

Technical Data Sheet

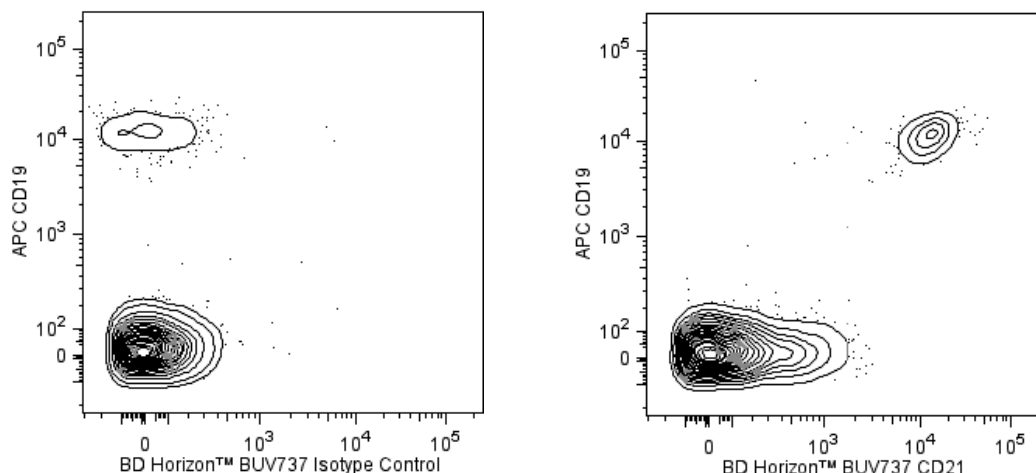
BUV737 Mouse Anti-Human CD21**Product Information**

Material Number:	564437
Alternate Name:	CR2; Complement receptor type 2; C3DR; EBV-R; Epstein-Barr virus receptor
Size:	100 Tests
Vol. per Test:	5 µl
Clone:	B-ly4
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human Tested in Development: Rhesus, Cynomolgus, Baboon, Pig IV B98
Workshop:	IV B98
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The B-ly4 monoclonal antibody specifically binds to CD21, a 145 kDa glycosylated type I integral membrane protein. CD21 is a receptor for the C3d complement fragment and for Epstein-Barr virus (EBV). CD21 is expressed on mature B cells, follicular dendritic cells, and some epithelial cells. It is also weakly expressed on the subset of mature T cells and thymocytes. CD21 plays a role in B-cell activation and proliferation. It may also play a role in modulating the function of T cells in the immune response to infections by lymphotropic viruses. Recently, CD21 was found to be part of a large complex containing CD19, CD81, and possibly other molecules.

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.



Two-color flow cytometric analysis of CD21 expression on human peripheral blood lymphocytes. Whole human blood was stained with APC Mouse Anti-Human CD19 antibody (Cat. No. 555415/561742) and either BD Horizon™ BUV737 Mouse IgG1, κ Isotype Control (Cat. No. 564299; Left Panel) or BD Horizon BUV737 Mouse Anti-Human CD21 antibody (Cat. No. 564437/564595; Right Panel). Erythrocytes were lysed with BD FACS Lysing Solution (Cat. No. 349202). The two-color flow cytometric contour plots showing the correlated expression patterns of CD21 (or Ig Isotype control staining) versus CD19 were derived from gated events with the forward and side light-scatter characteristics of intact lymphocytes. 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.

BD Biosciences

bdbiosciences.com

United States 877.232.8995 Canada 866.979.9408 Europe 32.2.400.98.95 Japan 0120.8555.90 Asia Pacific 65.6861.0633 Latin America/Caribbean 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.
© 2017 BD. BD, the BD Logo and all other trademarks are property of Becton, Dickinson and Company.



Application Notes

Application

Flow cytometry

Routinely Tested

Recommended Assay Procedure:

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).

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.

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)
564299	BUV737 Mouse IgG1, κ Isotype Control	50 μ g	X40
349202	BD FACSTM Lysing Solution	100 mL	(none)
555899	Lysing Buffer	100 mL	(none)
555415	APC Mouse Anti-Human CD19	100 Tests	HIB19
561742	APC Mouse Anti-Human CD19	25 Tests	HIB19
564595	BUV737 Mouse Anti-Human CD21	25 Tests	B-ly4
563794	Brilliant Stain Buffer	100 Tests	(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- μ l 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. Species testing during development may have been performed with a different format of the same clone. Selected applications have been tested for cross-reactivity.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
6. 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.
7. 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.
8. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Lin G-X, Yang X, Hollemweguer E, et al. Cross-reactivity of CD antibodies in eight animal species. In: Mason D, David Mason, et al., ed. *Leucocyte typing VII: white cell differentiation antigens: proceedings of the Seventh International Workshop and Conference held in Harrogate, United Kingdom*. Oxford: Oxford University Press; 2002:519-523. (Clone-specific)

Fearon DT. The CD19-CR2-TAPA-1 complex, CD45 and signaling by the antigen receptor of B lymphocytes. *Curr Opin Immunol*. 1993; 5(3):341-348. (Biology)

Fischer E, Delibrias C, Kazatchkine MD. Expression of CR2 (the C3dg/EBV receptor, CD21) on normal human peripheral blood T lymphocytes. *J Immunol*. 1991; 146(3):865-869. (Biology)

Knapp W, W. Knapp, et al., ed. *Leucocyte typing IV: white cell differentiation antigens*. Oxford New York: Oxford University Press; 1989:1-1182. (Clone-specific: Flow cytometry)

Paterson RL, Kelleher C, Amankonah TD, et al. Model of Epstein-Barr virus infection of human thymocytes: expression of viral genome and impact on cellular receptor expression in the T-lymphoblastic cell line, HPB-ALL. *Blood*. 1995; 85(2):456-464. (Biology)

Timens W, Boes A, Vos H, Poppema S. Tissue distribution of the C3d/EBV-receptor: CD21 monoclonal antibodies reactive with a variety of epithelial cells, medullary thymocytes, and peripheral T-cells. *Histochemistry*. 1991; 95(6):605-611. (Clone-specific: Immunocytochemistry (cytospins), Immunohistochemistry)

Tsoukas CD, Lambris JD. Expression of EBV/C3d receptors on T cells: biological significance. *Immunol Today*. 1993; 14(2):56-59. (Biology)