



Synonym

Integrin alpha 4 beta 7, ITGA4&ITGB7

Source

Cynomolgus ITGA4&ITGB7 Heterodimer Protein, His Tag&Tag Free (IT7-C52W4) is expressed from human 293 cells (HEK293). It contains AA Tyr 34 - Thr 977 (ITGA4) & Glu 20 - His 723 (ITGB7) (Accession # [XP_005573683.2](#) (ITGA4) & [XP_005571028.2](#) (ITGB7)).

Predicted N-terminus: Tyr 34 (ITGA4) & Glu 20 (ITGB7)

Molecular Characterization

Cynomolgus ITGA4&ITGB7 Heterodimer Protein, His Tag&Tag Free, produced by co-expression of ITGA4 and ITGB7, has a calculated MW of 111.6 kDa (ITGA4) & 81.6 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 60-70 kDa, 95-120 kDa (ITGB7) and 130-150 kDa (ITGA4) 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 μ g by the LAL method / rFC method.

Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 μ m 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.

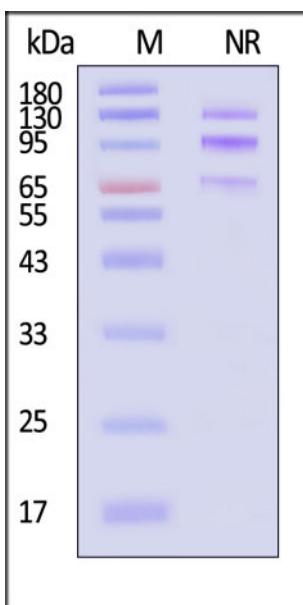
This product is stable after storage at:

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

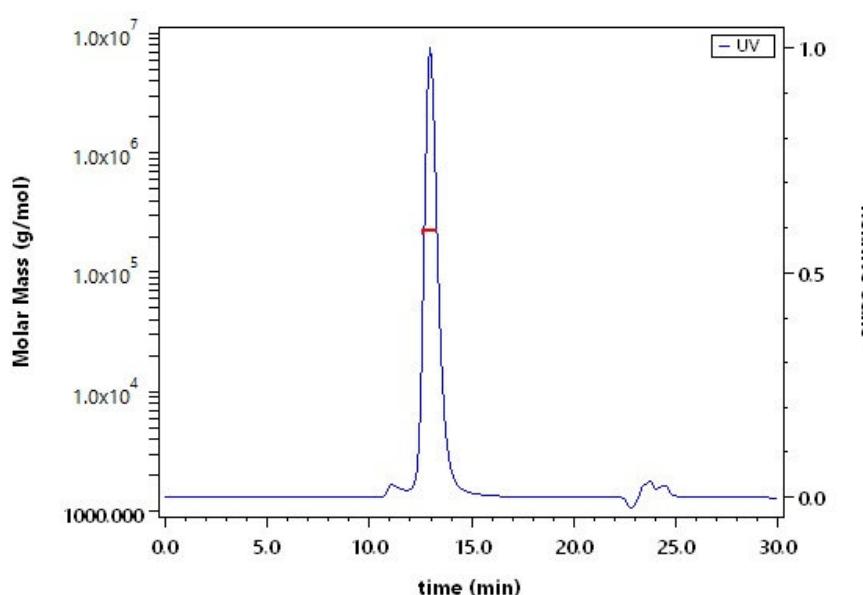
ACRO Quality Management System

- [QMS\(ISO, GMP\)](#)
- [Quality Advantages](#)
- [Quality Control Process](#)

SDS-PAGE



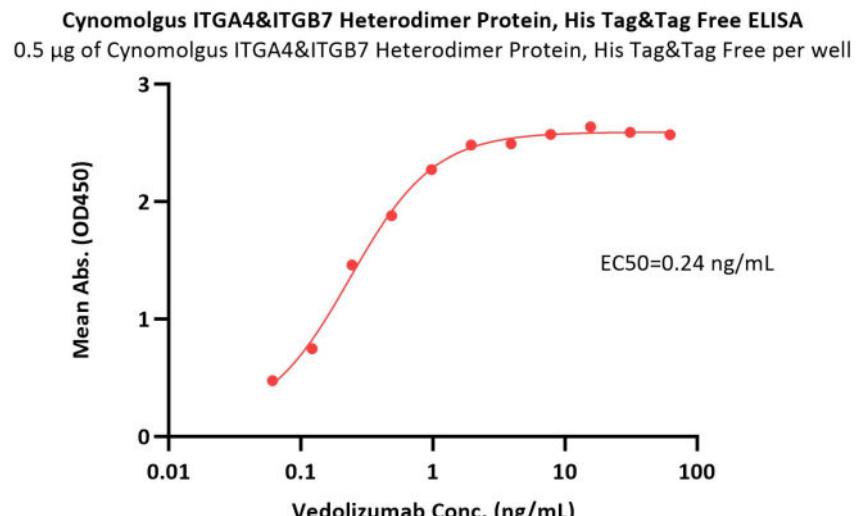
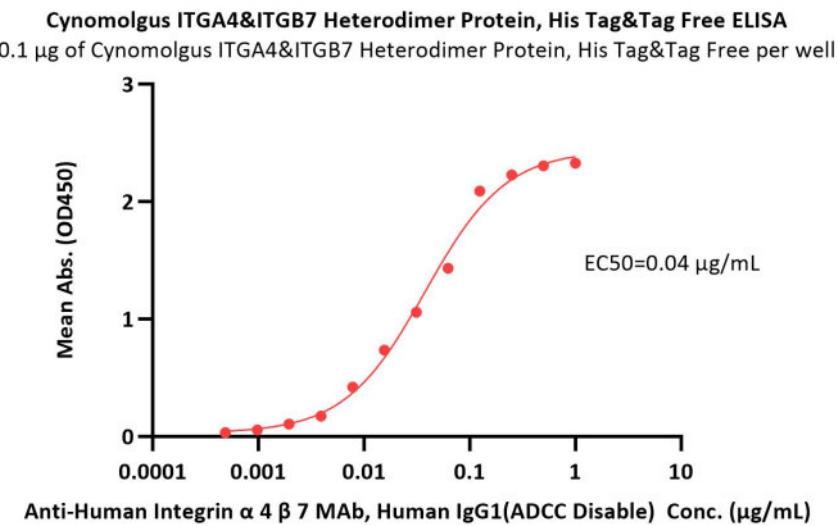
SEC-MALS



