

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

Catalog # IT7-H52W4AI



BIOSYSTEMS
Acro

Application

Human ITGA4&ITGB7 Heterodimer Protein, His Tag&Tag Free AIDD-Ready protein is designed for direct use in SPR assays. It is supplied in a sugar-free, glycerol-free formulation to eliminate refractive index interference in SPR. No desalting or buffer exchange is required before use, simplifying the SPR workflow and supporting high-throughput experimental validation to accelerate the transition from AI prediction to wet-lab validation.

Features and Advantages

- **Directly compatible with SPR:** No desalting or buffer exchange required; supplied as a liquid to reduce sample preparation and improve experimental efficiency.
- **High batch-to-batch consistency:** Each lot is released using SPR QC to ensure experimental reproducibility.
- **Validated with representative drugs:** SPR binding activity is validated using representative drug antibodies to ensure suitability for drug screening and evaluation.

Synonyms

Integrin alpha 4 beta 7, ITGA4&ITGB7

Source

Human ITGA4&ITGB7 Heterodimer Protein, His Tag&Tag Free (IT7-H52W4AI) 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

 Integrin alpha 4 beta 7 Structure

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 50-70 kDa, 75-80 kDa, 95-120 kDa and 130-150 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

The protein is designed as a heterodimer.

Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Formulated in a proprietary trehalose-free buffer, supplied ready-to-use for SPR/BLI analysis - no buffer exchange required.

For detailed formulation, please refer to the batch-specific COA.

Shipping and Storage

This product is supplied and shipped on dry ice.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

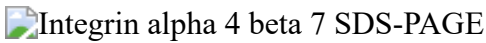
- The product **MUST** be stored at -70°C or lower upon receipt;
- -70°C for 12 months under sterile conditions.

ACRO Quality Management System

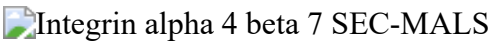
- [QMS\(ISO, GMP\)](#).
- [Quality Advantages](#)
- [Quality Control Process](#)

SDS-PAGE

SEC-MALS

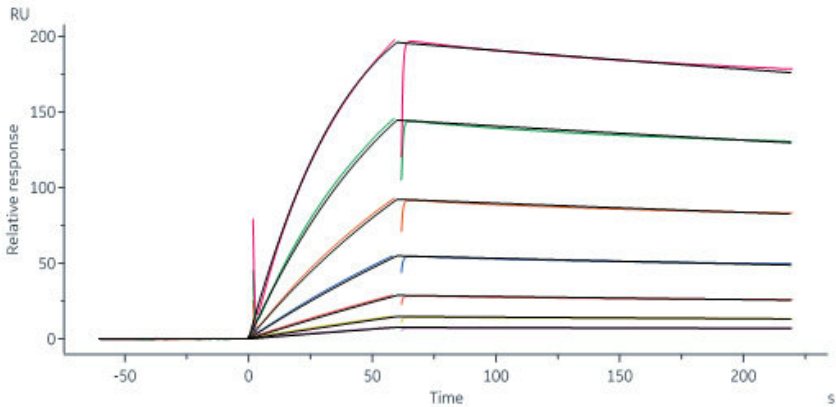


Human ITGA4&ITGB7 Heterodimer Protein, His Tag&Tag Free on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).



The purity of Human ITGA4&ITGB7 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT7-H52W4AI) is more than 90% and the molecular weight of this protein is around 210-250 kDa verified by SEC-MALS.

Activity-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 (Cat. No. IT7-H52W4AI) with an affinity constant of 20.8 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).



www.acrobiosystems.com