Biotinylated Human Integrin alpha 2 beta 1 (ITGA2&ITGB1) Heterodimer Protein, His,Avitag™&Tag Free

Catalog # IT1-H82W7

Synonyms

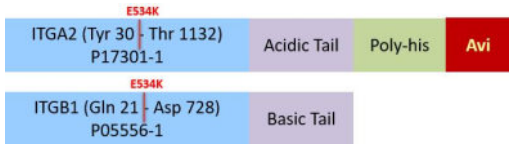
Integrin alpha 2 beta 1, ITGA2 & ITGB1

Source

Biotinylated Human ITGA2&ITGB1 Heterodimer Protein, His,Avitag&Tag Free (IT1-H82W7) is expressed from human 293 cells (HEK293). It contains AA Tyr 30 - Thr 1132 (ITGA2) (E534K) & Gln 21 - Asp 728 (ITGB1) (E534K) (Accession # P17301-1 (ITGA2) (E534K) & P05556-1 (ITGB1) (E534K)).

Predicted N-terminus: Tyr 30 (ITGA2) (E534K) & Gln 21 (ITGB1) (E534K)

Molecular Characterization



Biotinylated Human ITGA2&ITGB1 Heterodimer Protein, His,Avitag&Tag Free, produced by co-expression of ITGA2 and ITGB1, has a calculated MW of 130 kDa (ITGA2) (E534K) & 83.7 kDa (ITGB1) (E534K). Subunit ITGA2 is fused with an acidic tail at the C-terminus and followed by a polyhistidine tag and an Avi tag (Avitag™) and subunit ITGB1 contains no tag but a basic tail at the C-terminus. The protein migrates as 150-180 kDa (ITGA2) (E534K) and 105-130 kDa (ITGB1) (E534K) when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) 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

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4 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.

Shipping and Storage

This product is shipped at ambient temperature.

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

Please avoid repeated freeze-thaw cycles.

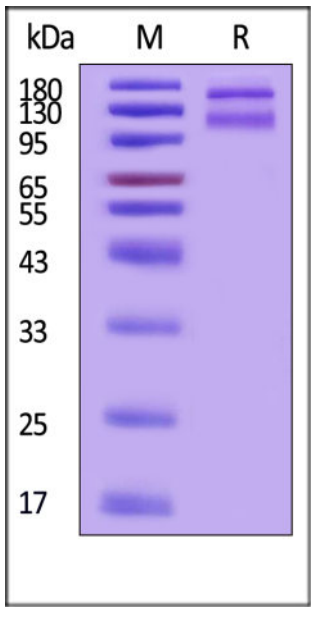
This product is stable after storage at:

- -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

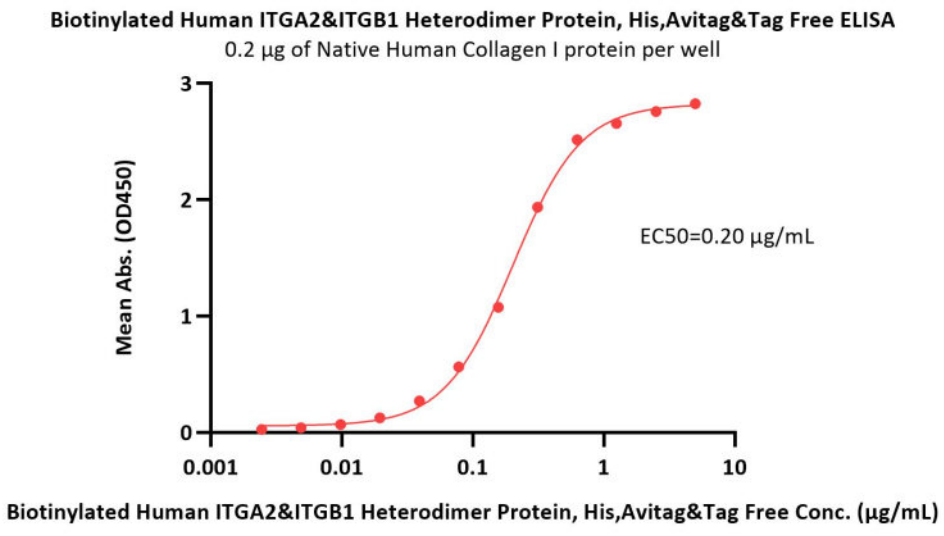
- QMS(ISO, GMP)
- Quality Advantages
- Quality Control Process

SDS-PAGE



Biotinylated Human ITGA2&ITGB1 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).

Bioactivity-ELISA



Immobilized Native Human Collagen I protein at 2 μg/mL (100 μL/well) can bind Biotinylated Human ITGA2&ITGB1 Heterodimer Protein, His,Avitag&Tag Free (Cat. No. IT1-H82W7) with a linear range of 0.002-0.625 μg/mL (QC tested).

Background

Integrin alpha 2 beta 1 is one of twelve integrin family adhesion receptors that share the beta 1 subunit. It is a receptor for laminin, collagen, collagen C-propeptides, fibronectin and E-cadherin. It recognizes the proline-hydroxylated sequence G-F-P-G-E-R in collagen. It is responsible for adhesion of platelets and other cells to collagens, modulation of collagen and collagenase gene expression, force generation and organization of newly synthesized extracellular matrix. Integrin ITGA2:ITGB1 acts as a receptor for Human rotavirus A and Human echoviruses 1 and 8. DGEA inhibited rotavirus binding to alpha2beta1 and infectivity. In a novel process, integrin-using viruses bind the alpha2 I domain of alpha2beta1 via DGE in VP4 and interact with alphaXbeta2 (via GPR) and alphaVbeta3 by using VP7 to facilitate cell entry and infection.