

Technical Data Sheet

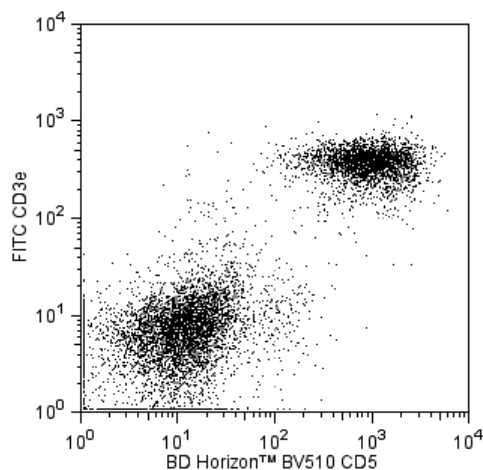
BV510 Rat Anti-Mouse CD5**Product Information**

Material Number:	563069
Alternate Name:	Lymphocyte antigen 1; Cd5; Ly-12; Ly-A; Lyt-1
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	53-7.3
Immunogen:	Mouse Thymus / Spleen
Isotype:	Rat (LOU) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The 53-7.3 monoclonal antibody specifically binds to a monomorphic epitope of CD5, a member of the scavenger receptor cysteine-rich protein superfamily and the major ligand of CD72, found on thymocytes, T lymphocytes, thymic NKT cells, and a subset of B lymphocytes, but not on NK cells or splenic NKT cells. The level of surface CD5 expression is developmentally regulated in the thymus, starting with low levels on CD4-CD8- thymocytes and increasing as they mature to CD4+CD8+ then CD4+CD8- or CD4-CD8+ thymocytes. Relatively high levels are maintained on peripheral T lymphocytes. The level of CD5 antigen detected on T helper cells has been reported to be somewhat higher than that on T cytotoxic/suppressor and B cells. Few, if any, intestinal intraepithelial lymphocytes bearing the γδ T-cell receptor express CD5. Phenotypic, anatomical, functional, developmental, and pathogenic characteristics of peripheral CD5+ B cells suggest that they may represent a distinct lineage, known as B-1 cells. The frequency of these CD5+ B cells has been reported to show strain-dependent variation. An additional population of CD5+ B lymphocytes resides in the thymus, where it matures from intrathymic B-cell progenitors. It has been proposed that CD5 is a costimulatory molecule which mediates interactions of cells in the immune system and negatively regulates signal transduction mediated by the T-cell receptor and B-cell receptor.

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 CD5 expression on BALB/c mouse splenocytes. BALB/c splenic leukocytes were simultaneously stained with BD Horizon™ BV510 Rat Anti-Mouse CD5 (Cat. No. 563069) and FITC Hamster Anti-Mouse CD3e (Cat. No. 553062/553061/561827) in the presence of Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™) (Cat. No. 553141/553142). A two-color flow cytometric dot plot showing the correlated expression of CD5 versus CD3 was derived from gated events with the forward and side light-scatter characteristics of viable cells. Flow cytometry was performed using a BD LSR™ II Flow Cytometry 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)
562952	BV510 Rat IgG2a, κ Isotype Control	50 μ g	R35-95
553062	FITC Hamster Anti-Mouse CD3e	0.5 mg	145-2C11
553061	FITC Hamster Anti-Mouse CD3e	0.1 mg	145-2C11
561827	FITC Hamster Anti-Mouse CD3e	25 μ g	145-2C11
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2
553142	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.5 mg	2.4G2

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
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/pharming/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

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