

## Monoclonal Antibody to T Cell Receptor (TCR) Vb 7 - Biotin

<b>Alternate names:</b>	TCR V beta-7, TCR Vb7
<b>Catalog No.:</b>	SM088B
<b>Quantity:</b>	0.1 mg
<b>Concentration:</b>	0.1 mg/ml
<b>Host / Isotype:</b>	Rat / IgG2b
<b>Recommended Isotype Controls:</b>	SM19B
<b>Clone:</b>	TR310
<b>Format:</b>	<b>State:</b> Liquid purified <b>Buffer System:</b> PBS, 0.02% sodium azide (NaN <sub>3</sub> ) 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. Immunoprecipitation. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
<b>Specificity:</b>	This anti-mouse T cell receptor Vβ7 antigen monoclonal antibody reacts with TCR Vβ7 bearing T cells <sup>1</sup> . The TCR Vβ7 may be deleted in mouse strains expressing Mls-1a haplotype. <b>Species:</b> Mouse. Other species not tested.
<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.
<b>General Readings:</b>	1. Okada CY, Holzmann B, Guidos C, Palmer E, Weissman IL. Characterization of a rat monoclonal antibody specific for a determinant encoded by the V beta 7 gene segment. Depletion of V beta 7+ T cells in mice with Mls-1a haplotype. J Immunol. 1990 May 1;144(9):3473-7. PubMed PMID: 1691759. 2. Sugihara S, Fujiwara H, Shearer GM. Autoimmune thyroiditis induced in mice depleted of particular T cell subsets. Characterization of thyroiditis-inducing T cell lines and clones derived from thyroid lesions. J Immunol. 1993 Jan 15;150(2):683-94. PubMed PMID: 7678281. 3. Ignatowicz, L., Kappier, J. W. Marrack, P. and Scherer, M. T. 1994 identification of two Vβ7-specific viral superantigens J. Immunol. 152:65-71.

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  $2 \times 10^7$  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  $\sim 1.0 \mu\text{g}^*$  of this Ab per  $10^6$  cells.
5. Vortex the tubes to ensure thorough mixing of antibody and cells.
6. Incubate the tubes for 30 minutes at  $4^\circ\text{C}$ .
7. Wash 2 times at  $4^\circ\text{C}$ .
8. Add 100  $\mu$ l of secondary antibody (Streptavidin-PE) at a 1:50 dilution.
9. Incubate tubes at  $4^\circ\text{C}$  for 30 - 60 minutes (It is recommended that tubes are protected from light since most fluorochromes are light sensitive).
10. Wash 2 times at  $4^\circ\text{C}$ .
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:**

(Representative dot blot)

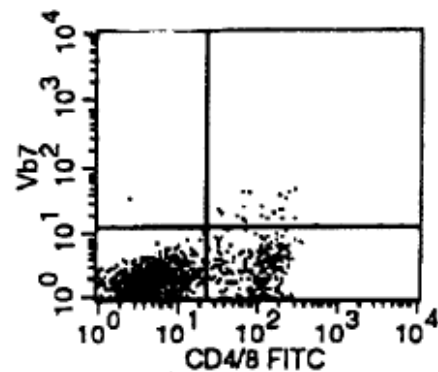
Mouse Strain: C3H.SW

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

Antibody Concentration Used:  $1.0 \mu\text{g}/10^6$  cells

Isotypic Control: Biotin Rat IgG2b

Pictures:



Cell source: Spleen  
Percentage of cells stained above control: 1.6%