

## Technical Data Sheet

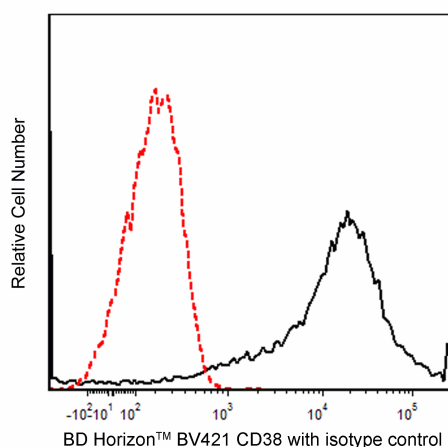
**BV421 Mouse Anti-Human CD38****Product Information**

<b>Material Number:</b>	<b>562444</b>
<b>Alternate Name:</b>	T10; ADP-ribosyl cyclase 1; Cyclic ADP-ribose hydrolase 1
<b>Size:</b>	100 tests
<b>Vol. per Test:</b>	5 µl
<b>Clone:</b>	HIT2
<b>Isotype:</b>	Mouse IgG1, κ
<b>Reactivity:</b>	QC Testing: Human
<b>Workshop:</b>	III 155
<b>Storage Buffer:</b>	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

**Description**

The HIT2 monoclonal antibody specifically binds to CD38. CD38 is a 45 kDa type II single-chain transmembrane glycoprotein present on thymocytes, activated T cells and terminally differentiated B cells (plasma cells). Other reactive cells include monocytes, macrophages, dendritic cells and some epithelial cells. The CD38 antigen acts as an ectoenzyme that catalyzes the synthesis and hydrolysis of a Ca<sup>++</sup> mobilizing agent, cyclic ADP-ribose. This intracellular calcium plays an important role in cell signaling pathways. Reports describe CD38 as participating in adhesion with CD31, immunoregulatory functions involving signal transduction leading to cell growth, apoptosis, and differentiation.

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 CD38 expression on human peripheral blood lymphocytes.** Human whole blood was stained with the BD Horizon™ BV421 Mouse Anti-Human CD38 antibody (Cat. No. 562444/562445; solid line histogram) or with BD Horizon™ BV421 Mouse IgG1, κ Isotype Control (Cat. No. 562438; dashed line histogram). The erythrocytes were lysed with BD Pharm Lyse™ Lysing Buffer (Cat. No. 555899). The fluorescence histograms were derived from events with the forward and side light-scatter characteristics of viable lymphocytes. Flow cytometry was performed using a BD FACSCanto™ 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™ 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)
555899	Lysing Buffer	100 ml	(none)

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562445	BV421 Mouse Anti-Human CD38	25 tests	HIT2
562438	BV421 Mouse IgG1, k Isotype Control	50 µg	X40

## Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use  $1 \times 10^6$  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. Brilliant Violet™ 421 is a trademark of Sirigen.
4. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
5. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
6. 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.
7. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/colors).
8. Please refer to [www.bdbiosciences.com/pharming/protocols](http://www.bdbiosciences.com/pharming/protocols) for technical protocols.

## References

McMichael AJ, Beverly PCL, Gilks W, et al, ed. *Leukocyte Typing III: White Cell Differentiation Antigens*. New York: Oxford University Press; 1987. (Clone-specific)

Schlossman SF, Boumsell L, Gilks W, et al, ed. *Leukocyte Typing V: White Cell Differentiation Antigens*. New York: Oxford University Press; 1995. (Biology)

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