



## Synonym

Integrin alpha 2 beta 1, ITGA2 & ITGB1

## Source

Mouse ITGA2&ITGB1 Heterodimer Protein, His Tag&Tag Free (IT1-M52W3) is expressed from human 293 cells (HEK293). It contains AA Tyr 27 - Thr 1129 (ITGA2) & Gln 21 - Asp 728 (ITGB1) (Accession # [Q62469-1](#) (ITGA2) & [P09055-1](#) (ITGB1)).

Predicted N-terminus: Tyr 27 (ITGA2) & Gln 21 (ITGB1)

## Molecular Characterization

|                                       |             |          |
|---------------------------------------|-------------|----------|
| ITGA2 (Tyr 27 - Thr 1129)<br>Q62469-1 | Acidic Tail | Poly-his |
| ITGB1 (Gln 21 - Asp 728)<br>P09055-1  | Basic Tail  |          |

Mouse ITGA2&ITGB1 Heterodimer Protein, His Tag&Tag Free, produced by co-expression of ITGA2 and ITGB1, has a calculated MW of 127.6 kDa (ITGA2) and 83.5 kDa (ITGB1). Subunit ITGA2 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 reducing (R) protein migrates as 140-150 kDa (ITGA2) and 100-130 kDa (ITGB1) respectively due to glycosylation.

## Endotoxin

Less than 1.0 EU per µg by the LAL method.

## Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

## 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

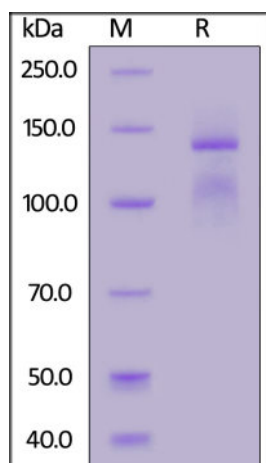
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*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.

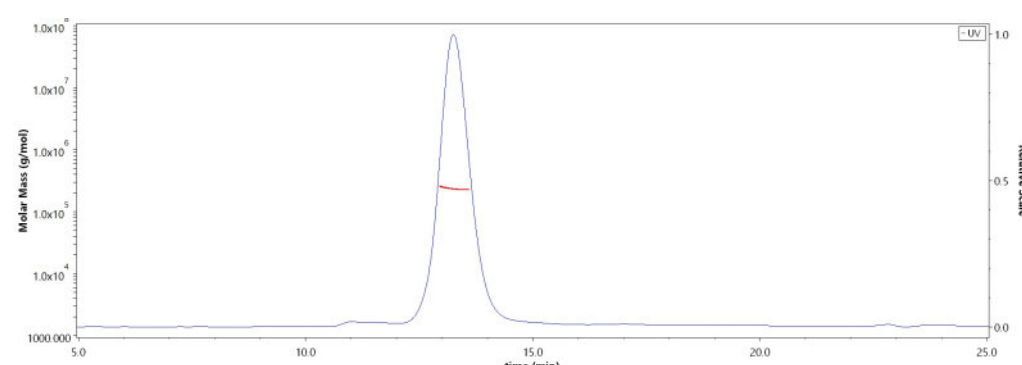
## SDS-PAGE



Mouse ITGA2&ITGB1 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%.

## Bioactivity-ELISA

## SEC-MALS



The purity of Mouse ITGA2&ITGB1 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT1-M52W3) is more than 90% and the molecular weight of this protein is around 210-240 kDa verified by SEC-MALS.

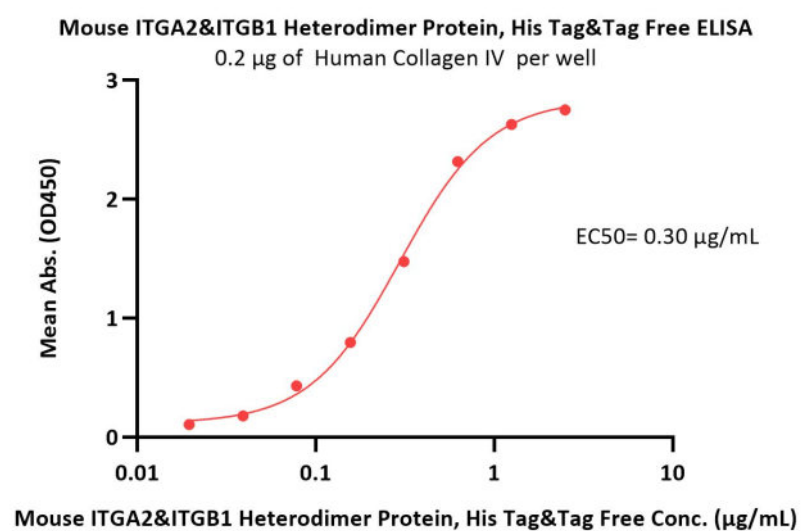
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Surprise Inside!



Immobilized Human Collagen IV at 2 µg/mL (100 µL/well) can bind Mouse ITGA2&ITGB1 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT1-M52W3) with a linear range of 0.02-0.625 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.

## Clinical and Translational Updates

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