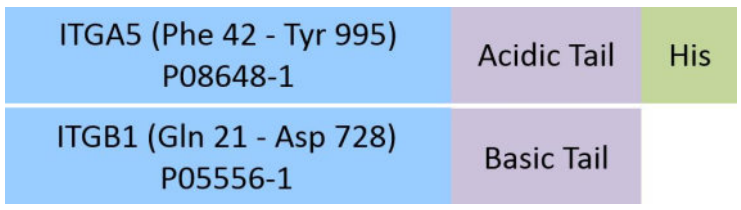
Synonym

Integrin alpha 5 beta 1,ITGA5&ITGB1

Source

Human ITGA5&ITGB1 Heterodimer Protein, His Tag&Tag Free(IT1-H52W5) is expressed from human 293 cells (HEK293). It contains AA Phe 42 - Tyr 995 (ITGA5) & Gln 21 - Asp 728 (ITGB1) (Accession # P08648-1 (ITGA5) & P05556-1 (ITGB1)).
Predicted N-terminus: Phe 42 (ITGA5) & Gln 21 (ITGB1)

Molecular Characterization



Human ITGA5&ITGB1 Heterodimer Protein, His Tag&Tag Free, produced by co-expression of ITGA5 and ITGB1, has a calculated MW of 110.7 kDa (ITGA5) and 83.7 kDa (ITGB1). Subunit ITGA5 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 130-150 kDa (ITGA5) and 100-120 kDa (ITGB1) 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, 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

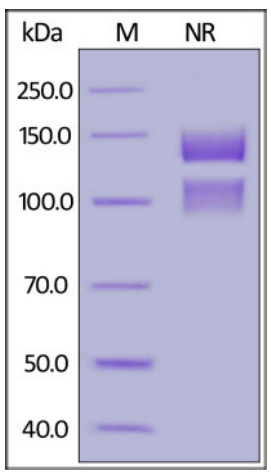
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

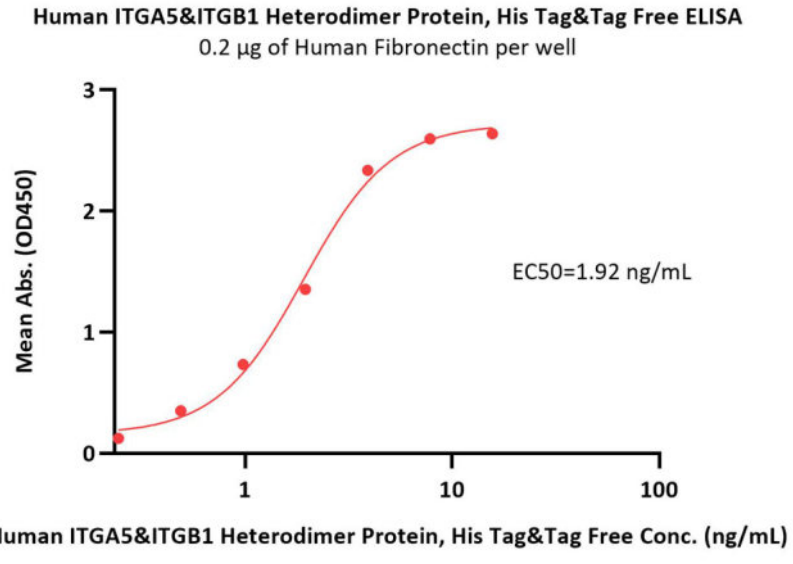
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



Human ITGA5&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 95%.

Bioactivity-ELISA



Immobilized Human Fibronectin at 2 μg/mL (100 μL/well) can bind Human ITGA5&ITGB1 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT1-H52W5) with a linear range of 0.2-2 ng/mL (QC tested).

Background

Integrin alpha 5 beta 1 / Integrin α5β1, which is a major cellular receptor for the extracellular matrix protein fibronectin and plays a fundamental role during mammalian development., is composed of α5 (ITGA5/CD49e) and β1 (ITGB1/CD29) subunits. Integrins are adhesion receptors that transmit bidirectional signals across the plasma membrane. The Integrin alpha 5 beta 1 and its primary extracellular matrix ligand fibronectin (Fn) are of great biological importance.

Clinical and Translational Updates

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