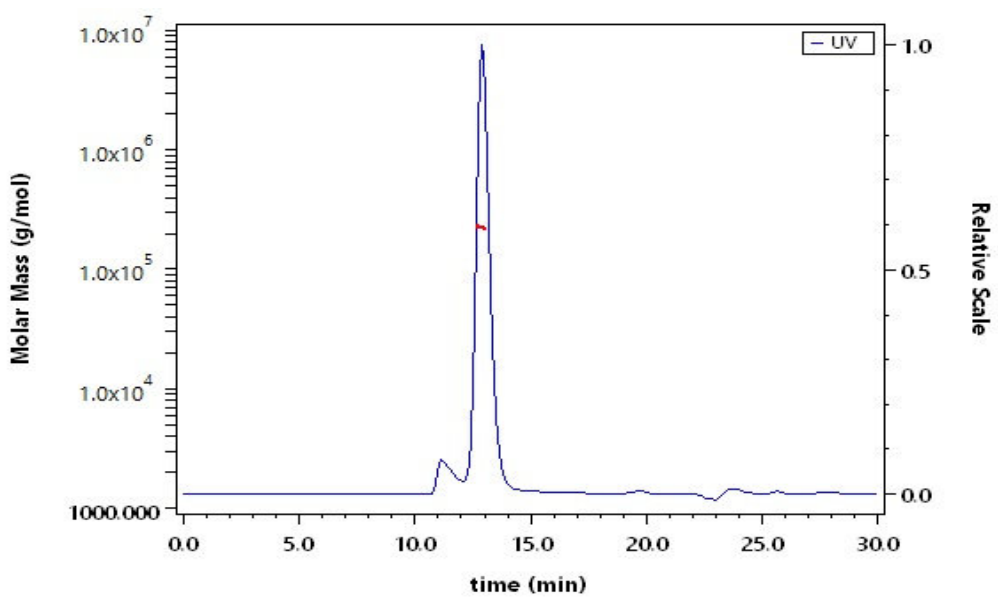
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



Cynomolgus ITGAV&ITGB8 Heterodimer Protein, His Tag&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

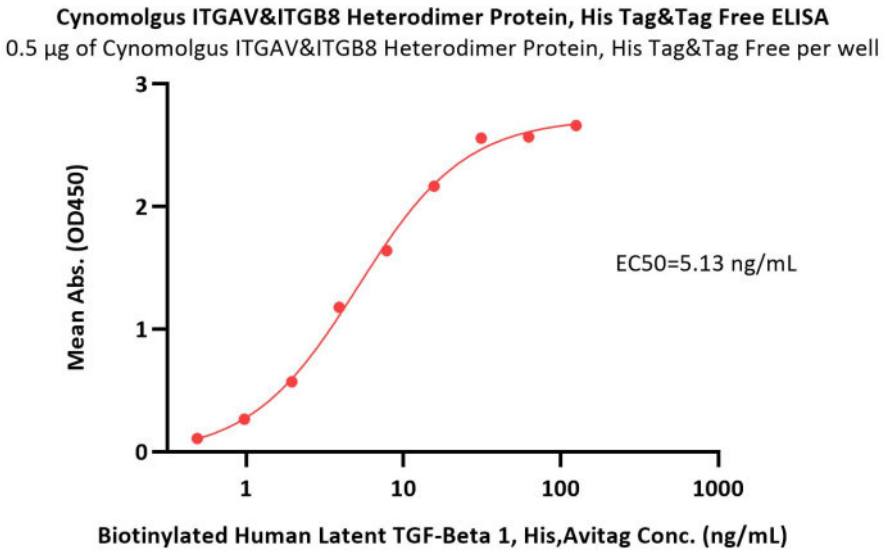


The purity of Cynomolgus ITGAV&ITGB8 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT8-C52W9) is more than 90% and the molecular weight of this protein is around 195-245 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA

Cynomolgus Integrin alpha V beta 8 (ITGAV&ITGB8) Heterodimer Protein, His Tag&Tag Free (MALS verified)

Catalog # IT8-C52W9



Immobilized Cynomolgus ITGAV&ITGB8 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT8-C52W9) at 5 μg/mL (100 μL/well) can bind Biotinylated Human Latent TGF-Beta 1, His,Avitag (Cat. No. TG1-H82Qb) with a linear range of 0.5-16 ng/mL (QC 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.