CL039R
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Monoclonal Antibody to CD90 - PE

Alternate names:	CDw90, THY1, Thy-1, Thy-1 membrane glycoprotein
Catalog No.:	CL039R
Quantity:	50 µg
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. Fusion Partner: Spleen from immunized recipient fused with myeloma P3-NSI-1-Ag4-1.
Format:	**State:** Liquid purified IgG fraction. **Purification:** Protein G Chromatography. **Buffer System:** PBS containing 0.02% Sodium Azide as preservative and EIA grade BSA as a stabilizing protein to bring total protein concentration to 4-5 mg/ml. **Label:** PE
Applications:	**Flow Cytometry.** Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	This monoclonal antibody reacts with all T lymphocytes from mouse strains expressing the Thy 1.2 phenotype (e.g. C57BL/6, C3H/He, DBA/2, CBA/J, BALB/c), but does not react with lymphocytes expressing the Thy 1.1 phenotype [e.g. AKR/J, B6.PL(74NS)]. **Species:** Mouse. Other species not tested.
Storage:	Store the antibody undiluted at 2-8°C. **DO NOT FREEZE!** This product is photosensitive and should be protected from light. 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 with Lympholyte®-M cell separation medium.
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 1x10e6 cells, representing 1 test).
4. To each tube, add 0.5 µg* of this Ab.
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 fluorochromes 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.

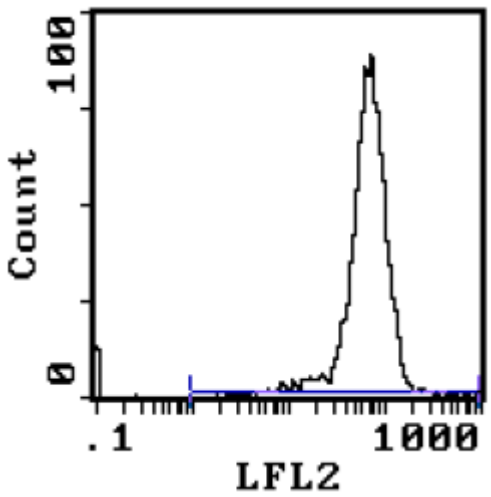
Media:
A. Phosphate buffered saline (pH 7.2) + 5% normal serum of host species + sodium azide (100 µl of 2M sodium azide in 100 mls).
B. Phosphate buffered saline (pH 7.2) + 0.5% Bovine serum albumin + sodium azide (100 µl of 2M sodium azide in 100 mls).

Results - Tissue Distribution:
Mouse Strain: BALB/c
Cell Concentration: 1x10e6 cells per test
Antibody Concentration Used: 0.5 µg/10e6 cells
Isotypic Control: PE-Mouse IgG2b,k

Cell Source Percentage of cells stained above control:
Thymus: 98.4%
Spleen: 28.8%

Results - Strain Distribution:
Cell Concentration: 1x10e6 cells per test
Antibody Concentration Used: 0.5 µg/10e6 cells
Strains Tested: C57BL/6, C3H/He, CBA/J, BALB/c, ATL, AKR/J
Positive: C57BL/6, C3H/He, CBA/J, BALB/c, ATL
Negative: AKR/J

Pictures:



Cell Source: Thymus - Percentage of cells stained above control: 98.4%