

# Human Integrin alpha 1 beta 1 (ITGA1&ITGB1) Heterodimer Protein, His Tag&Tag Free, low endotoxin (MALS verified)

Catalog # IT1-H52Wb



BIOSYSTEMS  
**Acro**

## Synonyms

Integrin alpha 1 beta 1, ITGA1&ITGB1

## Source

Human ITGA1&ITGB1 Heterodimer Protein, His Tag&Tag Free (IT1-H52Wb) is expressed from human 293 cells (HEK293). It contains AA Phe 29 - Pro 1141 (ITGA1) & Gln 21 - Asp 728 (ITGB1) (Accession # [P56199-1](#) (ITGA1) & [P05556-1](#) (ITGB1)).

Predicted N-terminus: Phe 29 (ITGA1) & Gln 21 (ITGB1)

## Molecular Characterization

ITGA1 (Phe 29 - Pro 1141) P56199-1	Acidic Tail	Poly-his
ITGB1 (Gln 21 - Asp 728) P05556-1	Basic Tail	

Human ITGA1&ITGB1 Heterodimer Protein, His Tag&Tag Free, produced by co-expression of ITGA1 and ITGB1, has a calculated MW of 130.0 kDa (ITGA1) and 83.7 kDa (ITGB1). Subunit ITGA1 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 protein migrates as 170-200 kDa (ITGA1) and 90-105 kDa (ITGB1) when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under non-reducing (NR) condition (SDS-PAGE) due to glycosylation.

The protein is designed as a heterodimer.

## Endotoxin

Less than 0.01 EU per µg by the LAL method / rFC method.

## Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

## Formulation

Lyophilized from 0.22 µm filtered solution in 50 mM Tris, 0.2 M Arginine, 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.**

## Shipping and Storage

This product is shipped at ambient temperature.

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

**Please avoid repeated freeze-thaw cycles.**

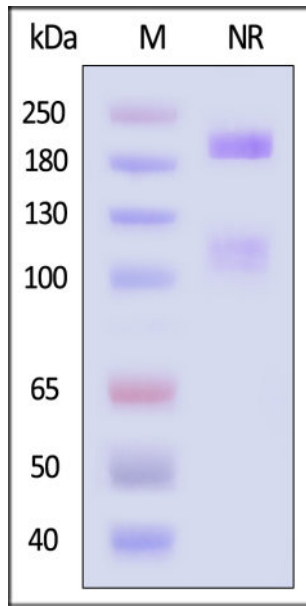
This product is stable after storage at:

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

## ACRO Quality Management System

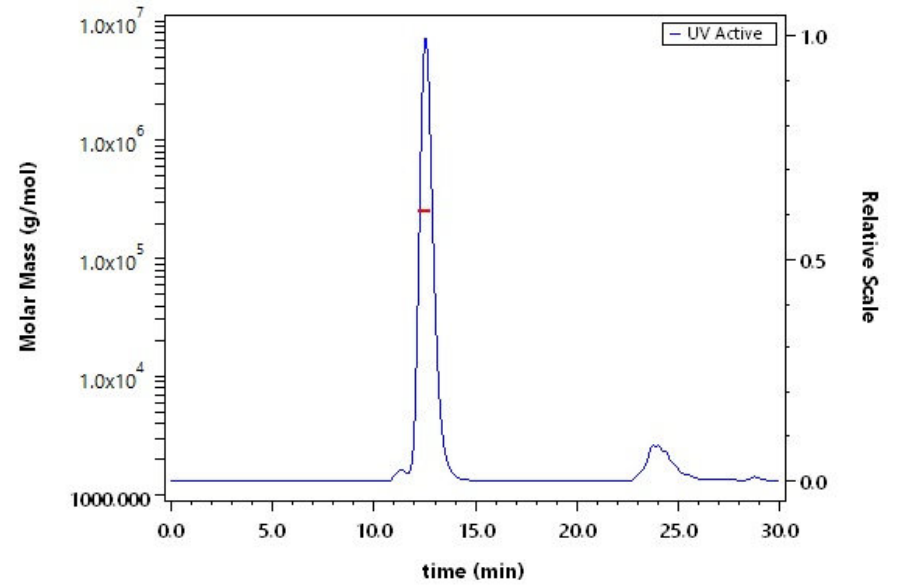
- [QMS\(ISO, GMP\)](#)
- [Quality Advantages](#)
- [Quality Control Process](#)

## SDS-PAGE



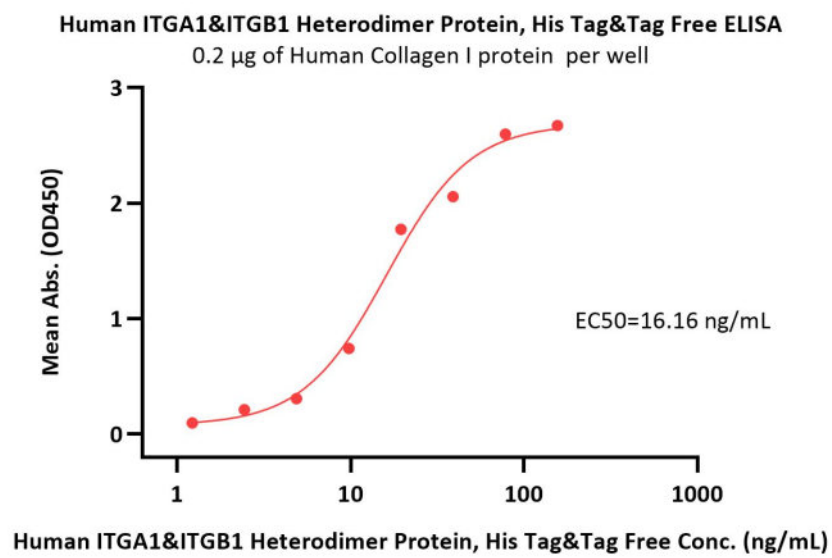
Human ITGA1&ITGB1 Heterodimer Protein, His Tag&Tag Free on SDS-PAGE under non-reducing (NR) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

## SEC-MALS



The purity of Human ITGA1&ITGB1 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT1-H52Wb) is more than 90% and the molecular weight of this protein is around 230-280 kDa verified by SEC-MALS.

## Bioactivity-ELISA



Immobilized Human Collagen I protein at 2  $\mu$ g/mL (100  $\mu$ L/well) can bind Human ITGA1&ITGB1 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT1-H52Wb) with a linear range of 1-20 ng/mL (QC tested).

## Background

Integrin alpha-1/beta-1 is a receptor for laminin and collagen. The Integrin alpha-1/beta-1 and Integrin alpha-2/beta-1 integrins provide critical support for vascular endothelial growth factor signaling, endothelial cell migration, and tumor angiogenesis. It recognizes the proline-hydroxylated sequence G-F-P-G-E-R in collagen. Involved in anchorage-dependent, negative regulation of EGF-stimulated cell growth.

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