

Technical Data Sheet

Biotin Rat Anti-Mouse CD4

Product Information

Material Number:	553649
Alternate Name:	L3T4
Size:	0.5 mg
Concentration:	0.5 mg/ml
Clone:	H129.19
Immunogen:	A.TH mouse CTL clone A15.1.17
Isotype:	Rat (LOU) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing $\leq 0.09\%$ sodium azide.

Description

The H129.19 antibody reacts with the CD4 (L3T4) differentiation antigen expressed on thymocytes, a subpopulation of mature T lymphocytes (i.e., MHC class II-restricted T cells, including most T helper cells), and a subset of NK-T cells of all mouse strains tested. CD4 has also been detected on pluripotent hematopoietic stem cells, bone marrow myeloid precursors, intrathymic lymphoid precursors, and a subset of splenic dendritic cells. CD4 is expressed on the plasma membrane of mouse egg cells and is involved in adhesion of the egg to MHC class II-bearing sperm. CD4 is an antigen coreceptor on the T-cell surface which interacts with MHC class II molecules on antigen-presenting cells. It participates in T-cell activation through its association with the T-cell receptor complex and protein tyrosine lck. H129.19 mAb blocks binding of the anti-mouse CD4 mAbs Gk1.5 (Cat. No. 557307/553729) and RM4-5 (Cat. No. 553046/553047), but not RM4-4 (Cat. No. 553055) antibody. mAb H129.19 inhibits various responses of T helper cells to antigenic or mitogenic stimuli.

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.

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.

Application Notes

Application

Flow cytometry	Routinely Tested
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Suggested Companion Products

Catalog Number	Name	Size	Clone
554061	PE Streptavidin	0.5 mg	(none)
553928	Biotin Rat IgG2a, κ Isotype Control	0.25 mg	R35-95

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. 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

Bendelac A. Mouse NK1+ T cells. *Curr Opin Immunol.* 1995; 7(3):367-374.(Biology)
 Bierer BE, Sleckman BP, Ratnoff SJ. The biologic roles of CD2, CD4, and CD8 in T-cell activation. *Annu Rev Immunol.* 1989; 7:579-599.(Biology)
 Frederickson GG, Basch RS. L3T4 antigen expression by hemopoietic precursor cells. *J Exp Med.* 1989; 169(4):1473-1478.(Biology)
 Ghobrial RR, Boublik M, Winn HJ, Auchincloss H Jr. In vivo use of monoclonal antibodies against murine T cell antigens. *Clin Immunol Immunopathol.* 1989; 52(3):486-506.(Clone-specific: Depletion)

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Godfrey DI, Kennedy J, Mombaerts P, Tonegawa S, Zlotnik A. Onset of TCR- β gene rearrangement and role of TCR- β expression during CD3-CD4-CD8-thymocyte differentiation. *J Immunol.* 1994; 152(10):4783-4792.(Biology)

Guo MW, Watanabe T, Mori E, Mori T. Molecular structure and function of CD4 on murine egg plasma membrane. *Zygote.* 1995; 3(1):65-73.(Clone-specific: Blocking)

Janeway CA Jr. The T cell receptor as a multicomponent signalling machine: CD4/CD8 coreceptors and CD45 in T cell activation. *Annu Rev Immunol.* 1992; 10:645-674.(Biology)

Martin P, del Hoyo GM, Anjuere F, et al. Concept of lymphoid versus myeloid dendritic cell lineages revisited: both CD8alpha(-) and CD8alpha(+) dendritic cells are generated from CD4(low) lymphoid-committed precursors. *Blood.* 2000; 96(7):2511-2519.(Biology)

Naquet P, Malissen B, Bekkhoucha F, et al. L3T4 but not LFA-1 participates in antigen presentation by Ak-positive L-cell transformants. *Immunogenetics.* 1985; 22(3):247-256.(Clone-specific: Blocking)

Pierres A, Naquet P, Van Agthoven A, et al. A rat anti-mouse T4 monoclonal antibody (H129.19) inhibits the proliferation of Ia-reactive T cell clones and delineates two phenotypically distinct (T4+, Lyt-2,3-, and T4-, Lyt-2,3+) subsets among anti-Ia cytolytic T cell clones. *J Immunol.* 1984; 132(6):2775-2782.(Immunogen: Blocking, Immunoprecipitation)

Pont S, Regnier-Vigouroux A, Marchetto S, Pierres M. Accessory molecules and T cell activation. II. Antibody binding to L3T4a inhibits Ia-independent mouse T cell proliferation. *Eur J Immunol.* 1987; 17(3):429-432.(Clone-specific: Blocking)

Regnier-Vigouroux A, Blanc D, Pont S, Marchetto S, Pierres M. Accessory molecules and T cell activation. I. Antigen receptor avidity differentially influences T cell sensitivity to inhibition by monoclonal antibodies to LFA-1 and L3T4. *J Immunol.* 1986; 136(11):1385-1390.(Clone-specific: Blocking)

Wineman JP, Gilmore GL, Gritzmacher C, Torbett BE, Muller-Sieburg CE. CD4 is expressed on murine pluripotent hematopoietic stem cells. *Blood.* 1992; 80(7):1717-1724.(Biology)

Wu L, Antica M, Johnson GR, Scollay R, Shortman K. Developmental potential of the earliest precursor cells from the adult mouse thymus. *J Exp Med.* 1991; 174(6):1617-1627.(Biology)

Wu L, Scollay R, Egerton M, Pearce M, Spangrude GJ, Shortman K. CD4 expressed on earliest T-lineage precursor cells in the adult murine thymus. *Nature.* 1991; 349(6304):71-74.(Biology)