



## Synonym

Integrin isoform alpha-7X2B beta 1,ITGA7X2BB1,ITGA7X2B&ITGB1

## Source

Human ITGA7X2B&ITGB1 Heterodimer Protein, His Tag&Tag Free(IT1-H52W8) is expressed from human 293 cells (HEK293). It contains AA Phe 34 - Trp 1038 (ITGA7X2B) & Gln 21 - Asp 728 (ITGB1) (Accession # [Q13683-7](#) (ITGA7X2B) & [P05556-1](#) (ITGB1)).

Predicted N-terminus: Phe 34 (ITGA7X2B) & Gln 21 (ITGB1)

## Molecular Characterization

ITGA7X2B (Phe 34 - Trp 1038) Q13683-7	Acidic Tail	His
ITGB1 (Gln 21 - Asp 728) P05556-1	Basic Tail	

Human ITGA7X2B&ITGB1 Heterodimer Protein, His Tag&Tag Free, produced by co-expression of ITGA7X2B and ITGB1, has a calculated MW of 116.5 kDa (ITGA7X2B) and 83.7 kDa (ITGB1). Subunit ITGA7X2B 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 non-reducing (NR) protein migrates as 130-135 kDa (ITGA7X2B) and 100-125 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.

## 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

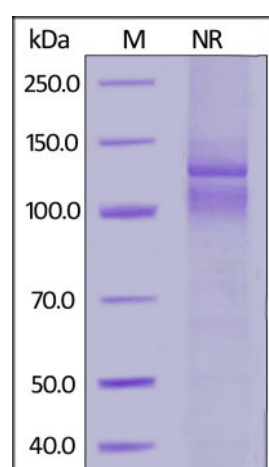
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

*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 ITGA7X2B&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 90%.

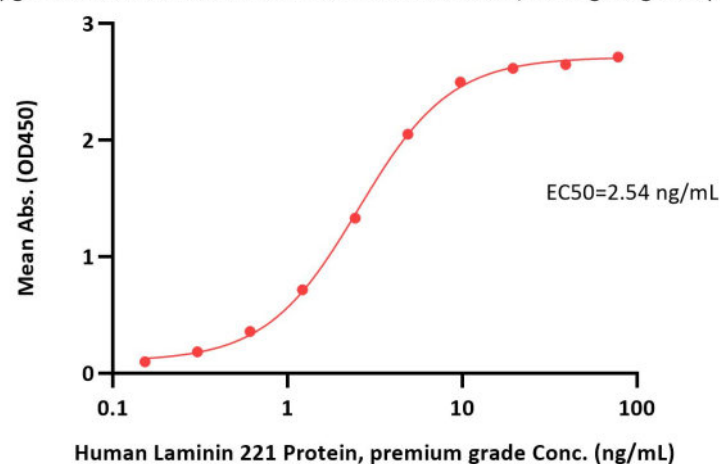
## Bioactivity-ELISA

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and more!





Human ITGA7X2B&ITGB1 Heterodimer Protein, His Tag&Tag Free ELISA  
0.5 µg of Human ITGA7X2B&ITGB1 Heterodimer Protein, His Tag&Tag Free per well



Immobilized Human ITGA7X2B&ITGB1 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT1-H52W8) at 5 µg/mL (100 µL/well) can bind Human Laminin 221 Protein, premium grade (Cat. No. LA2-H5269) with a linear range of 0.2-5 ng/mL (QC tested).

## Background

Integrin alpha-7/beta-1 is the primary laminin receptor on skeletal myoblasts and adult myofibers, which is highly expressed in cardiac muscle, skeletal muscle and smooth muscle cells, and localizes to Z-disc and costamere structures. It is involved in the maintenance of the myofibers cytoarchitecture as well as for their anchorage, viability and functional integrity. Isoform Alpha-7X2B and isoform Alpha-7X1B promote myoblast migration on laminin 1 and laminin 2/4, but isoform Alpha-7X1B is less active on laminin 1 (In vitro). ITGA7 has been shown to interact with Merosin, ITGB1, FHL2 and FHL3.

## Clinical and Translational Updates

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