

Monoclonal Antibody to T Cell Receptor (TCR) alpha/beta - PE

Alternate names: TCRA, TCRB, T-Cell Receptor alpha, T-Cell Receptor beta, T-Cell Receptor alpha beta

Catalog No.: CL075R

Quantity: 50 µg

Concentration: 0.1 mg/ml

Host / Isotype: Hamster / IgG

Clone: H57-597

Immunogen: Affinity-purified DO-11.10 TCR.

Format: **State:** Liquid purified IgG fraction.
Purification: Protein G Chromatography.
Buffer System: PBS with 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: R-Phycoerythrin (PE).

Applications: Use of this antibody in conjunction with an anti-CD3ε monoclonal antibody (CL001F or CL001FX) allows for accurate measurements of the mutually exclusive sub-populations of alpha/beta TCR and gamma/theta TCR bearing T cells.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: Mouse alpha/beta T Cell Receptor.
This monoclonal antibody reacts with the surface of all alpha/beta TCR bearing cells and does not react with receptors on gamma/theta TCR positive T cells.
This monoclonal antibody when used in an immobilized form was able to activate all alpha/beta TCR bearing T cell hybridomas tested to produce IL-2 (1).

Storage: Store the antibody at 2-8°C.
DO NOT FREEZE!
Avoid prolonged exposure to light.
Shelf life: one year from despatch.

General References: 1. Kubo, R.T. Born, W., Kappler, J.W., Marrack, P. and M. Pigeon. 1989. Characterization of a Monoclonal Antibody Which Detects All Murine α T Cell Receptors. *J. of Immunol.* 142:2736-2742.
2. Goodman, T., Lefrancois, L. 1989. Intraepithelial Lymphocytes. *J. of Exp. Med.* 170: 1569-1581.
3. Gross, J.A., E. Callas and J.P. Allison. 1992. Identification and Distribution of the Costimulatory Receptor CD28 in the Mouse. *J. of Immunol.* 149: 380-388.
4. Palathumpat, V. et al. 1992. Treatment of BCL1 Leukemia by Transplantation of Low

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Material Safety Datasheets are available at www.acris-antibodies.com or on request.

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

Density Fractions of Allogeneic Bone Marrow and Spleen Cells. J. of Immunol. 148: 3319-3326.

5. Paliwal, V. et al. 1997. Recombinant Soluble ab TCR Receptors Protect T Cells from Immune Suppression. J. of Immunol. 159: 1718-1727.

Protocols:**FLOW CYTOMETRY ANALYSIS:****Method:**

1. Prepare a cell suspension in media A. For cell preparations, deplete the red blood cell population with IQ-Lyse (IQP-199) or similar cell separation medium.
2. Wash 2 times.
3. Resuspend the cells to a concentration of 2×10^7 cells/ml in media A. Add 50 μ l of this suspension to each tube (each tube will then contain 1×10^6 cells, representing 1 test).
4. To each tube, add 1.0-0.5 μ g* of CL075R or CL075RX 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.
(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 μ l ice cold media B.
9. Transfer to suitable tubes for flow cytometric analysis containing 15 μ 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 μ l of 2M sodium azide in 100 mls).
- B. Phosphate buffered saline (pH 7.2) + 0.5% Bovine serum albumin + sodium azide (100 μ l of 2M sodium azide in 100 mls).

Results-Tissue Distribution:

Mouse Strain: BALB/C

Cell Concentration: 1×10^6 cells per test.

Antibody Concentration Used: 1.0 μ g/ 10^6 cells.

Isotypic Control: PE Hamster IgG.

Cell Source: A/ Splenic T cells B/ Thymus

Percentage of Cells Stained Above Control: A /89.3

B /75.2

N.B. Appropriate control samples should always be included in any labelling studies.

*For optimal results in various applications, it is recommended that each investigator determine dilutions appropriate for individual use.

STRAIN DISTRIBUTION:

Antibody Concentration: 1.0 μ g/ 10^6 cells

Strains Tested: C57BL/6, CBA/J, AKR, BALB/c, C3H/He

Postive: CBA/J, BALB/c, C3H/He, AKR, C57BL/6

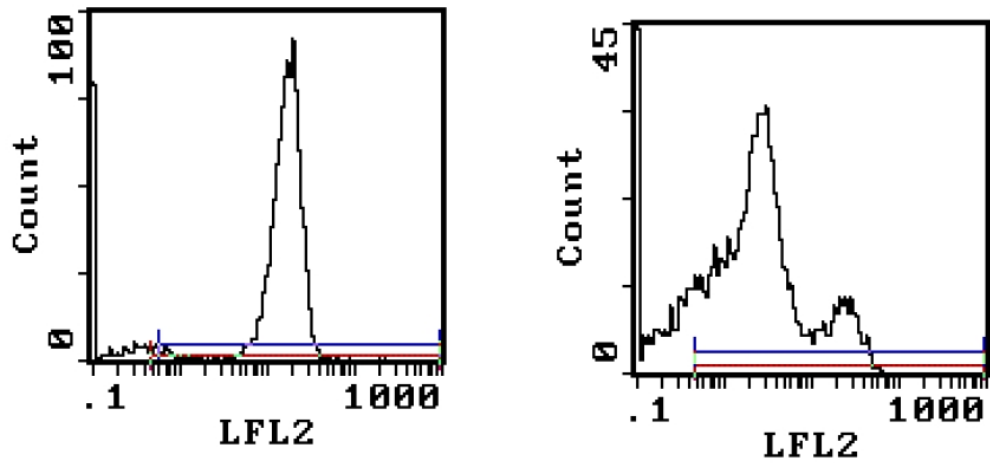
Negative: None.

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Pictures:



Percentage of Cells Stained Above Control: A /89.3 (Left) and B /75.2 /Right).

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