Human Integrin alpha V beta 1 (ITGAV&ITGB1) Heterodimer Protein, His Tag&Tag Free (MALS verified)

Catalog # IT1-H52E1

Synonym

Integrin alpha V beta 1,ITGAV&ITGB1

Source

Human ITGAV&ITGB1 Heterodimer Protein, His Tag&Tag Free(IT1-H52E1) is expressed from human 293 cells (HEK293). It contains AA Phe 31 - Val 992 (ITGAV) & Gln 21 - Asp 728 (ITGB1) (Accession # NP_002201.1 (ITGAV) & NP_002202.2 (ITGB1)).
Predicted N-terminus: Phe 31 (ITGAV) & Gln 21 (ITGB1)

Molecular Characterization

Human ITGAV&ITGB1 Heterodimer Protein, His Tag&Tag Free, produced by co-expression of ITGAV and ITGB1, has a calculated MW of 112.9 kDa (ITGAV) and 83.7 kDa (ITGB1). Subunit ITGAV is fused with an acidic tail at the C-terminus and followed by a polyhistidine tag and subunit ITGB1 contains no tag but a basic tail at the C-terminus. The non-reducing (NR) protein migrates as 125-150 kDa (ITGAV) and 95-110 kDa (ITGB1) respectively due to glycosylation.

Endotoxin

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

Purity

>90% 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

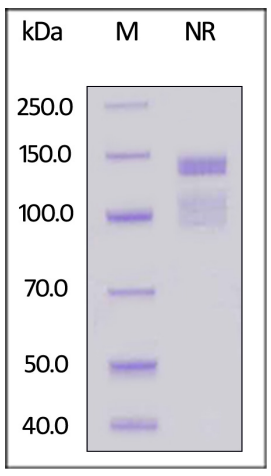
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

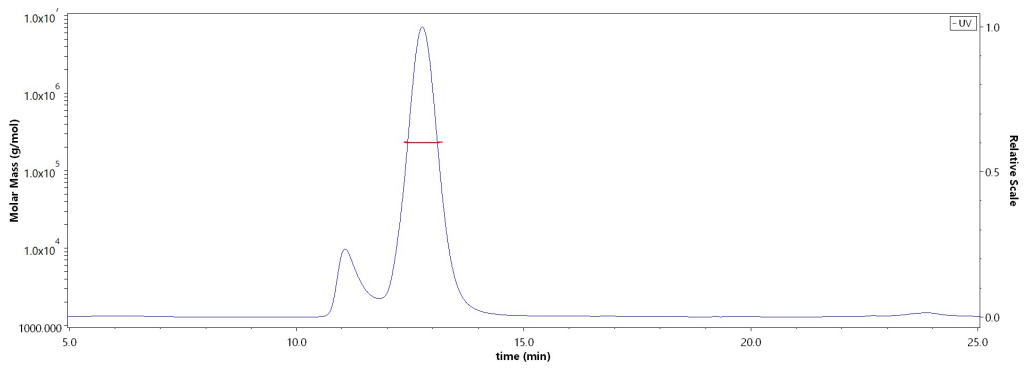
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



Human ITGAV&ITGB1 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 90%.

SEC-MALS

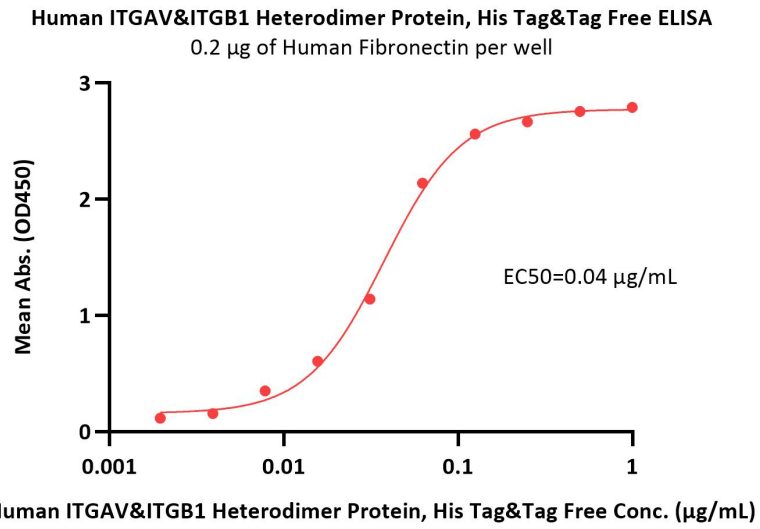


The purity of Human ITGAV&ITGB1 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT1-H52E1) is more than 85% and the molecular weight of this protein is around 200-245 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA

Human Integrin alpha V beta 1 (ITGAV&ITGB1) Heterodimer Protein, His Tag&Tag Free (MALS verified)

Catalog # IT1-H52E1



Immobilized Human Fibronectin at 2 μg/mL (100 μL/well) can bind Human ITGAV&ITGB1 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT1-H52E1) with a linear range of 0.002-0.063 μg/mL (QC tested).

Background

Integrin alpha-5/beta-1 is a receptor for ibrinogen. Integrin alpha-1/beta-1, alpha-2/beta-1, alpha-6/beta-1 and alpha-7/beta-1 are receptors for lamimin. Integrin alpha-4/beta-1 is a receptor for VCAM1. It recognizes the sequence Q-I-D-S in VCAM1. Integrin alpha-9/beta-1 is a receptor for VCAM1, cytotactin and osteopontin. It recognizes the sequence A-E-I-D-G-I-E-L in cytotactin. Integrin alpha-V/beta-1 is also a receptor for vitronectin. Beta-1 integrins recognize the sequence R-G-D in a wide array of ligands. Isoform 2 interferes with isoform 1 resulting in a dominant negative effect on cell adhesion and migration (in vitro). When associated with alpha-7/beta-1 integrin, regulates cell adhesion and laminin matrix deposition.