Technical Data Sheet

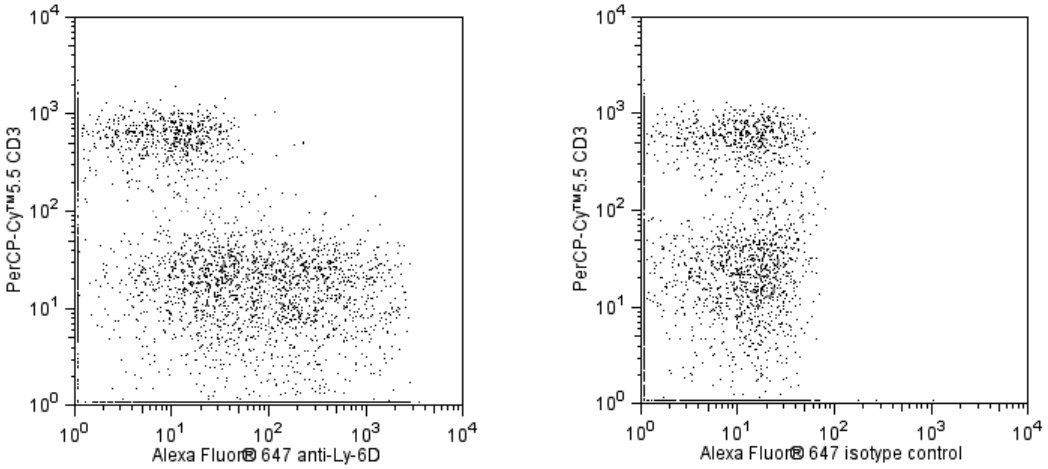
Alexa Fluor® 647 Rat Anti-Mouse Ly-6D

Product Information

Material Number:	**561147**
Alternate Name:	Lymphocyte antigen 6 complex, locus D; Thb; Thymocyte B-cell antigen; Ly-61
Size:	0.05 mg
Concentration:	0.2 mg/ml
Clone:	49-H4
Immunogen:	BALB/c mouse plasmacytoma MOPC-104E
Isotype:	Rat (LOU) IgG2c, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The 49-H4 antibody specifically binds to the ThB antigen (Ly-6D), which is a 15-kDa GPI-anchored protein of the Ly-6 Multigene Family. ThB has been detected on cortical thymocytes, small sIg- Thy-1- and sIg+ lymphoid cells in the bone marrow, thymic medullary epithelial cells, all epidermal layers (except the stratum corneum), and on peripheral B lymphocytes, but not on peripheral T lymphocytes. It has been noted that there is strain-to-strain variation in the expression of the ThB antigen on splenic B cells, those of strains with the Ly-6.2 haplotype (*e.g.*, AKR, C57BL, DBA/2, SJL, SWR) stain more intensely with anti-ThB reagents than those of Ly-6.1 strains (*e.g.*, A, BALB/c, CBA, C3H/He, NZB), and B cells of hybrids of Ly-6.1 and Ly-6.2 strains stain with intermediate intensity. The proportions of the ThB+ B cells and thymocytes do not differ significantly among strains.



Flow cytometric analysis of Ly-6D expression on BALB/c mouse splenocytes. *BALB/c mouse splenocytes were simultaneously stained with Alexa Fluor® 647 Rat Anti-Mouse Ly-6D (Cat. No. 561147, Left Panel) or Alexa Fluor® 647 Rat IgG2c Isotype Control (Cat. No. 560891, Right Panel) and PerCP-Cy™5.5 Anti-Mouse CD3 (Cat. No. 561108). A two-color flow cytometric dot plot showing the correlated expression patterns of Ly-6D versus CD3 was derived from gated events with the forward and side light-scatter characteristics of viable splenocytes. Flow cytometry was performed using a BD LSR™ II Flow Cytometer System.*

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated to Alexa Fluor® 647 under optimum conditions, and unreacted Alexa Fluor® 647 was removed.

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

BD Biosciences

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Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
560891	Alexa Fluor® 647 Rat IgG2c, κ Isotype Control	0.1 mg	A23-1
554656	Stain Buffer (FBS)	500 ml	(none)
561108	PerCP-Cy™5.5 Hamster Anti-Mouse CD3e	25 µg	145-2C11

Product Notices

1. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
2. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
3. Alexa Fluor® 647 fluorochrome emission is collected at the same instrument settings as for allophycocyanin (APC).
4. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
5. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
6. 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.
7. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.

References

Boyd RL, Tucek CL, Godfrey DI. The thymic microenvironment. *Immunol Today.* 1993; 14(9):445-459. (Biology)

Eckhardt LA, Herzenberg LA. Monoclonal antibodies to ThB detect close linkage of Ly-6 and a gene regulating ThB expression. *Immunogenetics.* 1980; 11(3):275-291. (Immunogen: Cytotoxicity)

Godfrey DI, Izon DJ, Tucek CL, Wilson TJ, Boyd RL. The phenotypic heterogeneity of mouse thymic stromal cells. *Immunology.* 1990; 70(1):66-74. (Biology)

Gumley TP, McKenzie IF, Kozak CA, Sandrin MS. Isolation and characterization of cDNA clones for the mouse thymocyte B cell antigen (ThB). *J Immunol.* 1992; 149(8):2615-2618. (Biology)

Gumley TP, McKenzie IF, Sandrin MS. Polymorphism at the mouse Thb locus. *Immunogenetics.* 1994; 39(6):390-394. (Clone-specific: Immunoprecipitation)

Matossian-Rogers A, Rogers P, Ledbetter JA, Herzenberg LA. Molecular weight determination of two genetically linked cell surface murine antigens: ThB and Ly-6. *Immunogenetics.* 1982; 15(6):591-599. (Clone-specific: Immunoprecipitation)