Technical Data Sheet

BV510 Mouse Anti-Human CD193

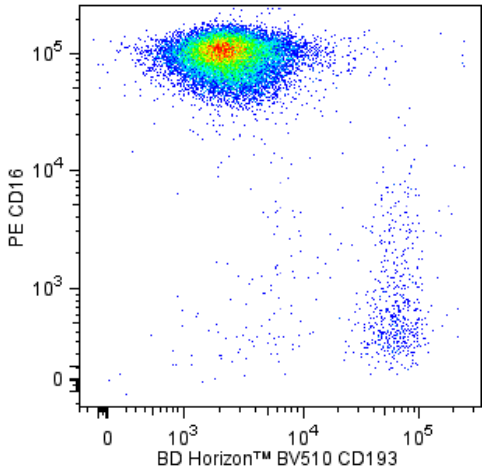
Product Information

Material Number:	**563071**
Alternate Name:	CD193; C-C CKR-3; CKR3; CMKBR3; Chemokine (C-C motif) receptor 3
Size:	50 tests
Vol. per Test:	5 µl
Clone:	5E8 (also known as 5E8-G9-B4)
Immunogen:	Human CCR3 Transfected Cell Line
Isotype:	Mouse (C57BL/6) IgG2b, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The 5E8 monoclonal antibody specifically binds to human CCR3. CCR3 is a G protein-linked, 7 transmembrane, chemokine receptor expressed on a variety of hematopoietic cells. Similar to CCR5 and CXCR4, CCR3 can be a co-receptor for HIV-1. It is primarily expressed by eosinophils and basophils during atopic conditions, dermatitis, allergic rhinitis, conjunctivitis and bronchial asthma. Chemokines including RANTES, Eotaxin, MCP-3, MIP1α have been reported to act as ligands for CCR3 and stimulate CCR3+ cells. Eotaxin stimulates Th2 cells expressing CCR3. Other studies describe HIV-1 specific T cell cytotoxicity can be mediated by RANTES and Eotaxin through CCR3. CCR3 expressed on dendritic cells may have a biological role on cell-cell interaction during antigen presentation. CCR3 has been clustered as CD193 in the HLDA VIIIth workshop.

The antibody was conjugated to BD Horizon™ BV510 which is part of the BD Horizon™ Brilliant Violet™ family of dyes. With an Ex Max of 405-nm and Em Max at 510-nm, BD Horizon™ BV510 can be excited by the violet laser and detected in the BD Horizon™ V500 (525/50-nm) filter set. BD Horizon™ BV510 conjugates are useful for the detection of dim markers off the violet laser.



Multicolor flow cytometric analysis of CD193 expression on human peripheral blood granulocytes (eosinophils). *Whole blood was stained with BD Horizon™ BV510 Mouse Anti-Human CD193 antibody (Cat. No. 563071) and PE Mouse Anti-Human CD16 (Cat. No. 560995/555407). The erythrocytes were lysed with BD Pharm Lyse™ Lysing Buffer (Cat. No. 555899). A two-color flow cytometric dot plot showing the correlated expression of CD16 versus CD193 was derived from events with the forward and side light-scatter characteristics of viable granulocytes. 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™ BV510 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV510 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)
563025	BV510 Mouse IgG2b, κ Isotype Control	50 µg	27-35
560995	PE Mouse Anti-Human CD16	25 tests	3G8
555407	PE Mouse Anti-Human CD16	100 tests	3G8
555899	Lysing Buffer	100 ml	(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-µl experimental sample (a test).
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. An isotype control should be used at the same concentration as the antibody of interest.
4. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
5. 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.
6. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
7. Brilliant Violet™ 510 is a trademark of Sirigen.

References

Agrawal L, Maxwell CR, Peters PJ, Clapham PR, Liu SM, Mackay CR, Strayer DS. Complexity in human immunodeficiency virus type 1 (HIV-1) co-receptor usage: roles of CCR3 and CCR5 in HIV-1 infection of monocyte-derived macrophages and brain microglia. *J Gen Virol.* 2009; 90(3):710-722. (Clone-specific: Flow cytometry, Immunofluorescence)

Daugherty BL, Siciliano SJ, DeMartino JA, Malkowitz L, Sirotina A, Springer MS. Cloning, expression, and characterization of the human eosinophil eotaxin receptor. *J Exp Med.* 1996; 83(5):2349-2354. (Biology)

Ghorpade A, Xia MQ, Hyman BT, et al. Role of the beta-chemokine receptors CCR3 and CCR5 in human immunodeficiency virus type 1 infection of monocytes and microglia. *J Virol.* 1998; 72(4):3351-3361. (Biology)

Hadida F, Vieillard V, Autran B, Clark-Lewis I, Baggiolini M, Debre P. HIV-specific T cell cytotoxicity mediated by RANTES via the chemokine receptor CCR3. *J Exp Med.* 1998; 188(3):609-614. (Biology)

Heath H, Qin S, Rao P, Wu L, LaRosa G, Kassam N, Ponath PD, Mackay CR. Chemokine receptor usage by human eosinophils. The importance of CCR3 demonstrated using an antagonistic monoclonal antibody. *J Clin Invest.* 1997; 99(2):178-184. (Immunogen: Flow cytometry)

Sallusto F, Mackay CR, Lanzavecchia A. Selective expression of the eotaxin receptor CCR3 by human T helper 2 cells. *Science.* 1997; 277(5334):2005-2007. (Biology)

Sato K, Kawasaki H, Nagayama H, et al. CC chemokine receptors, CCR-1 and CCR-3, are potentially involved in antigen-presenting cell function of human peripheral blood monocyte-derived dendritic cells. *Blood.* 1999; 93(1):34-42. (Biology)

Zimmermann N, Daugherty BL, Stark JM, Rothenberg ME. Molecular analysis of CCR-3 events in eosinophilic cells. *J Immunol.* 2000; 164(2):1055-1064. (Biology)

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