Cynomolgus 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](#)).

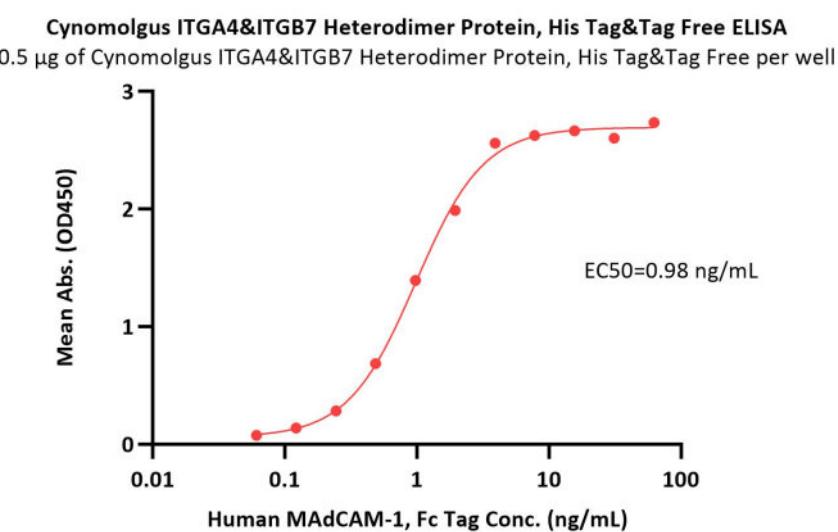
The purity of Cynomolgus ITGA4&ITGB7 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT7-C52W4) is more than 90% and the molecular weight of this protein is around 200-250 kDa verified by SEC-MALS.

Bioactivity-ELISA



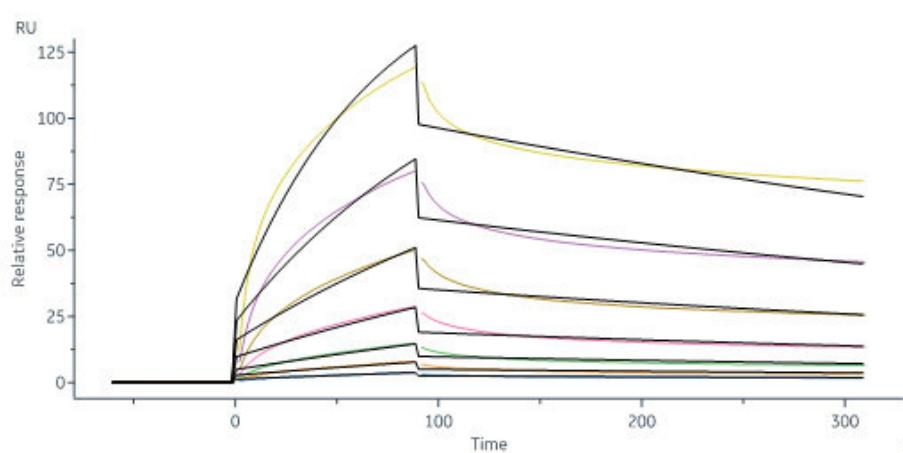
Immobilized Cynomolgus ITGA4&ITGB7 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT7-C52W4) at 1 µg/mL (100 µL/well) can bind Anti-Human Integrin α 4 β 7 MAb, Human IgG1(ADCC Disable) with a linear range of 0.0005-a linear range of 0.06-1 ng/mL (Routinely tested). 0.125 µg/mL (QC tested).

Immobilized Cynomolgus ITGA4&ITGB7 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT7-C52W4) at 5 µg/mL (100 µL/well) can bind Vedolizumab with a linear range of 0.06-1 ng/mL (Routinely tested).



Immobilized Cynomolgus ITGA4&ITGB7 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT7-C52W4) at 5 µg/mL (100 µL/well) can bind Human MAdCAM-1, Fc Tag (Cat. No. MAM-H5253) with a linear range of 0.06-4 ng/mL (Routinely tested).

Bioactivity-SPR



Human MAdCAM-1, Fc Tag (Cat. No. MAM-H5253) captured on Protein A Chip can bind Cynomolgus ITGA4&ITGB7 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT7-C52W4) with an affinity constant of 5.77 nM as determined in a SPR assay (Biacore 8K) (Routinely 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).

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