

## Technical Data Sheet

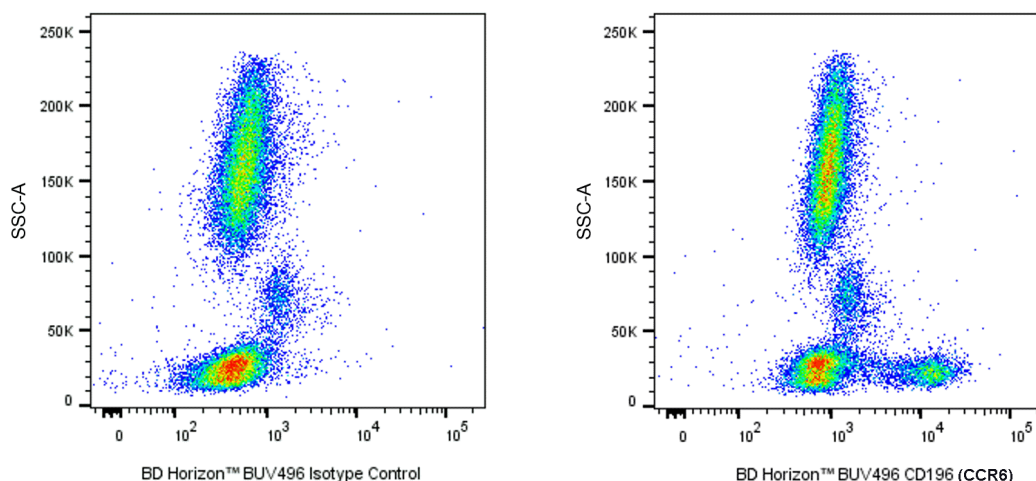
**BUV496 Mouse Anti-Human CD196 (CCR6)****Product Information**

<b>Material Number:</b>	612948
<b>Alternate Name:</b>	BN-1; C-C CKR-6; C-C chemokine receptor type 6; CC-CKR-6; CCR-6
<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
<b>Workshop:</b>	IX 48
<b>Storage Buffer:</b>	Aqueous buffered solution containing ≤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 BUV496 which is part of the BD Horizon Brilliant™ Ultraviolet family of dyes. This dye is a tandem fluorochrome of BD Horizon BUV395 with an Ex Max of 348-nm and an acceptor dye with an Em Max at 496-nm. BD Horizon BUV496 can be excited by the ultraviolet laser (355 nm) and detected with a 515/30 nm filter with a 450LP. Due to the excitation of the acceptor dye by other laser lines, there may be significant spillover into the channel detecting BD Horizon V500 or BV510 (eg, 525/40-nm filter). However, the spillover can be corrected through compensation as with any other dye combination.



**Multiparameter flow cytometric analysis of CD196 (CCR6) expression on human peripheral blood leucocyte populations.** Whole blood was stained with either BD Horizon™ BUV496 Mouse IgG1, κ Isotype Control (Cat. No. 612949; Left Plot) or BD Horizon BUV496 Mouse Anti-Human CD196 (CCR6) antibody (Cat. No. 6612948; Right Plot). The erythrocytes were lysed with BD FACS™ Lysing Solution (Cat. No. 349202). A two-parameter pseudocolor density plot showing the correlated expression of CD196 (CCR6) [or Ig Isotype control staining] versus side light-scatter (SSC-A) signals was derived from gated events with the forward and side light-scatter characteristics of intact leucocyte populations. Flow cytometry and data analysis were performed using a BD LSRFortessa™ X-20 Cell Analyzer System and FlowJo™ software.

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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 BUV496 under optimum conditions, and unconjugated antibody and free BD Horizon BUV496 were removed.

## 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).

Note: When using high concentrations of antibody, background binding of this dye to erythroid cell subsets (mature erythrocytes and precursors) has been observed. For researchers studying these cell populations, or in cases where light scatter gating does not adequately exclude these cells from the analysis, this background may be an important factor to consider when selecting reagents for panel(s).

### Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)
612949	BUV496 Mouse IgG1, $\kappa$ Isotype Control	50 $\mu$ g	X40
563794	Brilliant Stain Buffer	100 Tests	(none)
566349	Brilliant Stain Buffer	1000 Tests	(none)
566385	Brilliant Stain Buffer Plus	1000 Tests	(none)
555899	Lysing Buffer	100 mL	(none)
349202	BD FACSTM Lysing Solution	100 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- $\mu$ 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. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at [wwwbdbiosciences.com/colors](http://wwwbdbiosciences.com/colors).
5. BD Horizon Brilliant Ultraviolet 496 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.
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. Please refer to <http://regdocs.bd.com> to access safety data sheets (SDS).
8. Please refer to [wwwbdbiosciences.com/us/s/resources](http://wwwbdbiosciences.com/us/s/resources) 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, Willimann 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: Flow cytometry)
- 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)
- Liao F, Shirakawa AK, Foley JF, Rabin RL, Farber JM. Human B cells become highly responsive to macrophage-inflammatory protein-3 alpha/CC chemokine ligand-20 after cellular activation without changes in CCR6 expression or ligand binding. *J Immunol*. 2002; 168(10):4871-4880. (Clone-specific: Flow cytometry)
- 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, Sintes 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: Flow cytometry, Immunohistochemistry)
- 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: Immunohistochemistry)

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: Flow cytometry)

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: Flow cytometry)

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)