



Synonym

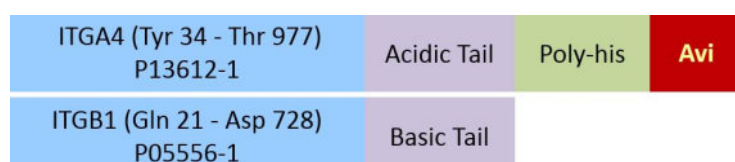
Integrin alpha 4 beta 1,ITGA4&ITGB1

Source

Biotinylated Human ITGA4&ITGB1 Heterodimer Protein, His,Avitag&Tag Free(IT1-H82W1) is expressed from human 293 cells (HEK293). It contains AA Tyr 34 - Thr 977 (ITGA4) & Gln 21 - Asp 728 (ITGB1) (Accession # [P13612-1](#) (ITGA4) & [P05556-1](#) (ITGB1)).

Predicted N-terminus: Tyr 34 & Ser 592 (ITGA4) & Gln 21 (ITGB1)

Molecular Characterization



Biotinylated Human ITGA4&ITGB1 Heterodimer Protein, His,Avitag&Tag Free, produced by co-expression of ITGA4 and ITGB1, has a calculated MW of 113.2 kDa (ITGA4) and 83.7 kDa (ITGB1). Subunit ITGA4 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 ITGA4 subunit is composed of a heavy chain (Tyr 34 - Arg 591, calculated MW 61.1 kDa) and a light chain (Ser 592 - Thr 977, calculated MW 52.1 kDa). Consequently ITGA4 migrates as 65-80 kDa, and ITGB1 as 90-150 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under non-reducing (NR) condition (SDS-PAGE) 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

>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

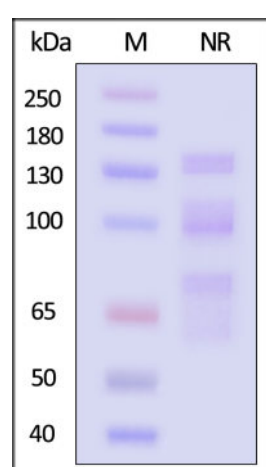
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

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



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and more!

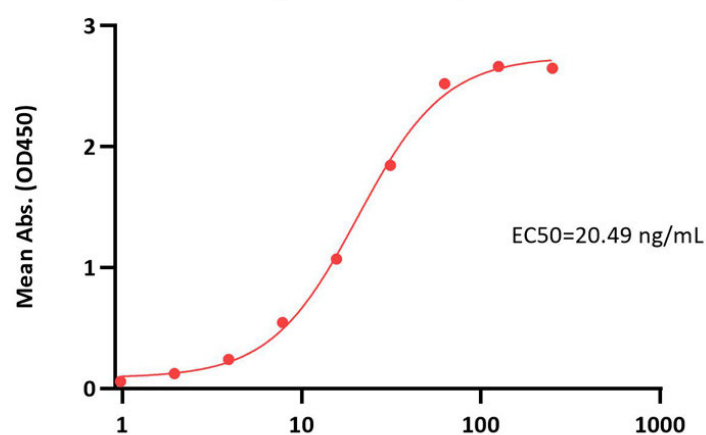




Biotinylated Human ITGA4&ITGB1 Heterodimer Protein, His,Avitag&Tag Free on SDS-PAGE under non-reducing (NR) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With [Star Ribbon Pre-stained Protein Marker](#)).

Bioactivity-ELISA

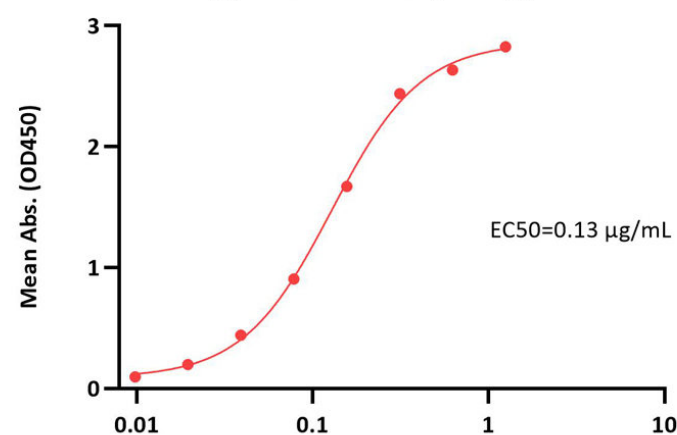
Biotinylated Human ITGA4&ITGB1 Heterodimer Protein, His,Avitag&Tag Free ELISA
0.1µg of Natalizumab per well



