CL039B

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Monoclonal Antibody to CD90 (Thy1.2) - Biotin

Alternate names:	CDw90, THY1, Thy-1, Thy-1 membrane glycoprotein
Catalog No.:	CL039B
Quantity:	0.1 mg
Concentration:	0.1 mg/ml
Background:	CD90 / Thy1 antigen is a GPI linked glycoprotein member of the Immunoglobulin superfamily. It is expressed on murine T cells, thymocytes, neural cells, cells of granulocytic lineage, early hematopoietic progenitors, fibroblasts, neurons and Kupffer's cells. Thy1 may play a role in cell to cell or cell to ligand interactions during synaptogenesis and other events in the brain. It is found in most mouse strains except AKR/J, A, Thy1.1 and B6.PL (74NS) expressing Thy1.1.
Uniprot ID:	P01831
NCBI:	NP_033408.1
GeneID:	21838
Host / Isotype:	Mouse / IgG2b
Clone:	5a-8
Immunogen:	CBA/J Donor: AKR/J Spleen
Format:	**State:** Liquid purified Ig fraction. **Purification:** Protein G Chromatography. **Buffer System:** PBS containing 0.02% Sodium Azide and EIA grade BSA as a stabilizing protein to bring total protein concentration to 4-5 mg/ml. **Label:** Biotin
Applications:	Flow Cytometry (protocol see below). Appropriate control samples should always be included in any labelling studies. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	This antibody detects CD90 (Thy 1.2). It reacts with all T lymphocytes from mouse strains expressing the Thy 1.2 phenotype (i.e. C57BL/6, C3H/He, DBA/2, CBA/J, BALB/c), but does not react with lymphocytes expressing the Thy 1.1 phenotype (i.e. AKR/J, B6.PL (74 NS).
Species Reactivity:	**Tested:** Mouse.
Storage:	Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20 °C for longer. Avoid repeated freezing and thawing. Shelf life: one year from despatch.

General References: 1. Krieg, A., Gourley, M. and Steinberg, A. 1991. Association of Murine Lupus and Thymic Full-Length Endeneous Retroviral Expression Maps To A Bone Marrow Stem Cell. J. Immunol. 146:3002-3005.
2. Haba, S. and Nisonoff, A., 1991. Induction of Tolerance To Syngeneic IgE In Neonatal Mice. J. Immunol. 146:807-811.
3. Miyajima, H., Takao, H., et al. 1991. Suppression By IL-2 Of IgE Production By B Cells Stimulated By IL-4. J. Immunol. 146:457- 462.
4. Kruger, M. and Riley, R. 1990. The Age-Dependent Loss Of Bone Marrow B Cell Precursors In Autoimmune NZ Mice Results From Decreased Mitotic Activity, But Not From Inherent Stromal Cell Defects. J. Immunol. 144:103-110.
5. Fine, J., Siverstone, A. and Gasiewicz, T. 1990. Impairment Of Prothymocyte Activity By 2,3,7,8-Tetrachlorocibenzo-p-Dioxin. J. Immunol. 144:1169-1176.

Protocols:

FLOW CYTOMETRY ANALYSIS:

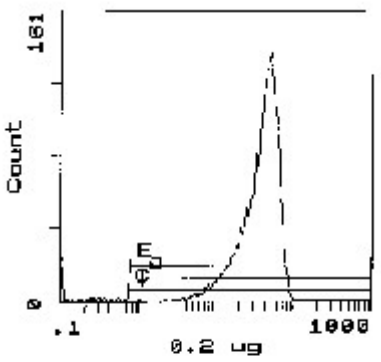
Method:

1. Prepare a cell suspension in media A. For cell preparations, deplete the red blood cell population.
2. Wash 2 times.
3. Resuspend the cells to a concentration of 2x10e7 cells/ml in media A. Add 50 µl of this suspension to each tube (each tube will then contain 1 x 10e6 cells, representing 1 test).
4. To each tube, add 0.2-0.5 µg of this antibody per 10e6 cells.
5. Vortex the tubes to ensure thorough mixing of antibody and cells.
6. Incubate the tubes for 30 minutes at 4°C.
7. Wash 2 times at 4°C.
8. Add 100 µl of secondary antibody (Streptavidin-FITC) at a 1/500 dilution.
9. Incubate tubes at 4°C for 30-60 minutes (It is recommended that tubes are protected from light since most fluorochromes are light sensitive).
10. Wash 2 times at 4°C.
11. Resuspend the cell pellet in 50 µl ice cold media B.
12. 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).

Results:
Tissue Distribution by Flow Cytometry Analysis:
Mouse Strain: CBA/J
Cell Concentration : 1x10e6 cells per tests
Antibody Concentration Used: 0.2 µg/10e6 cells
Isotypic Control: Biotin Mouse IgG2b,k
Cell Source: Percentage of cells stained above control:
Thymus: 97.8%
Spleen: 35.4%

Pictures:



LFL 1
Cell Source: Thymus
Percentage of cells stained above control: 97.8 %