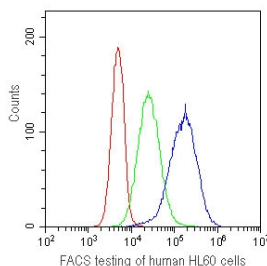


CD41 Antibody / ITGA2B (RQ4069)

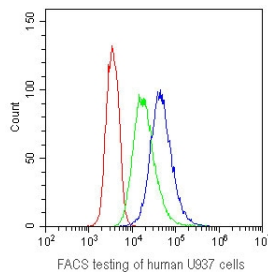
Catalog No.	Formulation	Size
RQ4069	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

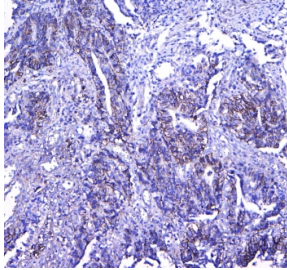
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	P08514
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml Flow Cytometry : 1-3ug/10 ⁶ cells Western Blot : 0.5-1ug/ml Immunofluorescence : 1-2ug/ml Direct ELISA : 0.1-0.5ug/ml
Limitations	This CD41 antibody is available for research use only.



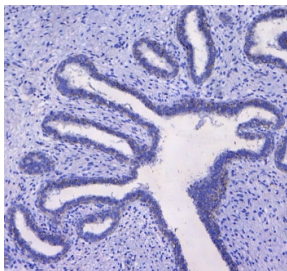
FACS testing of human HL60 cells with CD41 antibody at 1ug/10⁶ cells. CD41 antibody (blue), isotype control (green), cells alone (red).



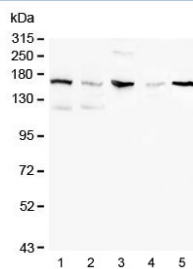
Flow cytometry testing of human U-937 cells with CD41 antibody at $1\mu\text{g}/10^6$ cells. CD41 antibody (blue), isotype control (green), cells alone (red).



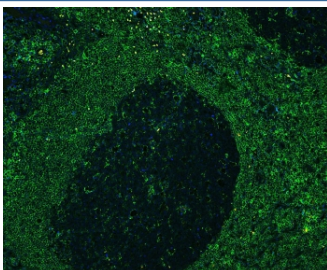
IHC testing of FFPE human rectal cancer tissue with CD41 antibody at $1\mu\text{g}/\text{ml}$. Required HIER: steam section in pH6 citrate buffer for 20 min and allow to cool prior to testing.



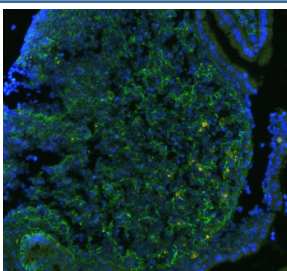
IHC testing of FFPE human breast cancer tissue with CD41 antibody at $1\mu\text{g}/\text{ml}$. Required HIER: steam section in pH6 citrate buffer for 20 min and allow to cool prior to testing.



Western blot testing of 1) human K562, 2) human Raji, 3) rat testis, 4) rat brain and 5) mouse brain lysate with CD41 antibody at $0.5\mu\text{g}/\text{ml}$. Expected molecular weight ~ 120 kDa (alpha chain) and ~ 23 kDa (beta chain).



Immunofluorescent staining of FFPE human tonsil tissue with CD41 antibody at $1\mu\text{g}/\text{ml}$ and DAPI nuclear stain (blue). HIER: boil tissue sections in pH6, 10mM citrate buffer, for 10-20 min and allow to cool before testing.



Immunofluorescent staining of FFPE mouse lymph tissue with CD41 antibody (green) at $1\mu\text{g}/\text{ml}$ and DAPI nuclear stain (blue). HIER: steam section in pH6 citrate buffer for 20 min.

Description

CD41 antibody detects Integrin alpha-IIb, a platelet membrane glycoprotein encoded by the ITGA2B gene that plays a central role in platelet aggregation and thrombus formation. The UniProt recommended name is Integrin alpha-IIb (ITGA2B). This receptor subunit combines with Integrin beta-3 (ITGB3) to form the fibrinogen receptor complex, also known as glycoprotein IIb/IIIa (GPIIb/IIIa), which mediates platelet adhesion and clot stabilization during hemostasis.

Functionally, CD41 antibody identifies a 1,032-amino-acid type I transmembrane protein synthesized as a precursor that undergoes proteolytic cleavage into heavy and light chains linked by disulfide bonds. Together with ITGB3, ITGA2B forms an integrin complex capable of binding fibrinogen, von Willebrand factor, and fibronectin upon platelet activation. This interaction induces platelet cross-linking and clot formation. The ITGA2B-ITGB3 complex also transduces outside-in signaling to promote cytoskeletal rearrangement and granule secretion, amplifying platelet aggregation.

The ITGA2B gene is located on chromosome 17q21.32 and is expressed almost exclusively in megakaryocytes and platelets. During megakaryocyte differentiation, ITGA2B is one of the earliest markers of lineage commitment. Its expression is regulated by transcription factors such as GATA1 and FLI1, linking it to thrombopoiesis and platelet function.

Clinically, mutations in ITGA2B lead to Glanzmann thrombasthenia, a rare autosomal recessive bleeding disorder characterized by defective platelet aggregation and impaired clot retraction. Abnormalities in GPIIb/IIIa function also contribute to thrombotic and cardiovascular diseases. Therapeutically, antagonists of the CD41/CD61 complex—such as abciximab—are used to inhibit platelet aggregation in acute coronary syndromes. Research using CD41 antibody supports studies in platelet biology, coagulation, and integrin-mediated signaling.

CD41 antibody is validated for use in relevant research applications to detect platelet integrins and investigate their role in hemostasis, thrombosis, and cell adhesion. NSJ Bioreagents provides CD41 antibody reagents optimized for research in vascular biology, megakaryocyte differentiation, and coagulation pathways.

Application Notes

Optimal dilution of the CD41 antibody should be determined by the researcher.

Immunogen

A recombinant human partial protein corresponding to amino acids L32-D263 was used as the immunogen for the CD41 antibody.

Storage

After reconstitution, the CD41 antibody can be stored for up to one month at 4°C. For long-term, aliquot and store at -20°C. Avoid repeated freezing and thawing.