Technical Data Sheet

Biotin Hamster Anti-Mouse γδ T-Cell Receptor

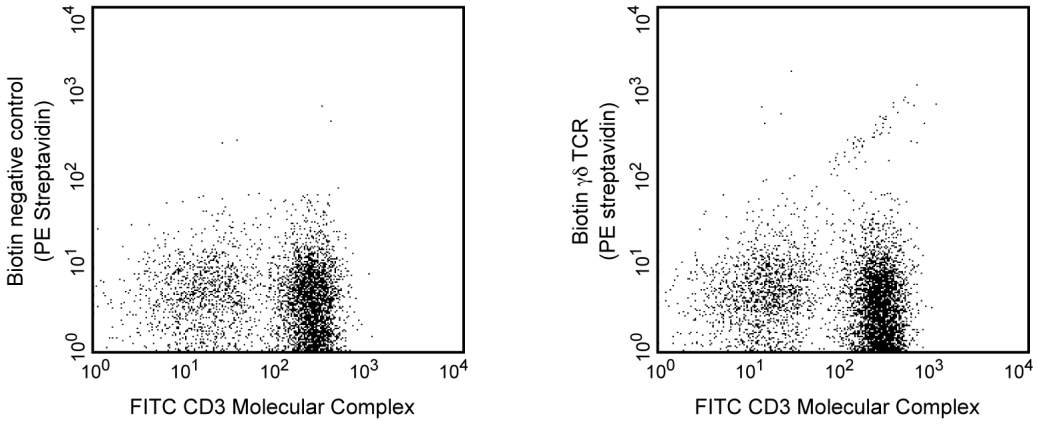
Product Information

Material Number:	**553176**
Size:	0.5 mg
Concentration:	0.5 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 ≤0.09% sodium azide.

Description

The GL3 antibody reacts with 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.

This antibody is routinely tested by flow cytometric analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



Two-color analysis of the expression of γδ TCR on peripheral T lymphocytes. *C57BL/6 lymph node cells were incubated simultaneously with biotin-conjugated GL3 (right panel) and FITC-conjugated anti-mouse CD3 (Molecular Complex 17A2 (Cat. No. 555274) monoclonal antibodies, followed by Streptavidin-PE (Cat. No. 554061). Flow cytometry was performed on a BD FACScan™ flow cytometry system.*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
The antibody was conjugated with biotin under optimum conditions, and unreacted biotin was removed.
Store undiluted at 4° C and protected from prolonged exposure to light. Do not freeze.

Application Notes

Application

Flow cytometry	Routinely Tested
Immunohistochemistry-frozen	Reported

Recommended Assay Procedure:
For flow cytometry of cell suspensions from peripheral lymphoid tissues, it is recommended that multicolor staining be performed to distinguish T lymphocytes from non-T cells.

BD Biosciences
bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	888.259.0187	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country-specific contact information, visit bdbiosciences.com/how_to_order/

BD Biosciences

Suggested Companion Products

Catalog Number	Name	Size	Clone
554061	PE Streptavidin	0.5 mg	(none)
550084	Biotin Hamster IgG2 Kappa Isotype Control	0.25 mg	B81-3
555274	FITC Rat Anti-Mouse CD3 Molecular Complex	0.5 mg	17A2

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. 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/pharmingen/hamster_chart_11x17.pdf.
4. 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.

References

Goodman T, LeCorre R, Lefrancois L. A T-cell receptor gamma delta-specific monoclonal antibody detects a V gamma 5 region polymorphism. *Immunogenetics.* 1992; 35(1):65-68.(Clone-specific: Flow cytometry)

Goodman T, Lefrancois L. Intraepithelial lymphocytes. Anatomical site, not T cell receptor form, dictates phenotype and function. *J Exp Med.* 1989; 170(5):1569-1581.(Clone-specific: Flow cytometry)

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: Flow cytometry)

King DP, Hyde DM, Jackson KA, et al. Cutting edge: protective response to pulmonary injury requires gamma delta T lymphocytes. *J Immunol.* 1999; 162(9):5033-5036.(Biology: Flow cytometry)

Lefrancois L. Phenotypic complexity of intraepithelial lymphocytes of the small intestine. *J Immunol.* 1991; 147(6):1746-1751.(Biology: Flow cytometry)

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)

Mosley RL, Klein JR. Peripheral engraftment of fetal intestine into athymic mice sponsors T cell development: direct evidence for thymopoietic function of murine small intestine. *J Exp Med.* 1992; 176(5):1365-1373.(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.(Biology: 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. (Biology: Flow cytometry)

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.(Biology: Flow cytometry)

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: Flow cytometry)

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. (Biology: Flow cytometry)