

Technical Data Sheet

BV421 Rat Anti-Mouse Ly-6C

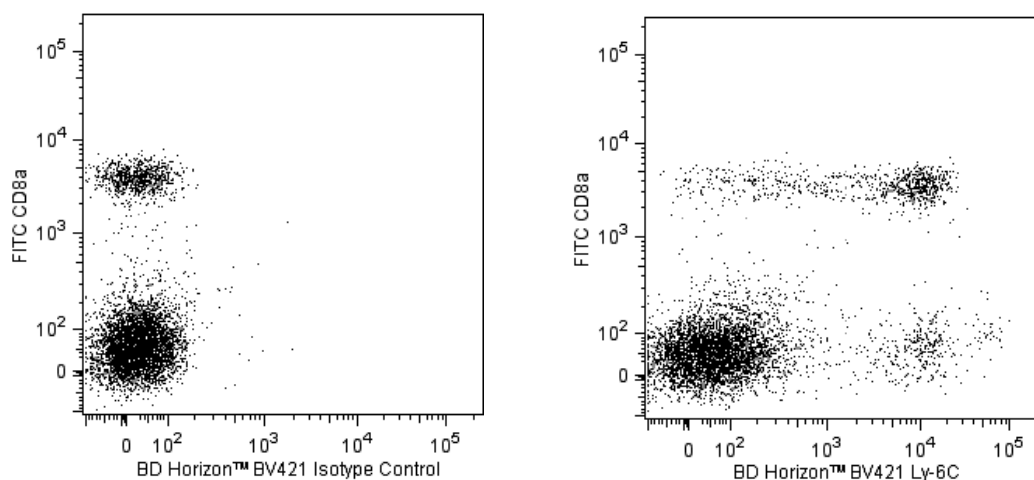
Product Information

Material Number:	562727
Alternate Name:	Ly6c; Lymphocyte antigen 6 complex, locus C; Lymphocyte antigen Ly-6C
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	AL-21
Immunogen:	Not reported
Isotype:	Rat IgM, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The AL-21 monoclonal antibody specifically binds to a non-polymorphic determinant of Ly-6C, a 14-17 kDa GPI-linked cell-surface antigen found on some monocyte/macrophage populations, granulocytes, endothelial cells, plasma cells, and thymocyte, NK-cell, and T-subsets. Mice with the Ly-6.2 alloantigen (eg, AKR, C57BL, C57BR, C57L, C58, DBA/2, PL, SJL, SWR, 129) have subsets of CD8+ and CD4+ Ly-6C+ T cells, while Ly-6.1 strains (eg, A, BALB/c, CBA, C3H/He, DBA/1, NZB) have only CD8+ Ly-6C+ T cells. Upregulation of Ly-6C expression on CD8+ T cells by interferons α and β and poly (I:C) has been described, and Ly-6C is a memory marker on CD8+ T cells.

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.



Multicolor flow cytometric analysis of Ly-6C expression on mouse splenocytes. Splenocytes from a BALB/c mouse were stained with FITC Rat Anti-Mouse CD8a antibody (Cat. No. 553031/553030/561966) and with either BD Horizon™ BV421 Rat IgM, κ Isotype Control (Cat. No. 562708, Left Panel) or with BD Horizon™ BV421 Rat Anti-Mouse Ly-6C antibody (Cat. No. 562727, Right Panel). Two-color flow cytometric dot plots showing the correlated expression of Ly-6C (or Ig isotype control staining) versus CD8a were derived from gated events with the forward and side light-scattering characteristics of viable splenocytes. Flow cytometry was performed with a BD™ LSR II Flow Cytometry 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
----------------	------------------

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	800.979.9408	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country contact information, visit bdbiosciences.com/contact

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton, Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.

Unless otherwise noted, BD, BD Logo and all other trademarks are property of Becton, Dickinson and Company. © 2011 BD



Suggested Companion Products

Catalog Number	Name	Size	Clone
562708	BV421 Rat IgM, κ Isotype Control	50 μ g	R4-22
554656	Stain Buffer (FBS)	500 ml	(none)
553031	FITC Rat Anti-Mouse CD8a	0.5 mg	53-6.7
553030	FITC Rat Anti-Mouse CD8a	0.1 mg	53-6.7
561966	FITC Rat Anti-Mouse CD8a	25 μ g	53-6.7

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
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.
8. Please refer to www.bdbiosciences.com/pharming/protocols for technical protocols.

References

Cerwenka A, Carter LL, Reome JB, Swain SL, Dutton RW. In vivo persistence of CD8 polarized T cell subsets producing type 1 or type 2 cytokines. *J Immunol.* 1998; 161(1):97-105. (Biology)

Jutila DB, Kurk S, Jutila MA.. Differences in the expression of Ly-6C on neutrophils and monocytes following PI-PLC hydrolysis and cellular activation.. *Immunol Lett.* 1994; 41(1):49-57. (Biology)

Jutila MA, Kroese FG, Jutila KL, Stall AM, Fiering S, Herzenberg LA, Berg EL, Butcher EC. Ly-6C is a monocyte/macrophage and endothelial cell differentiation antigen regulated by interferon-gamma. *Eur J Immunol.* 1988; 18(11):1819-1826. (Biology)

Sato N, Yahata T, Santa K. Functional characterization of NK1.1 + Ly-6C+ cells. *Immunol Lett.* 1996; 1(54):1-5-9. (Clone-specific: Flow cytometry, Fluorescence activated cell sorting)

Takahama Y, Sharrow SO, Singer A. Expression of an unusual T cell receptor (TCR)-V beta repertoire by Ly-6C+ subpopulations of CD4+ and/or CD8+ thymocytes. Evidence for a developmental relationship between Ly-6C+ thymocytes and CD4-CD8-TCR-alpha beta+ thymocytes. *J Immunol.* 1991; 147(9):2883-2891. (Clone-specific: Flow cytometry)

Tough DF, Borrow P, Sprent J. Induction of bystander T cell proliferation by viruses and type I interferon in vivo. *Science.* 1996; 272(5270):1947-1950. (Biology)

Wrammert J, Källberg E, Agace WW, Leanderson T. Ly6C expression differentiates plasma cells from other B cell subsets in mice. *Eur J Immunol.* 2002; 32(1):97-103. (Clone-specific: Flow cytometry)

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	800.979.9408	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country contact information, visit bdbiosciences.com/contact

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton, Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.

Unless otherwise noted, BD, BD Logo and all other trademarks are property of Becton, Dickinson and Company. © 2011 BD

