

## Technical Data Sheet

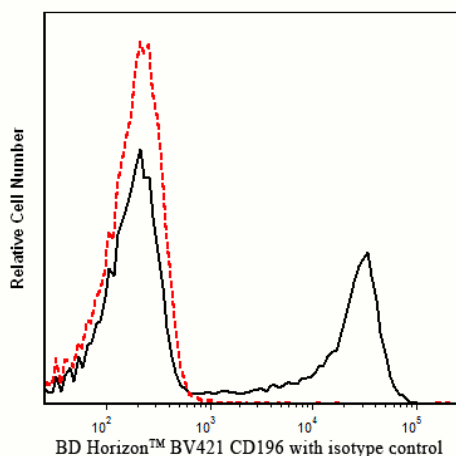
**BV421 Mouse Anti-Human CD196 (CCR6)****Product Information**

<b>Material Number:</b>	<b>562515</b>
<b>Alternate Name:</b>	BN-1; C-C chemokine receptor type 6; C-C CKR-6; CC-CKR-6; CCR-6; CD196
<b>Size:</b>	50 Tests
<b>Vol. per Test:</b>	5 µl
<b>Clone:</b>	11A9
<b>Immunogen:</b>	Human CD196/CCR6 Peptide
<b>Isotype:</b>	Mouse IgG1, κ
<b>Reactivity:</b>	QC Testing: Human Tested in Development: Rhesus, Cynomolgus, Baboon
<b>Workshop:</b>	IX 48
<b>Storage Buffer:</b>	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

**Description**

The 11A9 monoclonal antibody specifically binds to CD196, which is also known as CCR6. CCR6 is a seven-transmembrane, G-protein-coupled, glycoprotein receptor that is a member of the beta chemokine receptor family. The human *CCR6* gene has been mapped to chromosome 6q27. CCR6 is a receptor for the CC chemokine CCL20/MIP-3alpha/LARC/Exodus and also binds with lower affinity to and mediates responses to beta-defensin2/hBD-2. CCR6 is predominantly expressed by B lymphocytes, certain subsets of effector and memory T cells and by immature dendritic cells but not by monocytes, NK cells, or granulocytes. Skin-homing CLA (Cutaneous Lymphocyte Antigen)-positive memory T cells, Th1 cells, regulatory T cells and IL-17A-producing Th17 cells predominantly express high levels of CCR6. CCR6 mediates the trafficking of T, B, and dendritic cells to epithelial sites near the skin and mucosal surfaces during inflammatory and immunological responses. An N-terminal peptide of human CCR6 was used as an immunogen to generate the 11A9 hybridoma. The 11A9 antibody does not cross-react with human CCR1, CCR2, CCR3, CCR4, CCR5, CCR7, CCR8, CCR9, CXCR1, CXCR2, CXCR3, CXCR4 and CXCR5 receptors. This antibody is NOT a neutralizing antibody.

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 CD196 (CCR6) expression on human peripheral blood lymphocytes.** Human whole blood was stained with the BD Horizon™ BV421 Mouse Anti-Human CD196 (CCR6) antibody (Cat. No. 562515/565925; 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.

**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](http://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).

### Suggested Companion Products

Catalog Number	Name	Size	Clone
562438	BV421 Mouse IgG1, k Isotype Control	50 µg	X40
555899	Lysing Buffer	100 mL	(none)
554656	Stain Buffer (FBS)	500 mL	(none)
349202	BD FACS™ Lysing Solution	100 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)
565925	BV421 Mouse Anti-Human CD196 (CCR6)	25 Tests	11A9
563794	Brilliant Stain Buffer	100 Tests	(none)
566349	Brilliant Stain Buffer	1000 Tests	(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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. 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.
5. 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).
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. BD Horizon Brilliant Violet 421 is covered by one or more of the following US patents: 8,158,444; 8,362,193; 8,575,303; 8,354,239.
8. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
9. Species testing during development may have been performed with a different format of the same clone. Selected applications have been tested for cross-reactivity.
10. Please refer to [www.bdbiosciences.com/pharmingen/protocols](http://www.bdbiosciences.com/pharmingen/protocols) for technical protocols.

