



Synonym

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 100-130 kDa (ITGB1) under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per µg by the LAL method.

Purity

>95% 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

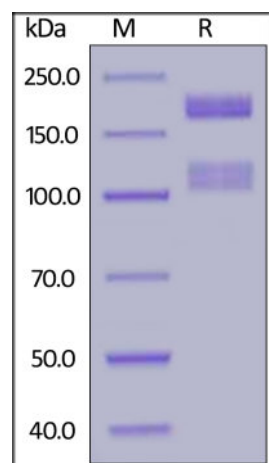
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

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

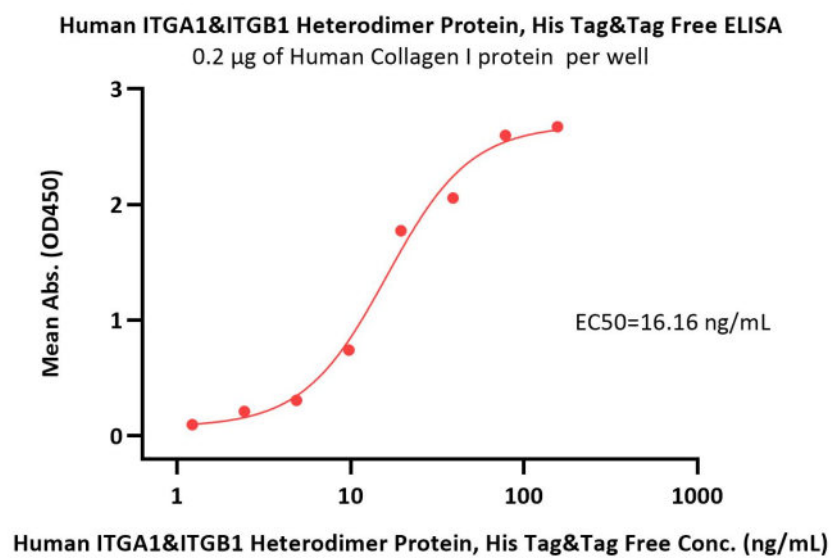


Human ITGA1&ITGB1 Heterodimer Protein, His Tag&Tag Free on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity-ELISA

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Immobilized Human Collagen I protein at 2 µg/mL (100 µL/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.

Clinical and Translational Updates

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