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

Catalog # IT8-H52W4

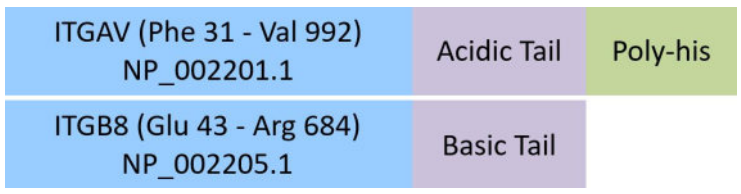
Synonym

Integrin alpha V beta 8,ITGAV&ITGB8

Source

Human ITGAV&ITGB8 Heterodimer Protein, His Tag&Tag Free(IT8-H52W4) 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



Human ITGAV&ITGB8 Heterodimer Protein, His Tag&Tag Free, produced by co-expression of ITGAV and ITGB8, has a calculated MW of 112.9 kDa (ITGAV) and 76.5 kDa (ITGB8). Subunit ITGAV is fused with polyhistidine tag at the C-terminus and followed by a acidic tail and subunit ITGB8 contains no tag but a basic tail at the C-terminus. The non-reducing (NR) protein migrates as 130-150 kDa (ITGAV) and 80-90 kDa (ITGB8) respectively due to glycosylation.

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, 100 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

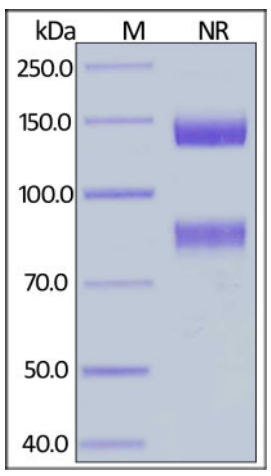
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

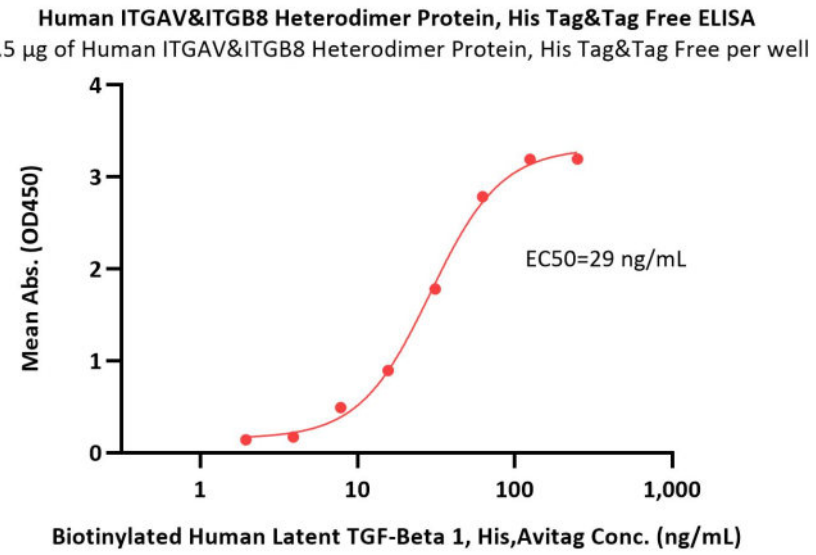
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

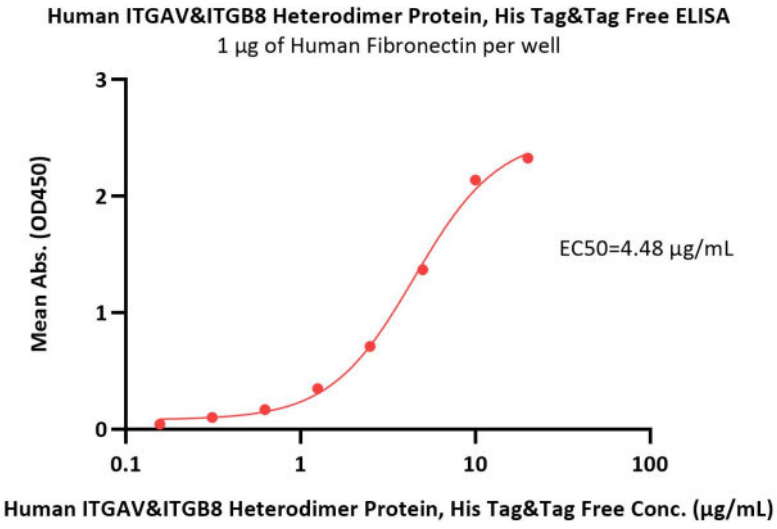


Human ITGAV&ITGB8 Heterodimer Protein, His Tag&Tag Free on SDS-PAGE under non-reducing (NR) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

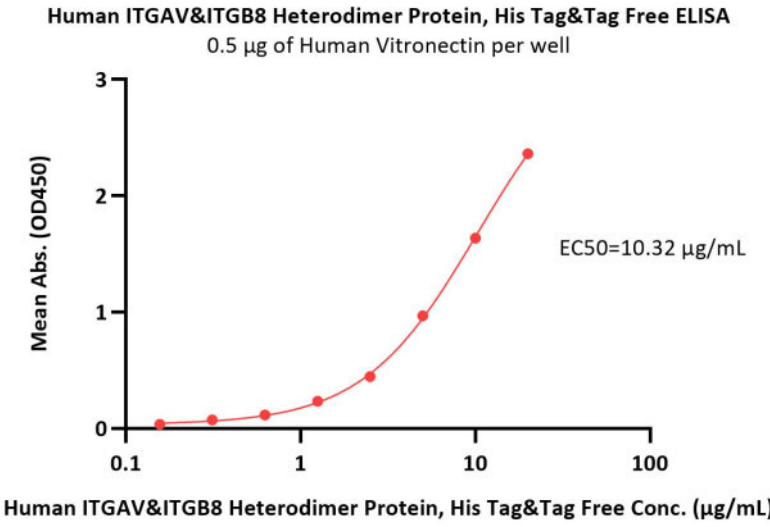
Bioactivity-ELISA



Immobilized Human ITGAV&ITGB8 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT8-H52W4) 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 1-31 ng/mL (QC tested).



Immobilized Human Fibronectin at 10 μg/mL (100 μL/well) can bind Human ITGAV&ITGB8 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT8-H52W4) with a linear range of 0.313-10 μg/mL (Routinely tested).



Immobilized Human Vitronectin at 5 μg/mL (100 μL/well) can bind Human ITGAV&ITGB8 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT8-H52W4) with a linear range of 0.313-10 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

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