Technical Data Sheet

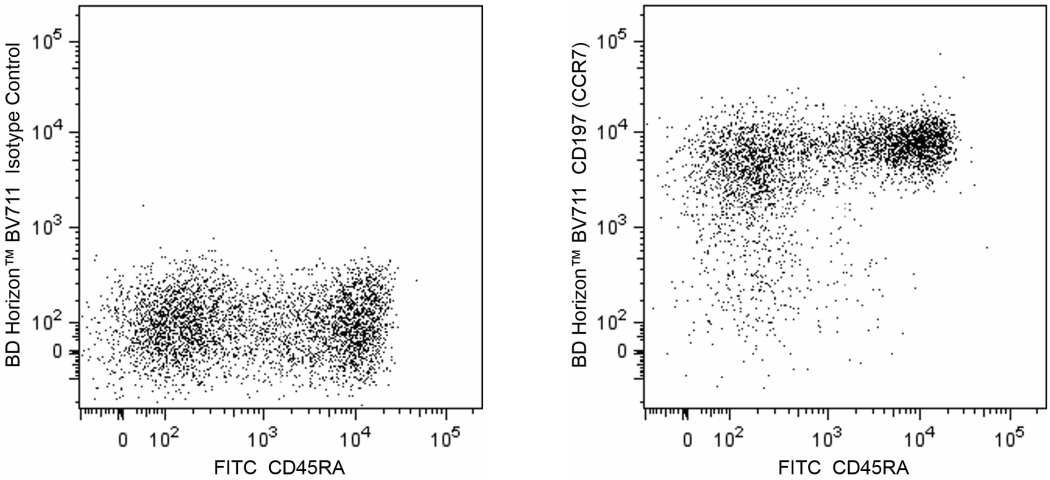
BV711 Mouse Anti-Human CD197 (CCR7)

Product Information

Material Number:	**566602**
Alternate Name:	CC chemokine receptor 7; BLR2; CMKBR7; EBI1; EVI1; MIP-3 beta receptor
Size:	50 Tests
Vol. per Test:	5 µl
Clone:	150503
Immunogen:	Human CCR7 Transfected Cell Line
Isotype:	Mouse IgG2a
Reactivity:	QC Testing: Human
Workshop:	VIII 80133
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The monoclonal antibody 150503 specifically binds to the human CC chemokine receptor, CCR7, also known as CD197. CCR7 (previously known as BLR2, EBI1 and CMKBR7), a seven-transmembrane, G-protein-coupled receptor, is the specific receptor for CC chemokines, MIP-3β/Exodus 3/ELC/ CCL19 and 6Ckine/Exodus 2/SLC/TCA4/CCL21. CCR7 mRNA is expressed mainly in lymphoid tissues including the spleen, lymph nodes and tonsil. CD197/CCR7 is expressed on peripheral T and B lymphocytes by bone marrow and cord blood CD34-positive cells and by mature dendritic cells. In response to its cognate chemokines, CD197/CCR7 mediates homing of leucocytes to secondary lymphoid tissues. Differential CCR7 expression can be used to distinguish naive, central memory, and effector memory T cell subsets. The human CCR7 gene, unlike other CC chemokine receptor genes, has been mapped to chromosome 17 (region 17q12).
The antibody was conjugated to BD Horizon BV711 which is part of the BD Horizon Brilliant™ Violet family of dyes. This dye is a tandem fluorochrome of BD Horizon BV421 with an Ex Max of 405-nm and an acceptor dye with an Em Max at 711-nm. BD Horizon BV711 can be excited by the violet laser and detected in a filter used to detect Cy™5.5 / Alexa Fluor® 700-like dyes (eg, 712/20-nm filter). Due to the excitation and emission characteristics of the acceptor dye, there may be moderate spillover into the Alexa Fluor® 700 and PerCP-Cy5.5 detectors. However, the spillover can be corrected through compensation as with any other dye combination.
Caution: Under some complex multi-color conditions, this clone may non-specifically interact with antibodies conjugated with APC-H7 or APC-Cy7, contributing to staining artifacts. BD Horizon Brilliant™ Stain Buffer (Cat. No. 563794), designed to minimize on non-specific fluorescent dye interactions, does not resolve this interaction with either APC-H7 or APC-Cy7. For optimal multicolor staining results, alternatives to APC-H7 and APC-Cy7 should be evaluated.



Multicolor flow cytometric analysis of CD197 (CCR7) expression on human peripheral blood CD4+ T lymphocytes.
Whole blood was stained with PE Mouse Anti-Human CD4 (Cat. No. 555347/561844/561843) and FITC Mouse Anti-Human CD45RA (Cat. No. 555488/561882) antibodies and either BD Horizon™ BV711 Mouse IgG2a, κ Isotype Control (Cat. No. 563345; Left Plot) or BD Horizon BV711 Mouse Anti-Human CD197 (CCR7) antibody (Cat. No. 566602; Right Plot). 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 CD45RA versus CD197 (CCR7) [or Ig Isotype control staining] was derived from CD4 positive-gated events with the forward and side light-scatter characteristics of viable lymphocytes. Flow cytometric analysis was performed using a BD LSRFortessa™ Cell Analyzer 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 BV711 under optimal conditions that minimize unconjugated dye and antibody.

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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 for the BD Horizon Brilliant Stain Buffer (Cat. No. 563794/566349) or the BD Horizon Brilliant Stain Buffer Plus (Cat. No. 566385).

When setting up compensation, it is recommended to compare spillover values obtained from cells and BD™ CompBeads to ensure that beads will provide sufficiently accurate spillover values.

For optimal results, it is recommended to perform two washes after staining with antibodies. Cells may be prepared, stained with antibodies and washed twice with wash buffer per established protocols for immunofluorescent staining, prior to acquisition on a flow cytometer. Performing fewer than the recommended wash steps may lead to increased spread of the negative population.

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 mL	(none)
554657	Stain Buffer (BSA)	500 mL	(none)
555899	Lysing Buffer	100 mL	(none)
563345	BV711 Mouse IgG2a, κ Isotype Control	50 µg	G155-178
563794	Brilliant Stain Buffer	100 Tests	(none)
566349	Brilliant Stain Buffer	1000 Tests	(none)
566385	Brilliant Stain Buffer Plus	1000 Tests	(none)
555347	PE Mouse Anti-Human CD4	100 Tests	RPA-T4
561844	PE Mouse Anti-Human CD4	500 Tests	RPA-T4
561843	PE Mouse Anti-Human CD4	25 Tests	RPA-T4
555488	FITC Mouse Anti-Human CD45RA	100 Tests	HI100
561882	FITC Mouse Anti-Human CD45RA	25 Tests	HI100

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. 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. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
6. Cy is a trademark of GE Healthcare.
7. BD Horizon Brilliant Violet 711 is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,227,187; 8,455,613; 8,575,303; 8,354,239.
8. 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.
9. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

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