### References

- Baba M, Imai T, Nishimura M, et al. Identification of CCR6, the specific receptor for a novel lymphocyte-directed CC chemokine LARC. *J Biol Chem*. 1997; 272(23):14893-14898. (Biology)
- Brandes M, Willmann K, Lang AB, et al. Flexible migration program regulates gamma delta T-cell involvement in humoral immunity. *Blood*. 2003; 102(10):3693-3701. (Clone-specific)
- Cabezon R, Sintès J, Llinas L, Benitez-Ribas D. Analysis of HLDA9 mAbs on plasmacytoid dendritic cell. *Immunol Lett*. 2011; 134(2):167-173. (Clone-specific)
- Greaves DR, Wang W, Dairaghi DJ, et al. CCR6, a CC chemokine receptor that interacts with macrophage inflammatory protein 3alpha and is highly expressed in human dendritic cells. *J Exp Med*. 1997; 186(6):837-844. (Biology)
- Homey B, Dieu-Nosjean MC, Wiesenborn A, et al. Up-regulation of macrophage inflammatory protein-3 alpha/CCL20 and CC chemokine receptor 6 in psoriasis. *J Immunol*. 2000; 164(12):6621-6632. (Biology)
- Kim CH, Rott L, Kunkel EJ, et al. Rules of chemokine receptor association with T cell polarization in vivo. *J Clin Invest*. 2001; 108(9):1331-1339. (Biology)
- Liao F, Alderson R, Su J, Ullrich SJ, Kreider BL, Farber JM. STRL22 is a receptor for the CC chemokine MIP-3alpha. *Biochem Biophys Res Commun*. 1997; 236(1):212-217. (Biology)
- Liao F, Lee HH, Farber JM. Cloning of STRL22, a new human gene encoding a G-protein-coupled receptor related to chemokine receptors and located on chromosome 6q27. *Genomics*. 1997; 40(1):175-180. (Biology)
- Liao F, Rabin RL, Smith CS, Sharma G, Nutman TB, Farber JM. CC-chemokine receptor 6 is expressed on diverse memory subsets of T cells and determines responsiveness to macrophage inflammatory protein 3 alpha. *J Immunol*. 1999; 162(1):186-194. (Biology)
- Lim HW, Lee J, Hillsamer P, Kim CH. Human Th17 cells share major trafficking receptors with both polarized effector T cells and FOXP3+ regulatory T cells. *J Immunol*. 2008; 180(1):122-129. (Biology)
- Llinas L, Lazaro A, de Salort J, Matesanz-Isabel J, Sintès J, Engel P. Expression profiles of novel cell surface molecules on B-cell subsets and plasma cells as analyzed by flow cytometry. *Immunol Lett*. 2011; 134(2):113-121. (Clone-specific)
- Power CA, Church DJ, Meyer A, et al. Cloning and characterization of a specific receptor for the novel CC chemokine MIP-3alpha from lung dendritic cells. *J Exp Med*. 1997; 186(6):825-835. (Biology)
- Ramos-Medina R, Montes-Moreno S, Maestre L, et al. Immunohistochemical analysis of HLDA9 Workshop antibodies against cell-surface molecules in reactive and neoplastic lymphoid tissues. *Immunol Lett*. 2011; 134(2):150-156. (Clone-specific)
- Sallusto F, Lenig D, Forster R, Lipp M, Lanzavecchia A. Two subsets of memory T lymphocytes with distinct homing potentials and effector functions. *Nature*. 1999; 401(6754):708-712. (Clone-specific)
- Thomas SY, Banerji A, Medoff BD, Lilly CM, Luster AD. Multiple chemokine receptors, including CCR6 and CXCR3, regulate antigen-induced T cell homing to the human asthmatic airway. *J Immunol*. 2007; 179(3):1901-1912. (Clone-specific)
- Yang D, Chertov O, Bykovskaia SN, et al. Beta-defensins: linking innate and adaptive immunity through dendritic and T cell CCR6. *Science*. 1999; 286(5439):525-528. (Biology)
- Zaballos A, Varona R, Gutierrez J, Lind P, Marquez G. Molecular cloning and RNA expression of two new human chemokine receptor-like genes. *Biochem Biophys Res Commun*. 1996; 227(3):846-853. (Biology)