

# Integrin alpha 2b beta 3 Heterodimer Recombinant Protein | ITGA2B recombinant protein

Human Integrin alpha 2b beta 3 Heterodimer Protein (I874S, DYKDDDDK & His Tag)

|                               |                             |
|-------------------------------|-----------------------------|
| CATALOG #<br><b>AAA259282</b> | HOST<br><b>HEK293 Cells</b> |
|-------------------------------|-----------------------------|

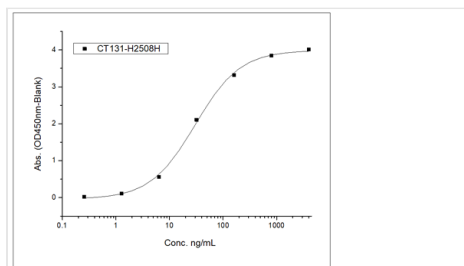
## PRODUCT SYNONYMS

Integrin alpha 2b beta 3 Heterodimer; Human Integrin alpha 2b beta 3 Heterodimer Protein (I874S; DYKDDDDK & His Tag); ITGA2B recombinant protein

## PRODUCT SPECIFICATIONS

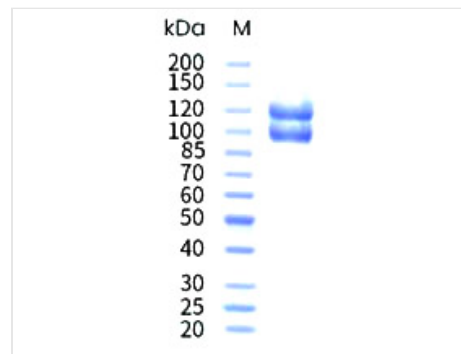
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|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                    | HEK293 Cells                                                                                                                                                                                                                                                                                                                                                                                           |
| Purity/Purification     | >= 90% as determined by SDS-PAGE.                                                                                                                                                                                                                                                                                                                                                                      |
| Form/Format             | Lyophilized from sterile PBS, pH 7.4.<br>Normally 5%-8% trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization.                                                                                                                                                                                                                                                          |
| Species                 | Human                                                                                                                                                                                                                                                                                                                                                                                                  |
| Predicted N Terminal    | Leu 32 & Gly 27                                                                                                                                                                                                                                                                                                                                                                                        |
| Endotoxin               | <1.0 EU per ug protein as determined by the LAL method.                                                                                                                                                                                                                                                                                                                                                |
| Protein Construction    | A DNA sequence encoding the human ITGA2B (P08514-1)(Met1-Arg993, I874S) was fused with a DYKDDDDK tag at the C-terminus, constructed the plasmid 1; A DNA sequence encoding the human ITGB3 (P05106-1)(Met1-Asp718) was expressed with a polyhistidine tag at the C-terminus, constructed the plasmid 2. The two plasmids were co-expressed and the Integrin alpha 2b beta 3 Heterodimer was purified. |
| Activity                | Immobilized Anti-GPIIb/IIIa Antibody (IgG1-Fab) at 2 ug/mL (100 uL/well) can bind Recombinant Human Integrin alpha 2b beta 3 Heterodimer Protein (DYKDDDDK & His Tag) , the EC50 is 18-54 ng/mL.                                                                                                                                                                                                       |
| Preparation and Storage | Samples are stable for up to twelve months from date of receipt at -20 degree C to -80 degree C. Store it under sterile conditions at -20 degree C to -80 degree C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.                                                                                                                            |

## IMAGES



### Application Data

Immobilized Anti-GPIIb/IIIa Antibody (IgG1-Fab) at 2 ug/mL (100 uL/well) can bind Recombinant Human Integrin alpha 2b beta 3 Heterodimer Protein (DYKDDDDK & His Tag) (#AAA259282), the EC50 is 18-54 ng/mL.



### Application Data

ADDITIONAL INFORMATION

|                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Related Product Information for ITGA2B recombinant protein | Integrin alpha 2b beta 3 (also GPIIbIIIa) is a key platelet integrin, a noncovalent heterodimer of type I transmembrane subunits alpha 2b/CD41 and beta3/CD61. Capable of binding fibrinogen in its active state, its alpha and beta subunits each comprise a ligand-binding extracellular domain, a single-pass transmembrane helix, and a cytoplasmic tail with binding sites for intracellular proteins. Upon agonist stimulation, alphallbbeta3 accepts its extended-open (activated) conformation, increasing its matrix protein RGD motif ligand affinity, subsequently facilitating platelet spreading, platelet aggregation, and thrombus formation. Deficiencies lead to lifelong bleeding diathesis as seen in Glanzmann thrombasthenia. alphallbbeta3-targeting therapeutic antibodies can inhibit thrombi formation in patients with acute coronary syndrome, and potentially inhibit tumor angiogenesis and metastasis by blocking interaction of platelet alphallbbeta3 with tumor cells. |
| References                                                 | <div>1. Huang, J., et al. Platelet integrin alphallbbeta3: signal transduction, regulation, and its therapeutic targeting. J Hematol Oncol, 2019. <a href="https://doi.org/10.1186/s13045-019-0709-6">https://doi.org/10.1186/s13045-019-0709-6</a></div> <div>2. Xin, H., et al. Structure, signal transduction, activation, and inhibition of integrin alphallbbeta3. Thrombosis J, 2023. <a href="https://doi.org/10.1186/s12959-023-00463-w">https://doi.org/10.1186/s12959-023-00463-w</a></div> <div>3. van den Kerkhof DL, et al. Exogenous Integrin alphallbbeta3 Inhibitors Revisited: Past, Present and Future Applications. Int J Mol Sci, 2021. doi: 10.3390/ijms22073366</div> <div>4. Collier BS. alphallbbeta3: structure and function. J Thromb Haemost. 2015 Jun;13 Suppl 1(Suppl 1):S17-25. doi: 10.1111/jth.12915</div>                                                                                                                                                              |

NCBI AND UNIPROT INFORMATION

|                                  |                                                                                                                                                 |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| NCBI GI #                        | 88758615                                                                                                                                        |
| NCBI GeneID                      | 3674                                                                                                                                            |
| NCBI Accession #                 | NP_000410.2                                                                                                                                     |
| NCBI GenBank Nucleotide #        | NM_000419.3                                                                                                                                     |
| UniProt Accession #              | P08514; P05106                                                                                                                                  |
| Molecular Weight                 | 1039                                                                                                                                            |
| NCBI Official Full Name          | integrin alpha-IIb preproprotein                                                                                                                |
| NCBI Official Synonym Full Names | integrin, alpha 2b (platelet glycoprotein IIb of IIb/IIIa complex, antigen CD41)                                                                |
| NCBI Official Symbol             | ITGA2B                                                                                                                                          |
| NCBI Official Synonym Symbols    | GT; GTA; CD41; GP2B; HPA3; CD41B; GPIIb; BDPLT2; BDPLT16                                                                                        |
| NCBI Protein Information         | integrin alpha-IIb; GPalpha IIb; platelet-specific antigen BAK; platelet membrane glycoprotein IIb; platelet fibrinogen receptor, alpha subunit |
| UniProt Protein Name             | Integrin alpha-IIb                                                                                                                              |
| UniProt Gene Name                | ITGA2B                                                                                                                                          |
| UniProt Synonym Gene Names       | GP2B; ITGAB; GPIIb                                                                                                                              |
| UniProt Entry Name               | ITA2B_HUMAN                                                                                                                                     |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.