Technical Data Sheet

BV421 Mouse Anti-Human MIP-1β

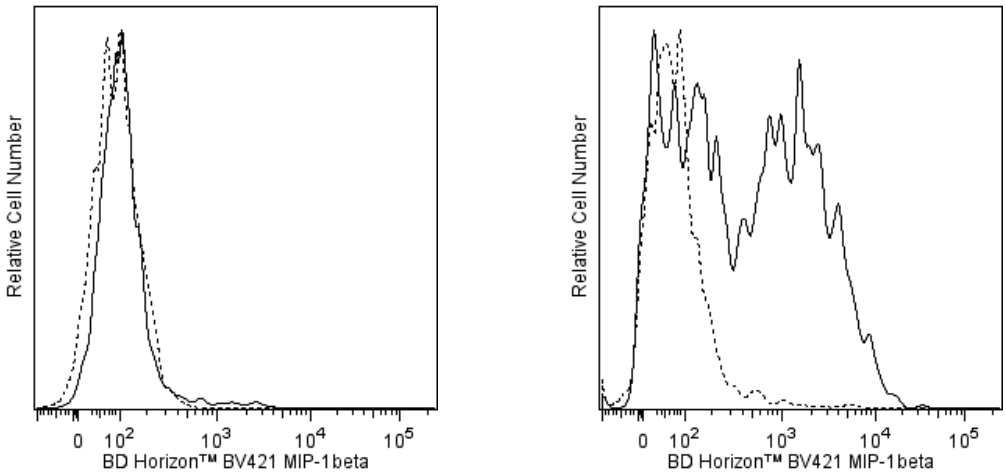
Product Information

Material Number:	**562900**
Alternate Name:	Macrophage inflammatory protein 1-beta; CCL4; C-C motif chemokine 4; LAG-1
Size:	50 tests
Vol. per Test:	5 µl
Clone:	D21-1351
Immunogen:	Recombinant Human MIP-1β
Isotype:	Mouse IgG1, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The D21-1351 monoclonal antibody specifically binds to the human CC chemokine, MIP-1β (macrophage inflammatory protein-1β). Human MIP-1β shares approximately 75% homology with mouse MIP-1β at the amino acid level. Expression of MIP-1β in human peripheral blood cells is induced by proinflammatory and mitogenic stimuli. MIP-1β is a chemoattractant for monocytes and lymphocytes. Human MIP-1β binds to receptors, CCR5 and CCR8. The human MIP-1β gene has been mapped to chromosome 17q11. The immunogen used to generate D21-1351 hybridoma was recombinant human MIP-1β.

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 MIP-1β expressed in human peripheral blood mononuclear cells (PBMC). *Human PBMC were either unstimulated (Left Panel) or stimulated (Right Panel) with 20 ng/mL Recombinant Human IFN-γ (Cat. No. 554616) for one hour followed by overnight incubation with 1 µg/mL LPS (Sigma-Aldrich, Cat. No. L-8272) in the presence of 2 µM BD GolgiStop™ Protein Transport Inhibitor (Cat. No. 554724). The PBMC were harvested, fixed with BD Cytofix™ Fixation Buffer (Cat. No. 554655) and permeabilized with BD Perm/Wash™ Buffer (Cat. No. 554723). The cells were then stained with either a BD Horizon™ BV421 Mouse IgG1, κ Isotype Control (Cat. No. 562438; dashed line histogram) or with the BD Horizon™ BV421 Mouse Anti-Human MIP-1β antibody (Cat. No. 562900; solid line histogram). The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of viable monocytes. Flow cytometry 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™ BV421 under optimum conditions, and unconjugated antibody and free BD Horizon™ BV421 were removed.

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Application Notes

Application

Intracellular staining (flow cytometry)	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
554656	Stain Buffer (FBS)	500 ml	(none)
562438	BV421 Mouse IgG1, k Isotype Control	50 µg	X40
554616	Recombinant Human IFN-γ	25 µg	(none)
554724	Protein Transport Inhibitor (Containing Monensin)	0.7 ml	(none)
554655	Fixation Buffer	100 ml	(none)
554723	Perm/Wash 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. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
8. Brilliant Violet™ 421 is a trademark of Sirigen.

References

Bernardini G, Hedrick J, Sozzani S. Identification of the CC chemokines TARC and macrophage inflammatory protein-1 beta as novel functional ligands for the CCR8 receptor. *J Immunol.* 1998; 28(2):582-588. (Biology)

Combadiere C, Ahuja SK, Tiffany HL, Murphy PM. Cloning and functional expression of CC CKR5, a human monocyte CC chemokine receptor selective for MIP-1(alpha), MIP-1(beta), and RANTES. *J Leukoc Biol.* 1996; 60(1):147-152. (Biology)

Prussin C, Metcalfe DD. Detection of intracytoplasmic cytokine using flow cytometry and directly conjugated anti-cytokine antibodies. *J Immunol Methods.* 1995; 188(1):117-128. (Methodology: Flow cytometry, IC/FCM Block)

Raport CJ, Gosling J, Schweickart VL, Gray PW, Charo IF. Molecular cloning and functional characterization of a novel human CC chemokine receptor (CCR5) for RANTES, MIP-1beta, and MIP-1alpha. *J Biol Chem.* 1996; 271(29):17161-17166. (Biology)

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