

## Technical Data Sheet

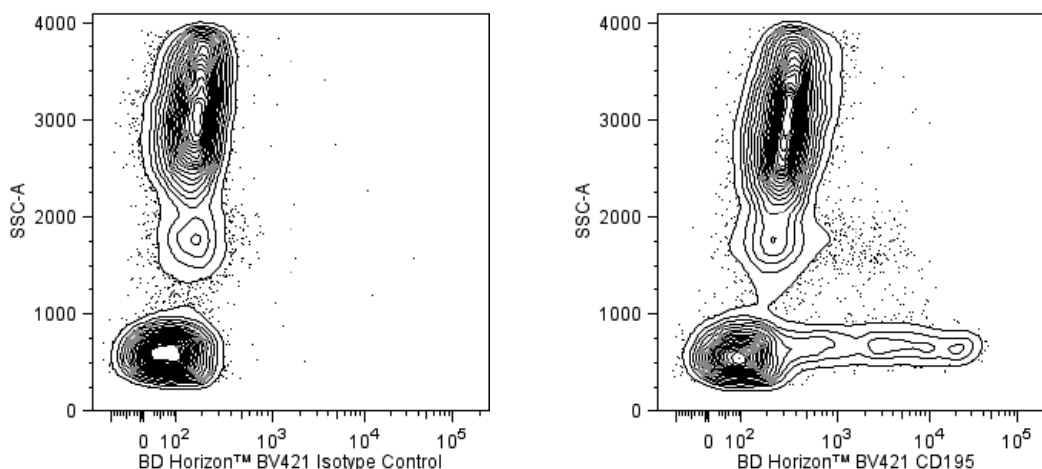
**BV421 Mouse Anti-Human CD195****Product Information**

<b>Material Number:</b>	<b>565000</b>
<b>Alternate Name:</b>	CCR-5; Chemokine (C-C motif) receptor 5; CMKBR5; CKR5; CKR-5; CHEMR13
<b>Size:</b>	50 Tests
<b>Vol. per Test:</b>	5 µl
<b>Clone:</b>	3A9
<b>Immunogen:</b>	Human CCR5 Transfected Cell Line
<b>Isotype:</b>	Mouse (C57BL/6) IgG2a, κ
<b>Reactivity:</b>	QC Testing: Human Tested in Development: Rhesus, Cynomolgus
<b>Workshop:</b>	VII 70309
<b>Storage Buffer:</b>	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

**Description**

The 3A9 monoclonal antibody recognizes CD195, which is also known as the chemokine receptor, CCR5, a seven transmembrane-spanning G protein-associated molecule. The 3A9 antibody also reportedly cross-reacts with human CCR8. Results of epitope mapping and sequence comparison between CCR5 and CCR8 reveals that the first three amino acid residues for these two receptors are identical: MDY (Met-Asp-Tyr). CCR5 belongs to the β-chemokine receptor family. It is expressed on subsets of T lymphocytes, NK cells, monocytes, macrophages, and dendritic cells. CCR5 regulates lymphocyte chemotaxis activation and transendothelial migration during inflammation. It signals a response to at least three chemokines: RANTES and macrophage inflammatory protein-1 (MIP-1) α and β. Additionally, CCR5 has been found to be a co-receptor for macrophage-tropic HIV-1 on CD4+ cells, a characteristic that is important in viral transmission. Reports indicate that individuals who have partial (heterozygous) or complete (homozygous) deletion of the CCR5 allele, demonstrate resistance to HIV infection. CCR5 has been clustered as CD195 in the VIIth HLDA workshop.

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.



**Multiparameter flow cytometric analysis of CD195 expression on human peripheral blood leucocytes.** Human whole blood was stained with either BD Horizon™ BV421 Mouse IgG2a, κ Isotype Control (Cat. No. 562439; Left Panel) or BD Horizon BV421 Mouse Anti-Human CD195 antibody (Cat. No. 565000; Right Panel). Erythrocytes were lysed with BD FACS Lysing Solution (Cat. No. 349202). Two-parameter flow cytometric contour plots showing the correlated expression of CD195 (or Ig Isotype control staining) versus side light-scatter (SSC-A) signals were derived from gated events with the forward and side light-scatter characteristics of intact leucocyte populations. Flow cytometric analysis was performed using a BD™ LSR II Flow Cytometer System.

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## 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
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## Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)
562439	BV421 Mouse IgG2a, k Isotype Control	50 µg	G155-178
349202	BD FACSTM Lysing Solution	100 mL	(none)
555899	Lysing Buffer	100 mL	(none)
563794	Brilliant Stain Buffer	5 mL	(none)

## 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. 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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
5. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
6. Species testing during development may have been performed with a different format of the same clone. Selected applications have been tested for cross-reactivity.
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/pharmingen/protocols](http://www.bdbiosciences.com/pharmingen/protocols) for technical protocols.

## References

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Wu L, Paxton WA, Kassam N, et al. CCR5 levels and expression pattern correlate with infectability by macrophage-tropic HIV-1, in vitro. *J Exp Med.* 1997; 185(9):1681-1689. (Immunogen: Flow cytometry, Functional assay, Inhibition, Neutralization)

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