Technical Data Sheet

BUV737 Mouse Anti-Human CD42a

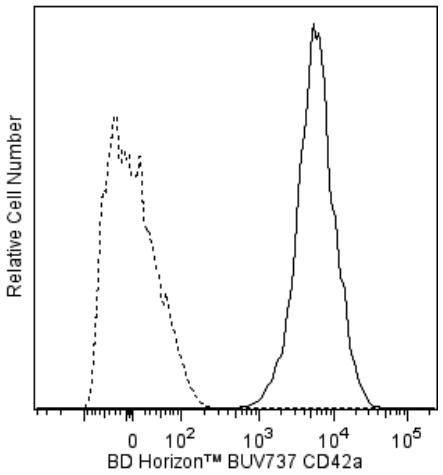
Product Information

Material Number:	**565443**
Alternate Name:	GPIX; Glycoprotein IX; GP9; Glycoprotein 9
Size:	50 Tests
Vol. per Test:	5 µl
Clone:	ALMA.16
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Workshop:	VI P-34
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The ALMA.16 monoclonal antibody specifically recognizes CD42a. CD42a is a 17-22 kDa type I transmembrane glycoprotein that is also known as Platelet glycoprotein IX (GPIX), or Glycoprotein 9 (GP9). CD42a forms a noncovalently linked complex (GPIb/GPIX/GPV) with CD42b, CD42c and CD42d that may serve as a receptor for von Willebrand factor. It is expressed on platelets and megakaryocytes and is absent on the platelets of patients with Bernadr-Soulier Syndrome (BSS). Although the CD42a function is not fully understood, GPIX glycoprotein is important for the assembly and membrane expression of the CD42 complex and for the maintenance of the functional conformation of CD42b (GPIb).

The antibody was conjugated to BD Horizon BUV737 which is part of the BD Horizon Brilliant™ Ultraviolet family of dyes. This dye is a tandem fluorochrome with an Ex Max near 350 nm and an Em Max near 737 nm. BD Horizon Brilliant BUV737 can be excited by the ultraviolet laser (355 nm) and detected with a 740/35 nm filter. Due to the excitation of the acceptor dye by the red laser line, there may be significant spillover into red laser detectors with filters in the 700-720 nm range.



Flow cytometric analysis of CD42a expression on human peripheral blood platelets. *Resting platelets were stained with either BD Horizon™ BUV737 Mouse IgG1, κ Isotype Control (Cat. No. 564299; dashed line histogram) or BD Horizon BUV737 Mouse Anti-Human CD42a antibody (Cat. No. 565443; solid line histogram). The fluorescence histogram showing CD42a expression (or Ig Isotype control staining) was derived from gated events with the forward and side light-scatter characteristics of platelets. Flow cytometric analysis was performed using a BD™ LSR II Flow Cytometer 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 BUV737 under optimum conditions, and unconjugated antibody and free BD Horizon BUV737 were removed.

Application Notes

Application

Flow cytometry	Routinely Tested

BD Biosciences

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Recommended Assay Procedure:

BD™ CompBeads can be used as surrogates to assess fluorescence spillover (Compensation). When fluorochrome conjugated antibodies are bound to BD CompBeads, they have spectral properties very similar to cells. However, for some fluorochromes there can be small differences in spectral emissions compared to cells, resulting in spillover values that differ when compared to biological controls. It is strongly recommended that when using a reagent for the first time, users compare the spillover on cells and BD CompBead to ensure that BD CompBeads are appropriate for your specific cellular application.

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes are used in the same experiment. Fluorescent dye interactions may cause staining artifacts which may affect data interpretation. The BD Horizon Brilliant Stain Buffer was designed to minimize these interactions. More information can be found in the Technical Data Sheet of the BD Horizon Brilliant Stain Buffer (Cat. No. 563794/566349) or the BD Horizon Brilliant Stain Buffer Plus (Cat. No. 566385).

Note: When using high concentrations of antibody, background binding of this dye to erythroid cell subsets (mature erythrocytes and precursors) has been observed. For researchers studying these cell populations, or in cases where light scatter gating does not adequately exclude these cells from the analysis, this background may be an important factor to consider when selecting reagents for panel(s).

Suggested Companion Products

Catalog Number	Name	Size	Clone
563794	Brilliant Stain Buffer	100 Tests	(none)
564299	BUV737 Mouse IgG1, κ Isotype Control (to be replaced with 612758)	50 µg	X40
554656	Stain Buffer (FBS)	500 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)
566349	Brilliant Stain Buffer	1000 Tests	(none)
566385	Brilliant Stain Buffer Plus	1000 Tests	(none)

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10^6 cells in a 100-µl experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. 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.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
5. BD Horizon Brilliant Ultraviolet 737 is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,227,187; 8,575,303; 8,354,239.
6. BD Horizon Brilliant Stain Buffer is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,575,303; 8,354,239.
7. Please refer to http://regdocs.bd.com to access safety data sheets (SDS).
8. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Fox JE, Aggerbeck LP, Berndt MC. Structure of the glycoprotein Ib.IX complex from platelet membranes. *J Biol Chem.* 1988; 263(10):4882-4890. (Biology)

Hickey MJ, Williams SA, Roth GJ. Human platelet glycoprotein IX: an adhesive prototype of leucine-rich glycoproteins with flank-center-flank structures. *Proc Natl Acad Sci U S A.* 1989; 86(17):6773-6777. (Biology)

Kishimoto T. Tadamitsu Kishimoto .. et al., ed. *Leucocyte typing VI : white cell differentiation antigens : proceedings of the sixth international workshop and conference held in Kobe, Japan, 10-14 November 1996.* New York: Garland Pub.; 1997(Clone-specific: Flow cytometry)

Schick PK, Walker J. The acylation of megakaryocyte proteins: glycoprotein IX is primarily myristoylated while glycoprotein Ib is palmitoylated. *Blood.* 1996; 87(4):1377-1384. (Biology)