

# Human Integrin alpha 4 beta 7 (ITGA4&ITGB7) Heterodimer Protein



Cat. No. ITG-HM147

## Description

<b>Source</b>	Recombinant Human Integrin alpha 4 beta 7 (ITGA4&ITGB7) Heterodimer Protein is expressed as a heterodimer of ITGA4 and ITGB7 by co-expression in HEK293. Subunit ITGA4 is fused with a His tag at the C-terminus and subunit ITGB7 contains no tag. It contains Tyr34-Thr977 (ITGA4) acidic tail and Glu20-His723 (ITGB7) basic tail.
<b>Accession</b>	P13612-1(ITGA4)&P26010-1(ITGB7)
<b>Molecular Weight</b>	The protein has a predicted MW of 111.18 kDa (ITGA4) and 81.3 kDa (ITGB7). Due to glycosylation, the protein migrates to 70-80 kDa, 80-95 kDa, 100-120 kDa and 140-160 kDa kDa based on Bis-Tris PAGE result.
<b>Endotoxin</b>	Less than 1 EU per µg by the LAL method.
<b>Purity</b>	> 95% as determined by Bis-Tris PAGE > 85% as determined by HPLC

## Formulation and Storage

<b>Formulation</b>	Lyophilized from 0.22 µm filtered solution in PBS, 8% trehalose (pH 7.4).
<b>Reconstitution</b>	Dissolve the lyophilized protein in distilled water. Please refer to the Certificate of Analysis for detailed instructions.
<b>Storage</b>	-20 to -80°C for 12 months as supplied from date of receipt. -80°C for 3 months after reconstitution. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.

## Background

Integrins alpha-4/beta-1 (VLA-4) and alpha-4/beta-7 are receptors for fibronectin. They recognize one or more domains within the alternatively spliced CS-1 and CS-5 regions of fibronectin. They are also receptors for VCAM1. Integrin alpha-4/beta-1 recognizes the sequence Q-I-D-S in VCAM1. Integrin alpha-4/beta-7 is also a receptor for MADCAM1. It recognizes the sequence L-D-T in MADCAM1.

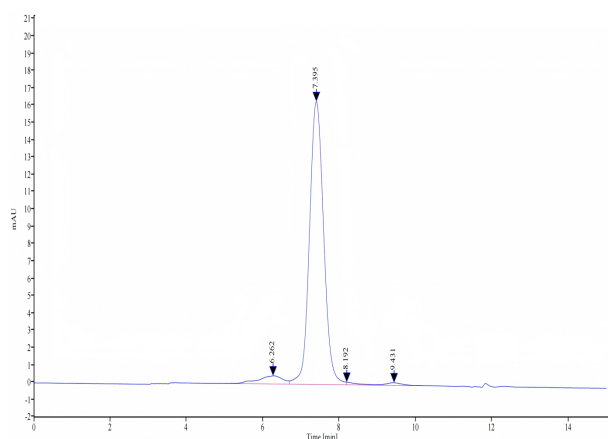
## Assay Data

### Bis-Tris PAGE



Human ITGA4&ITGB7 on Bis-Tris PAGE under reduced condition. The purity is greater than 95%.

### SEC-HPLC



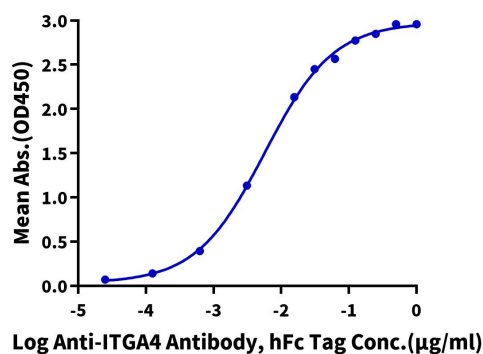
The purity of Human ITGA4&ITGB7 is greater than 85% as determined by SEC-HPLC.

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## Assay Data

## ELISA Data

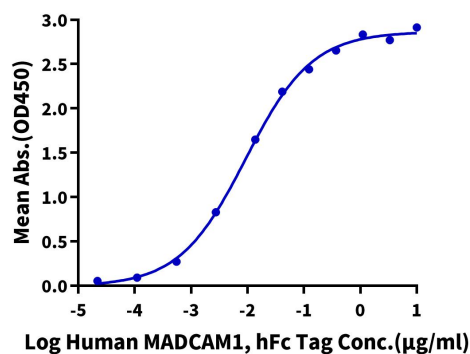
## Human ITGA4&amp;ITGB7, His Tag ELISA

0.1 $\mu$ g Human ITGA4&ITGB7, His Tag Per Well

Immobilized Human ITGA4&ITGB7, His Tag at 1 $\mu$ g/ml (100 $\mu$ l/well) on the plate. Dose response curve for Anti-ITGA4 Antibody, hFc Tag with the EC<sub>50</sub> of 5.7/ng/ml determined by ELISA.

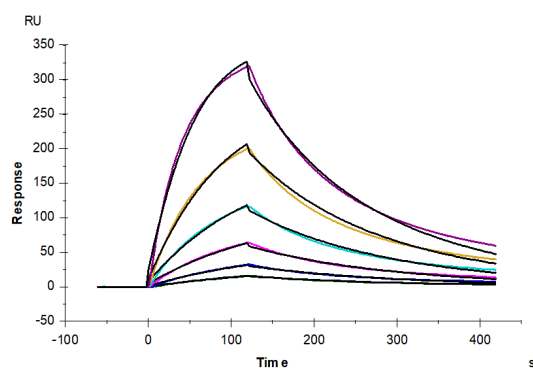
## ELISA Data

## Human ITGA4&amp;ITGB7, His Tag ELISA

0.5 $\mu$ g Human ITGA4&ITGB7, His Tag Per Well

Immobilized Human ITGA4&ITGB7, His Tag at 5 $\mu$ g/ml (100 $\mu$ l/well) on the plate. Dose response curve for Human MADCAM1, hFc Tag (Cat. MCM-HM201) with the EC<sub>50</sub> of 9.2ng/ml determined by ELISA.

## SPR Data



Human MADCAM1, hFc Tag (Cat. MCM-HM201) captured on CM5 Chip via Protein A can bind Human ITGA4&ITGB7, His Tag with an affinity constant of 45.41 nM as determined in SPR assay (Biacore S200).