Human Integrin alpha 4 beta 7 (ITGA4&ITGB7) Heterodimer Protein, His Tag&Tag Free (MALS & SPR verified)

Catalog # IT7-H52W4

Synonym

Integrin alpha 4 beta 7,ITGA4&ITGB7

Source

Human ITGA4&ITGB7 Heterodimer Protein, His Tag&Tag Free(IT7-H52W4) is expressed from human 293 cells (HEK293). It contains AA Tyr 34 - Thr 977 (ITGA4) & Glu 20 - His 723 (ITGB7) (Accession # P13612-1 (ITGA4) & P26010-1 (ITGB7)).
Predicted N-terminus: Tyr 34 (ITGA4) & Glu 20 (ITGB7)

Molecular Characterization

Human ITGA4&ITGB7 Heterodimer Protein, His Tag&Tag Free, produced by co-expression of ITGA4 and ITGB7, has a calculated MW of 111.4 kDa (ITGA4) & 83.7 kDa (ITGB7). Subunit ITGA4 is fused with an acidic tail at the C-terminus and followed by a polyhistidine tag and subunit ITGB7 contains no tag but a basic tail at the C-terminus. The protein migrates as 55 kDa, 80 kDa, 100-120 kDa and 130-150 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under non-reducing (NR) condition (SDS-PAGE) 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

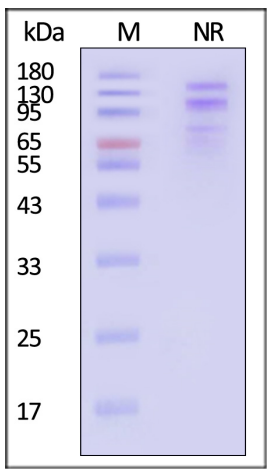
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

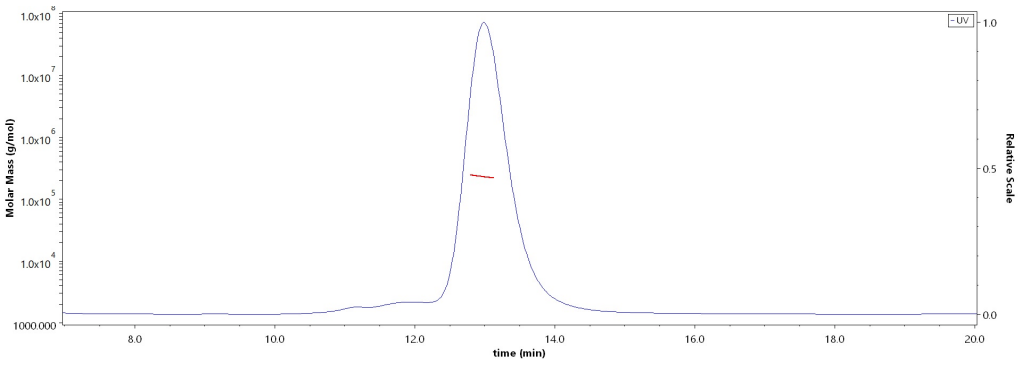
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE



Human ITGA4&ITGB7 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% (With Star Ribbon Pre-stained Protein Marker).

SEC-MALS

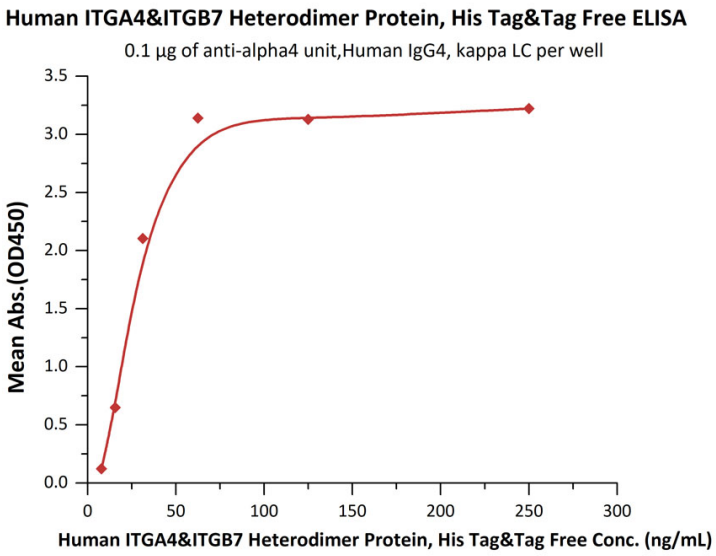


The purity of Human ITGA4&ITGB7 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT7-H52W4) is more than 85% and the molecular weight of this protein is around 210-250 kDa verified by SEC-MALS.
Report

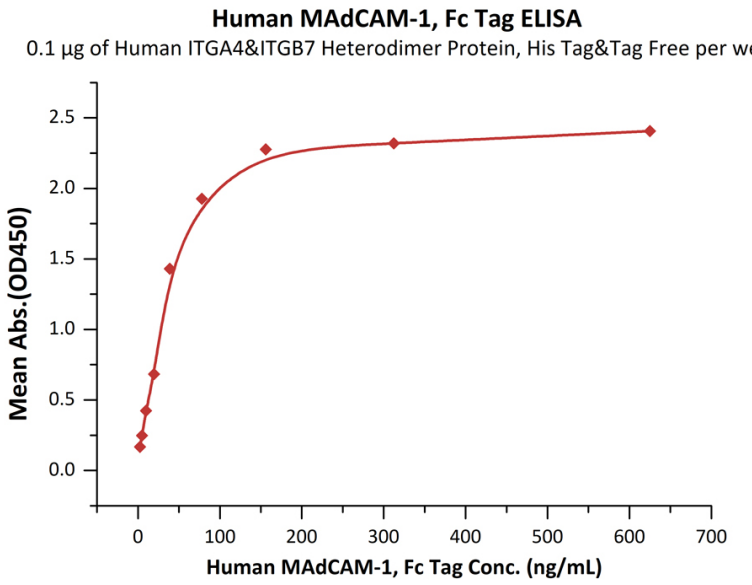
Bioactivity-ELISA

Human Integrin alpha 4 beta 7 (ITGA4&ITGB7) Heterodimer Protein, His Tag&Tag Free (MALS & SPR verified)

