

## Monoclonal Antibody to CD90 - Biotin

<b>Alternate names:</b>	CDw90, THY1, Thy-1, Thy-1 membrane glycoprotein
<b>Catalog No.:</b>	CL039BX
<b>Quantity:</b>	0.3 mg
<b>Concentration:</b>	0.1 mg/ml
<b>Background:</b>	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.
<b>Uniprot ID:</b>	<a href="#">P01831</a>
<b>NCBI:</b>	<a href="#">NP_033408.1</a>
<b>GeneID:</b>	<a href="#">21838</a>
<b>Host / Isotype:</b>	Mouse / IgG2b
<b>Clone:</b>	5a-8
<b>Immunogen:</b>	CBA/J Donor: AKR/J Spleen
<b>Format:</b>	<b>State:</b> Liquid purified Ig fraction. <b>Purification:</b> Protein G Chromatography. <b>Buffer System:</b> PBS containing 0.02% Sodium Azide and EIA grade BSA as a stabilizing protein to bring total protein concentration to 4-5 mg/ml. <b>Label:</b> Biotin
<b>Applications:</b>	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.
<b>Specificity:</b>	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)).
<b>Species Reactivity:</b>	<b>Tested:</b> Mouse.
<b>Storage:</b>	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.

**For research and in vitro use only. Not for diagnostic or therapeutic work.**

Material Safety Datasheets are available at [www.acris-antibodies.com](http://www.acris-antibodies.com) or on request.

Antibody Hotline - Technical Questions - Antibody Location Service  
Free Call: 0800-2274746 (Germany only) - [www.acris-antibodies.com](http://www.acris-antibodies.com)

- General References:**
1. Krieg, A., Gourley, M. and Steinberg, A. 1991. Association of Murine Lupus and Thymic Full-Length Endogenous 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  $2 \times 10^7$  cells/ml in media A. Add 50  $\mu$ l of this suspension to each tube (each tube will then contain  $1 \times 10^6$  cells, representing 1 test).
4. To each tube, add 0.2-0.5  $\mu$ g of this antibody per  $10^6$  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  $\mu$ l 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  $\mu$ l ice cold media B.
12. Transfer to suitable tubes for flow cytometric analysis containing 15  $\mu$ l 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  $\mu$ l of 2M sodium azide in 100 mls).
- B. Phosphate buffered saline (pH 7.2) + 0.5% Bovine serum albumin + sodium azide (100  $\mu$ l of 2M sodium azide in 100 mls).

**Results:**

Tissue Distribution by Flow Cytometry Analysis:

Mouse Strain: CBA/J

Cell Concentration :  $1 \times 10^6$  cells per tests

Antibody Concentration Used: 0.2  $\mu$ g/ $10^6$  cells

Isotypic Control: Biotin Mouse IgG2b,k

Cell Source: Percentage of cells stained above control:

Thymus: 97.8%

Spleen: 35.4%

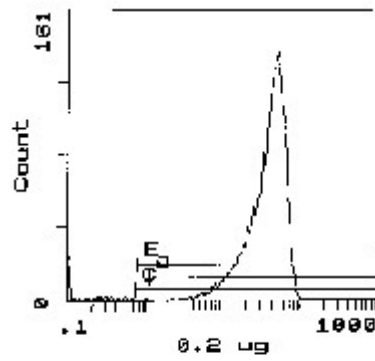
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Pictures:



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

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