Technical Data Sheet

BV510 Hamster Anti-Mouse γδ T-Cell Receptor

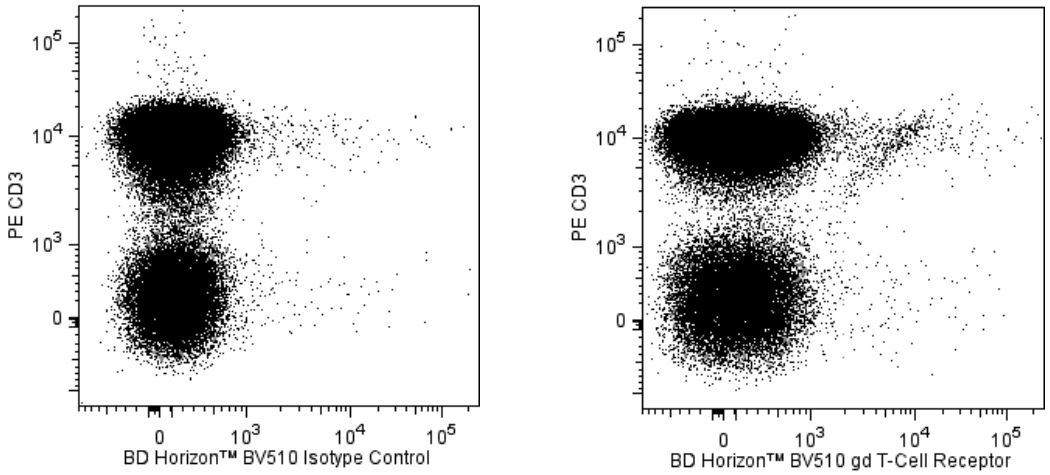
Product Information

Material Number:	**563218**
Alternate Name:	Tcrd; T-cell receptor delta chain; Tcr delta
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	GL3
Immunogen:	C57BL/6 Mouse Intestinal Intraepithelial Lymphocytes
Isotype:	Armenian Hamster IgG2, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

Description

The GL3 monoclonal antibody specifically binds to a common epitope of the δ chain of the T-cell Receptor (TCR) complex on γδ TCR-expressing T lymphocytes and NK-T cells of all mouse strains tested. It does not react with αβ TCR-bearing T cells. In the mouse, cells expressing the γδ TCR are found in the thymus, intestinal epithelium, epidermis, dermis, pulmonsry epithelium, peritoneum, liver, and peripheral lymphoid organs.

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.



Two-color flow cytometric analysis of γδ TCR expression on mouse peripheral T lymphocytes. *C57BL/6 lymph node cells were preincubated with Purified Rat Anti-Mouse CD16/CD32 antibody (Mouse BD Fc Block™) (Cat. No. 553141/553142). The cells were then stained with PE Rat Anti-Mouse CD3 Molecular Complex (Cat. No. 555275/561799) and with either BD Horizon™ BV510 Hamster IgG2, κ Isotype Control (Cat. No. 563202) or BD Horizon™ BV510 Hamster Anti-Mouse γδ T-Cell Receptor antibody (Cat. No. 563218, Right Panel). Two-color flow cytometric dot plots showing the correlated expression of γδ T-Cell Receptor (or Ig Isotype control staining) versus CD3 were derived from gated events with the forward and light scattering characteristics of viable cells. 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)
563202	BV510 Hamster IgG2, κ Isotype Control	50 µg	B81-3
555275	PE Rat Anti-Mouse CD3 Molecular Complex	0.2 mg	17A2
561799	PE Rat Anti-Mouse CD3 Molecular Complex	25 µg	17A2
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/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.
8. Although hamster immunoglobulin isotypes have not been well defined, BD Biosciences Pharmingen has grouped Armenian and Syrian hamster IgG monoclonal antibodies according to their reactivity with a panel of mouse anti-hamster IgG mAbs. A table of the hamster IgG groups, Reactivity of Mouse Anti-Hamster Ig mAbs, may be viewed at http://www.bdbiosciences.com/documents/hamster_chart_11x17.pdf.

References

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Kaufmann SH, Blum C, Yamamoto S. Crosstalk between alpha/beta T cells and gamma/delta T cells in vivo: activation of alpha/beta T-cell responses after gamma/delta T-cell modulation with the monoclonal antibody GL3. *Proc Natl Acad Sci U S A.* 1993; 90(20):9620-9624. (Clone-specific: Depletion)

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Lefrancois L, Barrett TA, Havran WL, Puddington L. Developmental expression of the alpha IEL beta 7 integrin on T cell receptor gamma delta and T cell receptor alpha beta T cells. *Eur J Immunol.* 1994; 24(3):635-640. (Clone-specific: Immunohistochemistry)

MacDonald HR, Schreyer M, Howe RC, Bron C. Selective expression of CD8 alpha (Ly-2) subunit on activated thymic gamma/delta cells. *Eur J Immunol.* 1990; 20(4):927-930. (Biology: Flow cytometry)

Nakazawa S, Brown AE, Maeno Y, Smith CD, Aikawa M. Malaria-induced increase of splenic gamma delta T cells in humans, monkeys, and mice. 1994; 79(3):391-398. (Clone-specific: Immunohistochemistry)

Shinohara K, Ikarashi Y, Maruoka H, et al. Functional and phenotypical characteristics of hepatic NK-like T cells in NK1.1-positive and -negative mouse strains. *Eur J Immunol.* 1999; 29(6):1871-1878. (Clone-specific: Flow cytometry)

Skeen MJ, Ziegler HK. Induction of murine peritoneal gamma/delta T cells and their role in resistance to bacterial infection. *J Exp Med.* 1993; 178(3):971-984. (Clone-specific: Flow cytometry, In vivo exacerbation)

Tamaki K, Yasaka N, Chang CH, et al. Identification and characterization of novel dermal Thy-1 antigen-bearing dendritic cells in murine skin. *J Invest Dermatol.* 1996; 106(3):571-575. (Clone-specific: Fluorescence microscopy, Immunofluorescence, Immunohistochemistry)

Tigelaar RE, Lewis JM, Bergstresser PR. TCR gamma/delta+ dendritic epidermal T cells as constituents of skin-associated lymphoid tissue. *J Invest Dermatol.* 1990; 94(6):58S-63S. (Biology)

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Vicari AP, Mocci S, Openshaw P, O'Garra A, Zlotnik A. Mouse gamma delta TCR+NK1.1+ thymocytes specifically produce interleukin-4, are major histocompatibility complex class I independent, and are developmentally related to alpha beta TCR+NK1.1+ thymocytes. *Eur J Immunol.* 1996; 26(7):1424-1429. (Clone-specific: Flow cytometry, Fluorescence activated cell sorting)

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