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Monoclonal Antibody to CD8 - FITC

Alternate names: CD8 alpha chain, CD8A, MAL, T-cell surface glycoprotein CD8 alpha chain, T-lymphocyte differentiation antigen T8/Leu-2

Catalog No.: CL007F

Quantity: 0.1 mg

Concentration: 0.1 mg/ml

Background: The CD8 antigen is a cell surface glycoprotein found on most cytotoxic T lymphocytes that mediates efficient cell to cell interactions within the immune system. The CD8 antigen, acting as a coreceptor, and the T cell receptor on the T lymphocyte recognize antigen displayed by an antigen presenting cell (APC) in the context of class I MHC molecules. The functional coreceptor is either a homodimer composed of two alpha chains, or a heterodimer composed of one alpha and one beta chain. Both alpha and beta chains share significant homology to immunoglobulin variable light chains.

Uniprot ID: P01731

NCBI: NP_001074579.1

GeneID: 12525

Host / Isotype: Rat / IgG2b

Clone: YTS169.4

Immunogen: Murine thymocytes

Format:
State: Liquid purified IgG
Purification: Protein G Chromatography
Buffer System: PBS, 0.02% NaN3 and EIA grade BSA as a stabilizing protein to bring total protein concentration to 4-5 mg/ml.
Label: FITC

Applications:
Flow Cytometry.
Immunohistochemistry on frozen sections.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: Antibody CL007 reacts with a protein of approximately 30 kDa found on mouse thymocytes and mouse cytotoxic/ suppressor T cells. It does not bind to mouse helper/inducer T cells. It binds to T lymphocytes from all mouse strains regardless of phenotypic expression (i.e. reacts with T lymphocytes from mouse strains expressing the Ly 2.1 or Ly 2.2 phenotype). It can be used to investigate the role of T cells in models for infectious disease, autoimmunity, transplantation tolerance and fundamental aspects of immunology.
Species: Mouse.
Other species not tested.

Add. Information: Strain Distribution by Flow Cytometry Analysis:
Procedure: see below
Cell Concentration: 1x10e6 cells per test
Antibody Concentration Used: 0.1 µg/10e6 cells
Strains Tested: BALB/c, C57BL/6
Positive: BALB/c, C57BL/6
Negative: non

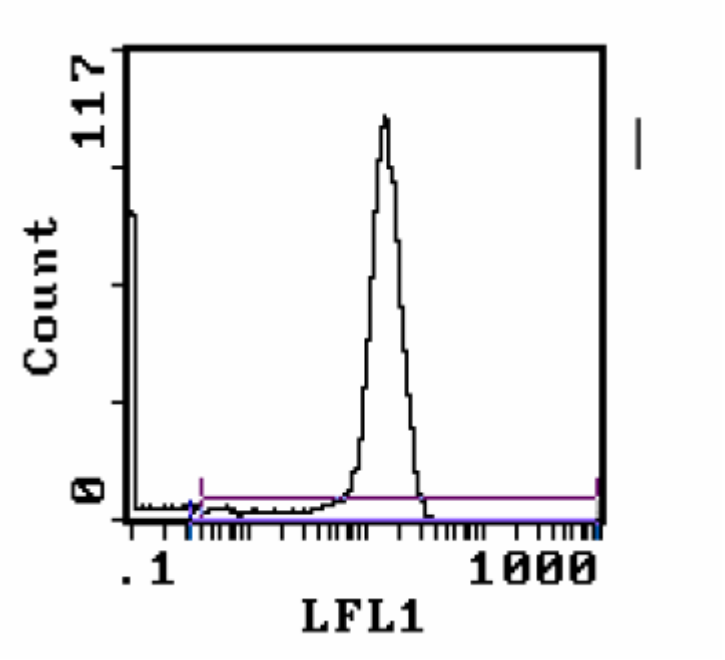
Storage: Store the antibody at 2 - 8 °C up to one month or (in aliquots) at -20 °C for longer. Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General References:
1. Cobbald S.P et al. (1984) Nature. Therapy with monoclonal antibodies by elimination of T cell subsets in vivo 312, 5994, 548-551.
2. Cobbald S.P. et al. 8th International Conference on Lymphatic Tissues and Germinal Centres. Plenum Press (Ed. Klaus G.) in press (1984) Immunosuppression with monoclonal antibodies - rules for effective serotherapy.
3. Aqel N.M. et al. (1984) J. of Immunol. Methods. 69: 207-214. Immunohistological Screening in the selection of monoclonal antibodies: the use of isotype specific antiglobulins.
4. Ledbetter J.A. and Hertzenberg L.A. (1979) Nature. 277: 131-133. Rat x Rat hybrid myelomas and a monoclonal anti-Fd portion of mouse Ig.
5. Mueller, R. et al. (1997) J. of Immunol. 159: 1599-1603. IL-4 Expression by Grafts from Transgenic Mice Fails to Prevent Allograft Rejection.
6. Stevenson, P.G. et al. (1997) J. of Immunol. 159: 1876-1884. Virus Dissemination Through the Brain Parenchyma Without Immunologic Control.

Protocols: FLOW CYTOMETRY ANALYSIS:
Method:
1. Prepare a cell suspension in media A. For cell preparations, deplete the red blood cell population with Lympholyte®-M cell separation medium.
2. Wash 2 times.
3. Resuspend the cells to a concentration of 2x107 cells/ml in media A. Add 50µl of this suspension to each tube (each tube will then contain 1 x 106 cells, representing 1 test).
4. To each tube, add 0.1-0.5 µg* of CL007F per 106 cells.
5. Vortex the tubes to ensure thorough mixing of antibody and cells.
6. Incubate the tubes for 30 minutes at 4°C.
(It is recommended that the tubes are protected from light, since most flurochromes are light sensitive.)
7. Wash 2 times at 4°C.
8. Resuspend the cell pellet in 50 µl ice cold media B.
9. Transfer to suitable tubes for flow cytometric analysis containing 15 µl of propidium iodide at 0.5 mg/ml in PBS. This stains dead cells by intercalating in DNA.

Media:
A. Phosphate buffered saline (pH 7.2) + 5% normal serum of host species + sodium azide (100 µl of 2M sodium azide in 100 mls).
B. Phosphate buffered saline (pH 7.2) + 0.5% Bovine serum albumin + sodium azide (100 µl of 2M sodium azide in 100 mls).

Pictures:



Tissue Distribution by Flow Cytometry Analysis:
Mouse Strain: BALB/c
Cell Concentration: 1x10e6 cells per test
Antibody Concentration Used: 0.1 µg/10e6 cells
Isotypic Control: FITC Rat IgG2b

Cell Source Percentage of cells stained above control:Thymus 74.4%