Human Integrin isoform alpha-7X2B beta 1 (ITGA7X2B&ITGB1) Heterodimer Protein, His Tag&Tag Free

Catalog # IT1-H52W8

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 / rFC 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

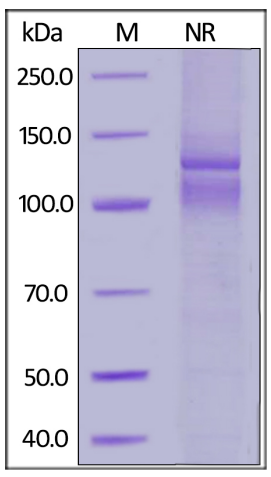
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

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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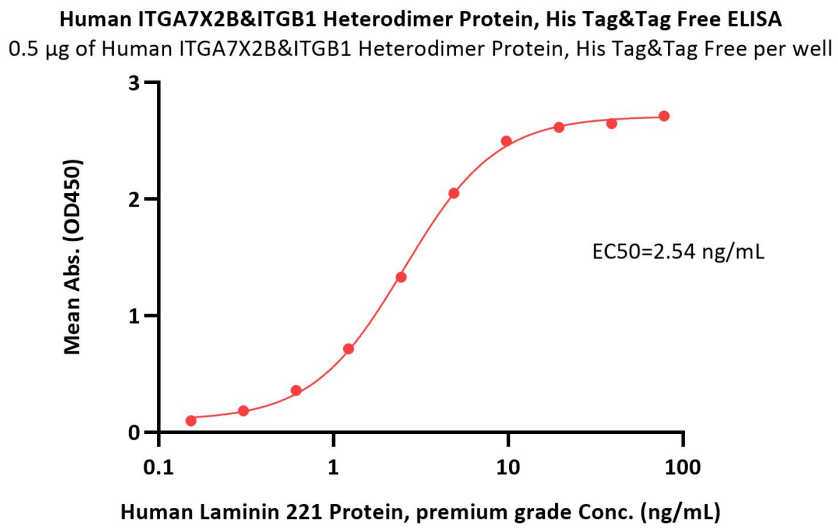

Immobilized Human ITGA7X2B&ITGB1 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT1-H52W8) at 5 μg/mL (100 μL/well) can bind Human Laminin 221 Protein, premium grade (Cat. No. LA2-H5269) with a linear range of 0.2-5 ng/mL (QC tested).

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.