**Human Integrin alpha E beta 7 (ITGAE&ITGB7) Heterodimer Protein**

**Catalog #** IT7-H52W7  
**For Research Use Only**

### Description

**Source**  
Human ITGAE & ITGB7 Heterodimer Protein (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)

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

**Protein Structure**

<table>
<thead>
<tr>
<th>Subunit</th>
<th>Accession</th>
<th>Acidic Tail</th>
<th>Basic Tail</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITGAE</td>
<td>P38570-1</td>
<td></td>
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<tr>
<td>ITGB7</td>
<td>P26010-1</td>
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</tbody>
</table>

**Molecular Characterization**  
Human ITGAE & ITGB7 Heterodimer Protein, produced by co-expression of ITGAE and ITGB7, has a calculated MW of 128.6 kDa (ITGAE) and 81.8 kDa (ITGB7). Subunit ITGAE is fused with a polyhistidine tag at the C-terminus and subunit ITGB7 contains no tag. The predicted N-terminus is Phe 19 (ITGAE) & Glu 20 (ITGB7). The reducing (R) protein migrates as 135-150 kDa (ITGAE) and 105-115 kDa (ITGB7) respectively due to glycosylation.

**Endotoxin**  
Less than 1.0 EU per μg by the LAL method.

**Purity**  
>90% as determined by reduced SDS-PAGE.

**Bioactivity**  
Measured by its binding ability in a functional ELISA. Immobilized Human ITGAE&ITGB7, His Tag (Cat. No. IT7-H52W7) at 5 μg/mL (100 μL/well) can bind Human E-Cadherin, Fc Tag (Cat. No. ECD-H5250) with a linear range of 0.08-2.5 μg/mL (QC tested).

### Formulation and Storage

**Formulation**  
Lypophilized from 0.22 μm filtered solution in PBS, pH 7.4. Normally trehalose is added as protectant before lyophilization. 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.

No activity loss was observed after storage at:  
- 4-8°C for 12 months in lyophilized state;  
- -70°C for 3 months under sterile conditions after reconstitution.

### Background

**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.

### References


Please contact us at TechSupport@acrobiosystems.com, if you have any questions about this product.
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Assay Data

SDS-PAGE Data

Human ITGAE & ITGB7 Heterodimer Protein on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.

Bioactivity Data

Immobilized Human ITGAE&ITGB7, His Tag (Cat. No. IT7-H52W7) at 5 μg/mL (100 μL/well) can bind Human E-Cadherin, Fc Tag (Cat. No. ECD-H5250) with a linear range of 0.08-2.5 μg/mL (QC tested).