Biotinylated Human ITGA4&ITGB1 Heterodimer Protein, His,Avitag&Tag Free Conc. (ng/mL)

Immobilized Natalizumab at 1 µg/mL (100 µL/well) can bind Biotinylated Human ITGA4&ITGB1 Heterodimer Protein, His,Avitag&Tag Free (Cat. No. IT1-H82W1) with a linear range of 2-31 ng/mL (QC tested).

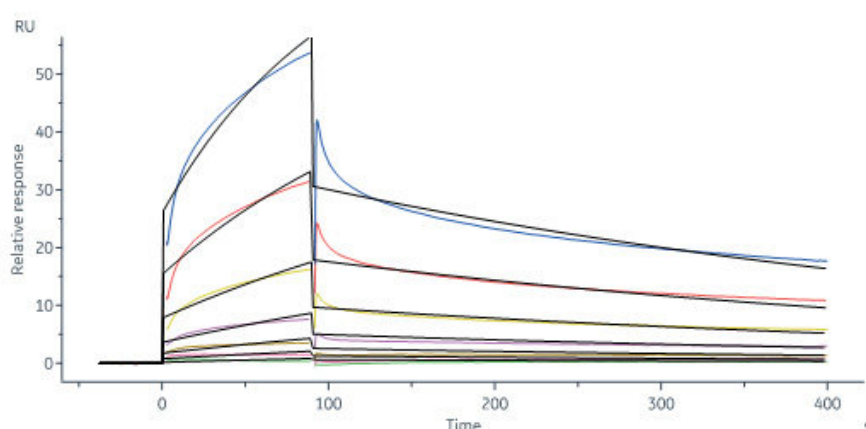
Biotinylated Human ITGA4&ITGB1 Heterodimer Protein, His,Avitag&Tag Free ELISA
0.5 µg of Human VCAM-1, His Tag per well



Biotinylated Human ITGA4&ITGB1 Heterodimer Protein, His,Avitag&Tag Free Conc. (µg/mL)

Immobilized Human VCAM-1, His Tag (Cat. No. VC1-H5224) at 5 µg/mL (100 µL/well) can bind Biotinylated Human ITGA4&ITGB1 Heterodimer Protein, His,Avitag&Tag Free (Cat. No. IT1-H82W1) with a linear range of 0.01-0.156 µg/mL (Routinely tested).

Bioactivity-SPR



Human VCAM-1, His Tag (Cat. No. VC1-H5224) immobilized on CM5 Chip can bind Biotinylated Human ITGA4&ITGB1 Heterodimer Protein, His,Avitag&Tag Free (Cat. No. IT1-H82W1) with an affinity constant of 253 nM as determined in a SPR assay (Biacore 8K) (Routinely tested).

Background

Integrins are transmembrane proteins that mediate interactions between adhesion molecules on adjacent cells and/or the extracellular matrix (ECM). Integrins have diverse roles in several biological processes including cell migration during development and wound healing, cell differentiation, and apoptosis. Their activities can also regulate the metastatic and invasive potential of tumor cells. Integrin alpha 4 beta 1 (Alpha-4/beta-1) is receptors for fibronectin. Integrin alpha-4/beta-1 is a receptor for VCAM1 and recognizes the sequence Q-I-D-S in VCAM1.

Clinical and Translational Updates

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Biotinylated Human Integrin alpha 4 beta 1 (ITGA4&ITGB1) Heterodimer Protein, His,Avitag™&Tag Free

Catalog # IT1-H82W1



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