

# Human Integrin alpha D beta 2 (ITGAD&ITGB2) Heterodimer Protein, His Tag&Tag Free

Catalog # IT2-H53W6



BIOSYSTEMS  
**Acro**

Surprise Inside!

## Synonym

Integrin alpha D beta 2, ITGAD & ITGB2

## Source

Human ITGAD&ITGB2 Heterodimer Protein, His Tag&Tag Free (IT2-H53W6) is expressed from CHO cells. It contains AA Phe 18 - Asn 1099 (ITGAD) & Gln 23 - Asn 700 (ITGB2) (Accession # [Q13349-1](#) (ITGAD) & [P05107-1](#) (ITGB2) (H354Q)).

Predicted N-terminus: Phe 18 (ITGAD) & Gln 23 (ITGB2)

## Molecular Characterization

ITGAD (Phe 18 - Asn 1099) Q13349-1	Acidic Tail	Poly-his
<sup>H354Q</sup> ITGB2 (Gln 23 - Asn 700) P05107-1	Basic Tail	

Human Integrin alpha D beta 2 (ITGAD&ITGB2) Heterodimer Protein, produced by co-expression of ITGAD and ITGB2, has a calculated MW of 124.9 kDa (ITGAD) and 80.2 kDa (ITGB2). Subunit ITGAD is fused with an acidic tail at the C-terminus and followed by a polyhistidine tag and subunit ITGB1 contains no tag but a basic tail at the C-terminus. The protein migrates as 150 kDa (ITGAD) and 90-100 kDa (ITGB2) 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.**

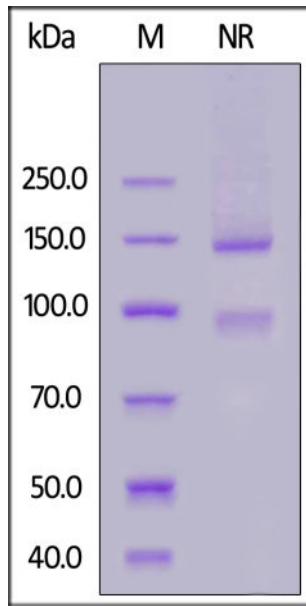
This product is stable after storage at:

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

## ACRO Quality Management System

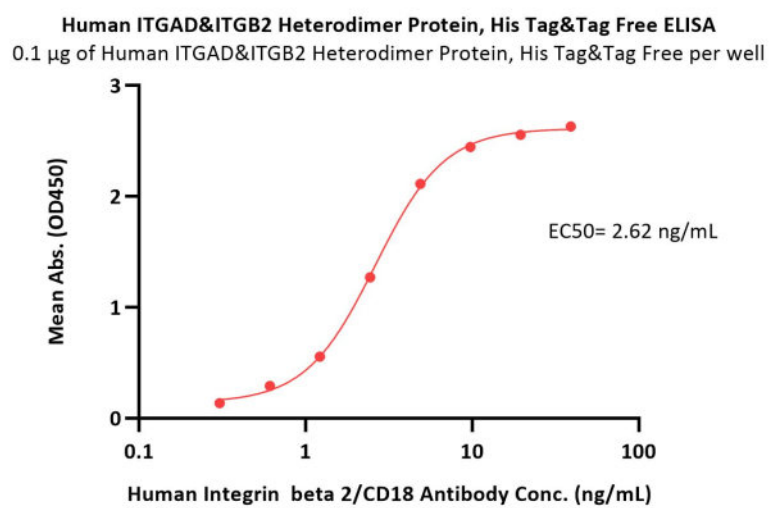
- [QMS\(ISO, GMP\)](#).
- [Quality Advantages](#)
- [Quality Control Process](#)

## SDS-PAGE



Human ITGAD&ITGB2 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%.

## Bioactivity-ELISA



Immobilized Human ITGAD&ITGB2 Heterodimer Protein, His Tag&Tag Free (Cat. No. IT2-H53W6) at 1 µg/mL (100 µL/well) can bind Human Integrin beta 2/CD18 Antibody with a linear range of 0.3-5 ng/mL (QC tested).

## Background

Integrin alpha-D/beta-2 is a receptor for ICAM3 and VCAM1. May play a role in the atherosclerotic process such as clearing lipoproteins from plaques and in phagocytosis of blood-borne pathogens, particulate matter, and senescent erythrocytes from the blood. Contributes to natural killer cell cytotoxicity. Involved in leukocyte adhesion and transmigration of leukocytes including T-cells and neutrophils. Triggers neutrophil transmigration during lung injury through PTK2B/PYK2-mediated activation (PubMed:18587400). Alpha D beta 2, selectively binds ICAM-3 and does not appear to bind ICAM-1. In addition, a soluble form of alpha D beta 2 binds VCAM-1 with greater efficiency relative to ICAM-3. The I domain of alpha D contains a binding site for VCAM-1 since recombinant alpha D I domain binds specifically to VCAM-1.

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