Technical Data Sheet

BV510 Mouse Anti-Rat Marginal Zone B Cells

Product Information

Material Number:	743342
Size:	50 µg
Clone:	HIS57
Reactivity:	Tested in Development:Rat
Isotype:	Mouse IgG1, κ
Application:	Flow cytometry(Qualified)
Concentration:	0.2 mg/ml
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.
Regulatory Status:	RUO

Description

The HIS57 monoclonal antibody reacts with an unknown antigen that is highly expressed by most marginal zone B (MZ-B) cells in the spleen. In contrast, this antigen is weakly expressed, or not expressed at all, by other B-cell subpopulations. Rat MZ-B cells express low levels of CD45R (mAb HIS24) and sIgD and high levels of sIgM. The HIS57 mAb does not stain granulocytes and thymocytes. Immunohistochemical staining of normal spleen sections with HIS57 mAb produced a positive signal in the marginal zone and, to a lesser extent, in B-cell follicles. This marker can be used in combination with CD45R, sIgD, and sIgM t0 identify MZ-B cells in the rat.

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.

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 optimal conditions that minimize unconjugated dye and antibody.

Recommended Assay Procedure

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes (including BD OptiBuild Brilliant reagents) 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).

Suggested Companion Products

Catalog Number	Name	Size
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg
554656	Stain Buffer (FBS)	500 mL
554657	Stain Buffer (BSA)	500 mL
563794	Brilliant Stain Buffer	100 Tests
555899	Lysing Buffer	100 mL
562946	BV510 Mouse IgG1, k Isotype Control	50 µg

Product Notices

1. This antibody was developed for use in flow cytometry.
2. The production process underwent stringent testing and validation to assure that it generates a high-quality conjugate with consistent performance and specific binding activity. However, verification testing has not been performed on all conjugate lots.

3. Researchers should determine the optimal concentration of this reagent for their individual applications.
4. An isotype control should be used at the same concentration as the antibody of interest.
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. Please refer to www.bdbiosciences.com/us/s/resources for technical protocols.
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. BD Horizon Brilliant Violet 510 is covered by one or more of the following US patents: 8,575,303; 8,354,239.

References

Kroese FG, Wubbena AS, Opstelten D, et al. B lymphocyte differentiation in the rat: production and characterization of monoclonal antibodies to B lineage-associated antigens. Eur J Immunol. 1987; 17(7):921-928. (Biology).
Kroese FG, Butcher EC, Lalor PA, Stall AM, Herzenberg LA. The rat B cell system: the anatomical localization of flow cytometry-defined B cell subpopulations. Eur J Immunol. 1990; 20(7):1527-1534. (Biology).
Dammers PM, de Boer NK, Deenen GJ, Nieuwenhuis P, Kroese FG. The origin of marginal zone B cells in the rat. Eur J Immunol. 1999; 29(5):1522-1531. (Clone-specific: Flow cytometry, Immunohistochemistry).

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