

Technical Data Sheet

BV421 Rat Anti-Mouse CD41

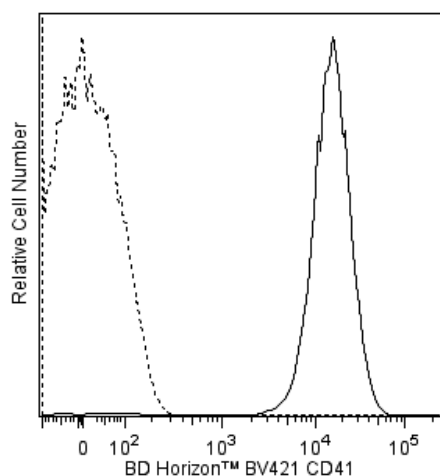
Product Information

Material Number:	562957
Alternate Name:	Integrin α IIb chain
Size:	50 μ g
Concentration:	0.2 mg/ml
Clone:	MWReg30
Immunogen:	Mouse Platelets
Isotype:	Rat IgG1, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing BSA and $\leq 0.09\%$ sodium azide.

Description

The MWReg30 antibody reacts with glycoprotein (gp) IIb, also called integrin α IIb chain (CD41), that associates with integrin β 3 chain (gpIIIa or CD61) to form the gpIIb/IIIa (CD41/CD61) complex. CD41/CD61 is expressed on platelets, megakaryocytes, and early hematopoietic progenitors. The integrin complex binds to fibrinogen, fibronectin, vitronectin, von Willebrand factor, and thrombospondin. It is important for platelet adhesion and aggregation, and it may play a role in osteolytic tumor metastasis.

The antibody was conjugated to BD Horizon™ BV421 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. With an Ex Max of 407-nm and Em Max at 421-nm, BD Horizon™ BV421 can be excited by the violet laser and detected in the standard Pacific Blue™ filter set (eg, 450/50-nm filter). BD Horizon™ BV421 conjugates are very bright, often exhibiting a 10 fold improvement in brightness compared to Pacific Blue™ conjugates.



Flow cytometric analysis of CD41 expression on mouse platelets. BALB/c mouse platelets were stained with either BD Horizon™ BV421 Rat IgG1, κ Isotype Control (Cat. No. 562868; dashed line histogram) or BD Horizon™ BV421 Rat Anti-Mouse CD41 antibody (Cat. No. 562957; solid line histogram). The fluorescence histograms were derived from events with the forward and side light-scatter characteristics of platelets. Flow cytometry was performed using a BD LSRFortessa™ Cell Analyzer System.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with BD Horizon™ BV421 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV421 were removed.

Application Notes

Application

Flow cytometry

Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
562868	BV421 Rat IgG1, κ Isotype Control	50 μ g	R3-34

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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. Please refer to www.bdbiosciences.com/pharming/protocols for technical protocols.
5. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
8. Brilliant Violet™ 421 is a trademark of Sirigen.

References

Bakewell SJ, Nestor P, Prasad S, et al. Platelet and osteoclast beta3 integrins are critical for bone metastasis. *Proc Natl Acad Sci U S A*. 2003; 100(24):14205-14210. (Biology)

Ferkowicz MJ, Starr M, Xie X, et al. CD41 expression defines the onset of primitive and definitive hematopoiesis in the murine embryo. *Development*. 2003; 130(18):4393-4403. (Biology)

Kieffer N, Phillips DR. Platelet membrane glycoproteins: functions in cellular interactions. *Annu Rev Cell Biol*. 1990; 6:329-357. (Clone-specific: Immunohistochemistry)

Nieswandt B, Echtenacher B, Wachs FP, et al. Acute systemic reaction and lung alterations induced by an antiplatelet integrin gpIIb/IIIa antibody in mice. *Blood*. 1999; 94(2):684-693. (Immunogen: Activation, Flow cytometry, Immunohistochemistry, Immunoprecipitation, Inhibition, In vivo exacerbation)

Phillips DR, Charo IF, Scarborough RM. GPIIb-IIIa: the responsive integrin. *Cell*. 1991; 65(3):359-362. (Biology)

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