



Synonym

Integrin alpha 5 beta 1,ITGA5&ITGB1

Source

Biotinylated Human ITGA5&ITGB1 Heterodimer Protein, His,Avitag&Tag Free(IT1-H82Wa) is expressed from human 293 cells (HEK293). It contains AA Phe 42 - Tyr 995 (ITGA5) & Gln 21 - Asp 728 (ITGB1) (Accession # [P08648-1](#) (ITGA5) & [P05556-1](#) (ITGB1)).

Predicted N-terminus: Phe 42 (ITGA5) & Gln 21 (ITGB1)

Molecular Characterization

ITGA5 (Phe 42 - Tyr 995) P08648-1	Acidic Tail	Poly-his	Avi
ITGB1 (Gln 21 - Asp 728) P05556-1	Basic Tail		

Biotinylated Human ITGA5&ITGB1 Heterodimer Protein, His,Avitag&Tag Free, produced by co-expression of ITGA5 and ITGB1, has a calculated MW of 112.4 kDa (ITGA5) and 83.7 kDa (ITGB1). Subunit ITGA5 is fused with an acidic tail at the C-terminus and followed by a polyhistidine tag and an Avi tag (Avitag™) and subunit ITGB1 contains no tag but a basic tail at the C-terminus. The non-reducing (NR) protein migrates as 100-115 kDa (ITGA5) and 135-150 kDa (ITGB1) respectively due to glycosylation.

Labeling

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

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

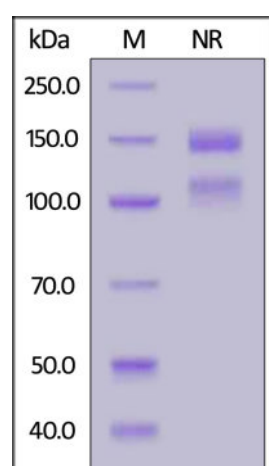
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

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



Biotinylated Human ITGA5&ITGB1 Heterodimer Protein, His,Avitag&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%.

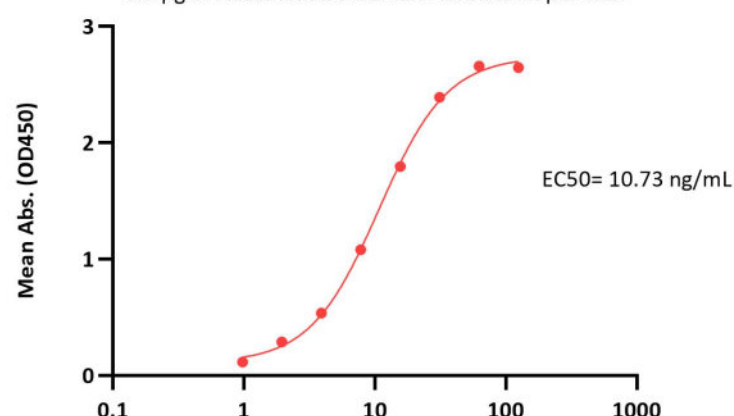
Discounts, Gifts,
and more!





Bioactivity-ELISA

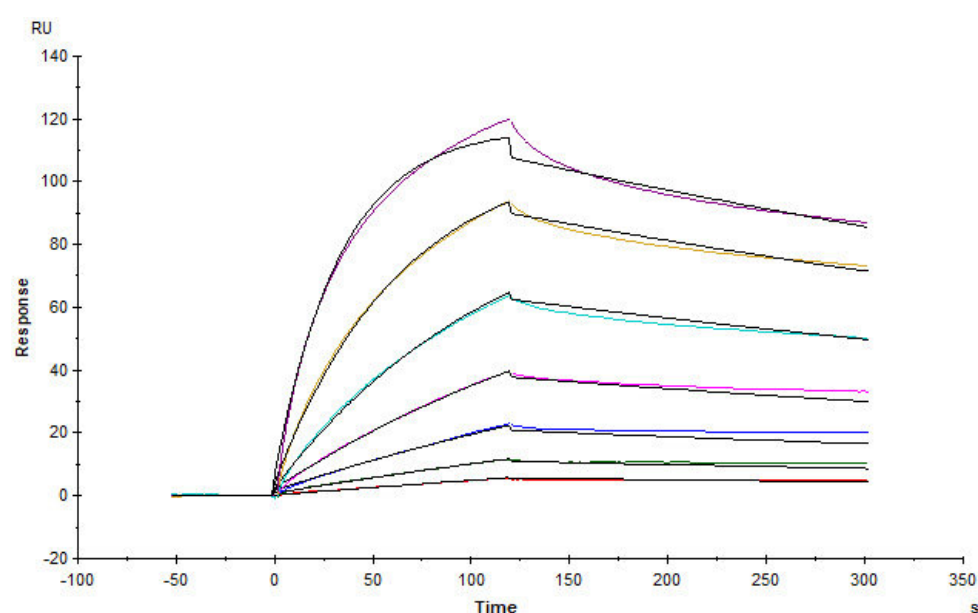
Biotinylated Human ITGA5&ITGB1 Heterodimer Protein, His,Avitag&Tag Free ELISA
0.2 µg of Recombinant Human Fibronectin per well



Biotinylated Human ITGA5&ITGB1 Heterodimer Protein, His,Avitag&Tag Free Conc. (ng/mL)

Immobilized Recombinant Human Fibronectin at 2 µg/mL (100 µL/well) can bind Biotinylated Human ITGA5&ITGB1 Heterodimer Protein, His,Avitag&Tag Free (Cat. No. IT1-H82Wa) with a linear range of 1-16 ng/mL (QC tested).

Bioactivity-SPR



Biotinylated Human ITGA5&ITGB1 Heterodimer Protein, His,Avitag&Tag Free (Cat. No. IT1-H82Wa) captured on Biotin CAP-Series S Sensor Chip can bind Human Fibronectin with an affinity constant of 4.4 nM as determined in a SPR assay (Biacore T200) (Routinely tested).

Background

Integrin alpha 5 beta 1 / Integrin $\alpha 5\beta 1$, which is a major cellular receptor for the extracellular matrix protein fibronectin and plays a fundamental role during mammalian development., is composed of $\alpha 5$ (ITGA5/CD49e) and $\beta 1$ (ITGB1/CD29) subunits. Integrins are adhesion receptors that transmit bidirectional signals across the plasma membrane. The Integrin alpha 5 beta 1 and its primary extracellular matrix ligand fibronectin (Fn) are of great biological importance.

Clinical and Translational Updates

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