

Synonym

Integrin alpha E beta 7, ITGAE&ITGB7

Source

Human ITGAE&ITGB7 Heterodimer Protein, His Tag&Tag Free (IT7-H52W7) is expressed from human 293 cells (HEK293). It contains AA Phe 19 - Ser 1124 (ITGAE) & Glu 20 - His 723 (ITGB7) (Accession # [P38570-1](#) (ITGAE) & [P26010-1](#) (ITGB7)).

Predicted N-terminus: Phe 19 (ITGAE) & Glu 20 (ITGB7)

Molecular Characterization

ITGAE (Phe 19 - Ser 1124) P38570-1	Acidic Tail	His
ITGB7 (Glu 20 - His 723) P26010-1	Basic Tail	

Human ITGAE&ITGB7 Heterodimer Protein, His Tag&Tag Free, produced by co-expression of ITGAE and ITGB7, has a calculated MW of 128.6 kDa (ITGAE) and 81.8 kDa (ITGB7). The protein migrates as 100-115 kDa and 135-150 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per µg by the LAL 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.

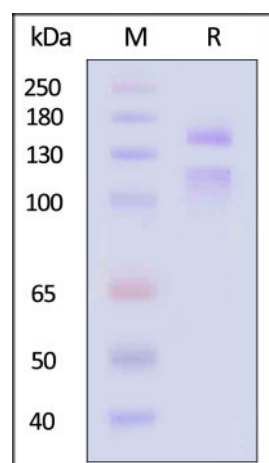
Storage

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

Please avoid repeated freeze-thaw cycles.

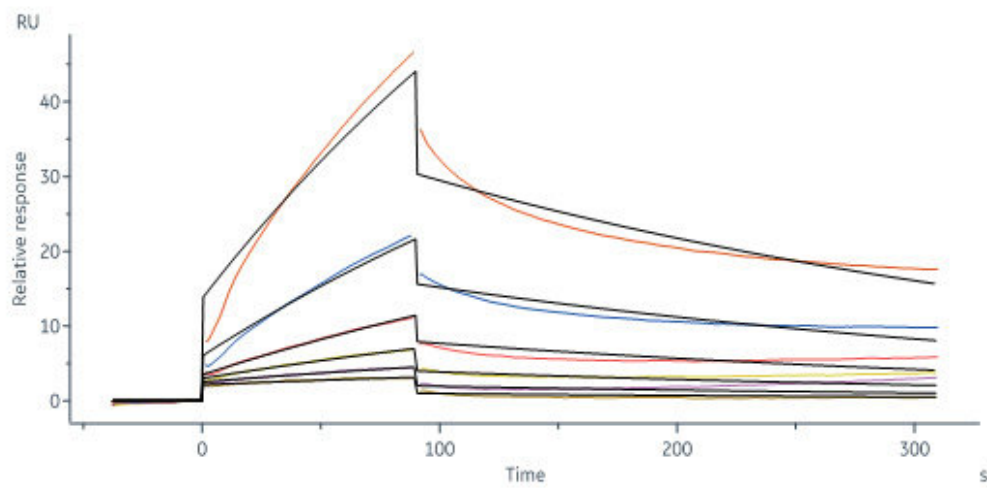
This product is stable after storage at:

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

SDS-PAGE

Human ITGAE&ITGB7 Heterodimer Protein, His Tag&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-SPR



Human ITGAE&ITGB7 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT7-H52W7) immobilized on CM5 Chip can bind Human E-Cadherin, Fc Tag, premium grade (Cat. No. ECD-H5250) with an affinity constant of 0.148 μ M as determined in a SPR assay (Biacore 8K) (Routinely tested).

Background

Integrin alpha E beta 7 consist of two major subunits: Integrin alpha E (ITGAE) also known as CD103 (cluster of differentiation 103) and Integrin beta-7 is an integrin protein that in humans is encoded by the ITGB7 gene. Integrin alpha E beta 7 (CD103) is expressed mainly by cells of the T lymphocyte lineage within mucosal tissues. This is a strikingly narrow pattern of expression compared with that of other integrins. Lymphocytes expressing alpha E beta 7 are abundant in the gut and comprise a major part of the total T cell complement of the body.

The effectiveness of lung transplantation is marred by the relatively high incidence of rejection. The lung normally contains a large population of lymphocytes in contact with the airway epithelium, a proportion of which expresses the mucosal integrin, alpha(E)(CD103)beta(7). This integrin is not a homing receptor, but is thought to retain lymphocytes at the epithelial surface.

Clinical and Translational Updates

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