



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

Molecular Characterization

ITGAD (Phe 18 - Asn 1099) Q13349-1	Acidic Tail	Poly-his
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.

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

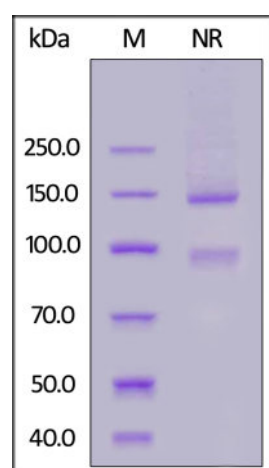
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

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 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%.

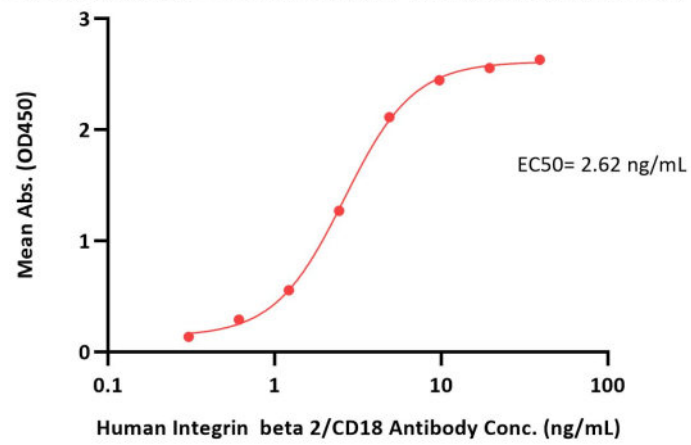
Bioactivity-ELISA

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Human ITGAD&ITGB2 Heterodimer Protein, His Tag&Tag Free ELISA
0.1 µg of Human ITGAD&ITGB2 Heterodimer Protein, His Tag&Tag Free per well



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.

Clinical and Translational Updates

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