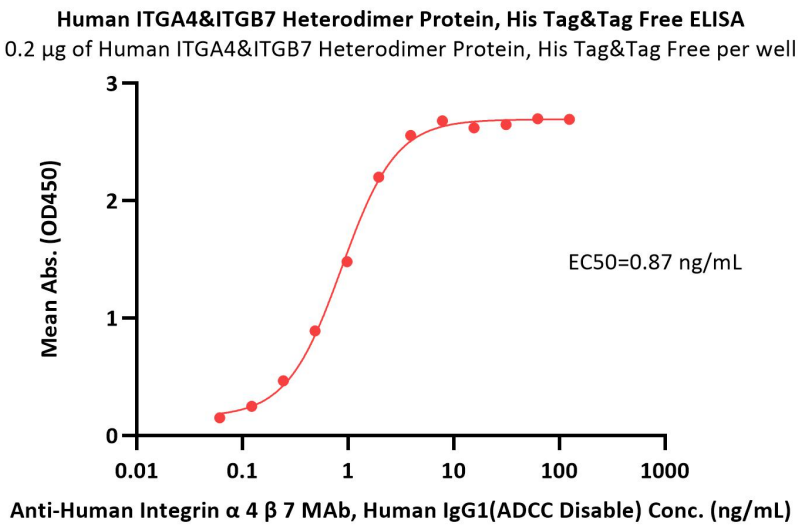
Catalog # IT7-H52W4



Immobilized Human ITGA4&ITGB7 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT7-H52W4) at 2 μg/mL (100 μL/well) can bind Monoclonal Anti-Human ITGA4&ITGB7 Antibody, Human IgG4 with a linear range of 0.1-2 ng/mL (Routinely tested).

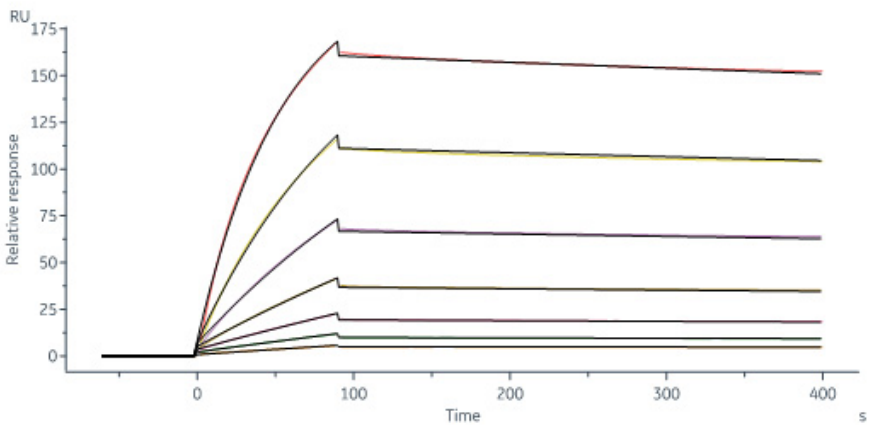


Immobilized Human ITGA4&ITGB7 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT7-H52W4) at 1 μg/mL (100 μL/well) can bind Human MAdCAM-1, Fc Tag (Cat. No. MAM-H5253) with a linear range of 0.2-4 ng/mL (Routinely tested).



Immobilized Human ITGA4&ITGB7 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT7-H52W4) at 2 μg/mL (100 μL/well) can bind Anti-Human Integrin α 4 β 7 MAb, Human IgG1(ADCC Disable) with a linear range of 0.06-2 ng/mL (Routinely tested).

Bioactivity-SPR



Anti-Human Integrin α 4 β 7 MAb, Human IgG1 (ADCC Disable) captured on Protein A Chip can bind Human ITGA4&ITGB7 Heterodimer Protein, His Tag&Tag Free (IT7-H52W4) with an affinity constant of 1.37 nM as determined in a SPR assay (Biacore 8K) (QC tested).

Background

Integrin alpha 4 beta 7 is an integrin family adhesion receptor that shares subunits with alpha 4 beta 1 (VLA4) and the E-Cadherin receptor, alpha E beta 7 . Integrin alpha 4 beta 7, which is critical for homing to intestinal mucosa, is induced during T cell activation in Peyer's patches or mesenteric lymph nodes.Its expression requires signals from local dendritic and stromal cells, including secreted retinoic acid. The HIV-1 envelope protein gp120 binds to the active form of Integrin alpha 4 beta 7, and this may or may not account for the concentration of HIV-1 virus in the gut-associated lymphoid tissue (GALT). Integrin alpha 4 beta 7 may also be involved in lymphocyte trafficking in acute intestinal graft vs. host disease (GVHD).