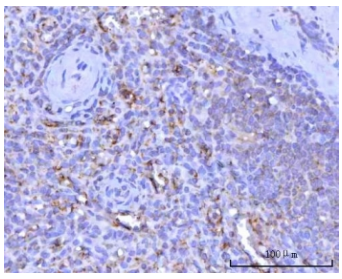
ITGA2B Antibody / Integrin Alpha 2b Antibody (RQ7859)

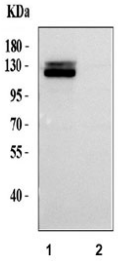
Catalog No.	Formulation	Size
RQ7859	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

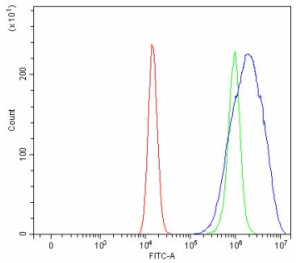
Species Reactivity	Human, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P08514
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Flow cytometry: 1-3ug/million cells Direct ELISA: 0.1-0.5ug/ml
Limitations	This ITGA2B Antibody / Integrin Alpha 2b Antibody is available for research use only.



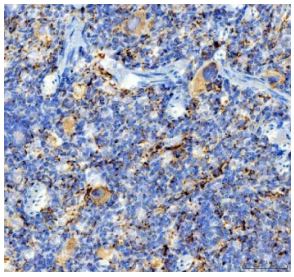
ITGA2B Antibody Staining in Human Spleen by IHC. Immunohistochemistry of FFPE human spleen tissue using ITGA2B Antibody shows distinct brown staining in scattered cells and cellular processes throughout the splenic tissue, against a predominantly hematoxylin-counterstained background. The distribution is consistent with detection of CD41-expressing elements within the spleen. Heat-induced epitope retrieval was performed by boiling the tissue sections in pH 8 EDTA for 20 min followed by cooling before antibody incubation. This staining demonstrates detection of integrin alpha 2b in human spleen tissue using this CD41 Antibody.



ITGA2B Antibody Detection in HEL and HeLa Human Cells by WB. Western blot testing of human HEL (lane 1) and HeLa (lane 2) cell lysates with ITGA2B Antibody shows a strong, discrete band in HEL cells migrating between the 95 and 130 kDa markers, with little to no corresponding signal visible in HeLa cells. The predicted molecular weight of integrin alpha 2b is approximately 113 kDa, while glycosylation can increase its apparent molecular weight. The differential signal between the two lysates demonstrates detection of the CD41 glycoprotein in HEL cells using this Integrin Alpha 2b Antibody.



ITGA2B Antibody Detection in HEL Human Erythroleukemia Cells by FACS. Flow cytometry analysis of human HEL erythroleukemia cells using ITGA2B Antibody at 1 ug/million cells shows a clear rightward shift of the antibody-stained population (blue) relative to the isotype control (green) and cells-alone control (red). Cells were blocked with goat serum before antibody incubation. The strong separation of the blue population demonstrates detection of cell-surface integrin alpha 2b on HEL cells and supports use of this CD41 Antibody for examining CD41-positive cell populations by flow cytometry.



ITGA2B Antibody Staining in Rat Spleen by IHC. Immunohistochemistry of FFPE rat spleen tissue using ITGA2B Antibody shows distinct brown staining distributed among scattered cells and cellular structures throughout the splenic parenchyma. The signal is readily distinguishable from the blue hematoxylin-counterstained nuclei and demonstrates recognition of rat integrin alpha 2b. Heat-induced epitope retrieval was performed by boiling the tissue sections in pH 8 EDTA for 20 min followed by cooling before antibody incubation. This cross-species tissue staining further supports detection of the CD41 glycoprotein using this Integrin Alpha 2b Antibody.

Description

ITGA2B Antibody detects integrin alpha 2b, a cell-surface glycoprotein encoded by the ITGA2B gene and also widely known as CD41. Integrin alpha 2b is a member of the integrin alpha-chain family and is expressed predominantly by platelets and megakaryocytes. The protein associates noncovalently with integrin beta 3, also known as CD61, to form the alpha IIb beta 3 heterodimeric receptor. This complex is also designated glycoprotein IIb/IIIa and represents one of the most abundant adhesion receptors on the platelet surface.

In resting platelets, alpha IIb beta 3 is maintained primarily in a low-affinity state. Platelet activation triggers conformational changes that increase receptor affinity for fibrinogen and other adhesive ligands. Fibrinogen binding allows adjacent platelets to become cross-linked, promoting platelet aggregation and formation of the primary hemostatic plug. Integrin alpha 2b therefore has a central role in platelet adhesion, aggregation, thrombus formation and normal hemostasis. A CD41 Antibody is consequently useful for investigating platelet and megakaryocyte biology and for identifying cells of the megakaryocytic lineage.

ITGA2B is synthesized as a precursor that undergoes post-translational processing to generate disulfide-linked heavy and light chains. The mature alpha 2b subunit remains associated with beta 3 at the plasma membrane, where the receptor participates in bidirectional signaling. In addition to ligand binding and platelet aggregation, alpha IIb beta 3 transmits intracellular signals that influence cytoskeletal organization, spreading and clot stabilization. Pathogenic variants affecting ITGA2B or ITGB3 can disrupt receptor expression or function and cause Glanzmann thrombasthenia, an inherited bleeding disorder characterized by defective platelet aggregation.

Because CD41 expression is closely associated with platelets and megakaryocytes, it is commonly used as a lineage marker in studies of hematopoiesis, megakaryocytic differentiation and platelet development. CD41 is also useful in research examining hematopoietic progenitor populations and developmental blood formation. NSJ Bioreagents offers this ITGA2B Antibody for research into integrin alpha 2b expression, platelet biology and related signaling mechanisms. An ITGA2B Antibody can provide a useful tool for investigating CD41 expression and the biological functions of the alpha IIb beta 3 integrin complex.

Explore our CD Antibodies page for additional antibodies targeting CD-designated cell-surface proteins used in immune and hematopoietic cell research.

Application Notes

Optimal dilution of the ITGA2B Antibody / Integrin Alpha 2b Antibody should be determined by the researcher.

Immunogen

E. coli-derived recombinant human protein (amino acids A675-R714) was used as the immunogen for the ITGA2B antibody.

Storage

After reconstitution, the ITGA2B antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

Integrin alpha 2b antibody; Integrin alpha-IIb antibody; CD41 antibody; CD41b antibody; Platelet glycoprotein IIb antibody; GP IIb antibody

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