



CELL LAB Mouse Anti-Chicken TCR

Cat. No.	Form	Quantity
733054	Purified (UNLB) Antibody	0.5 mg
733055	Fluorescein (FITC) Conjugate	0.5 mg
733056	Biotin (BIOT) Conjugate	0.5 mg
733057	Phycoerythrin (PE) Conjugate	0.1 mg

For Laboratory Use Only

DESCRIPTION

Clone: TCR-2
Isotype: Mouse IgG1 κ
Specificity: Chicken TCR $\alpha\beta$ (V β_1)

Monoclonal antibody (MAb) TCR-2 precipitates a CD3-associated heterodimer of Mr 90 kDa (two bands of Mr 40 kDa and 50 kDa upon reduction) on chicken peripheral blood T cells.¹ Deglycosylation of the heterodimer yields two polypeptides of Mr 34 kDa and 29 kDa from TCR-2 precipitates. In the chicken, two distinct subpopulations of $\alpha\beta$ T cells appear in the thymus subsequent to the appearance of $\gamma\delta$ T cells. These subpopulations, originally denoted as TCR-2 and TCR3,¹⁻³ arise sequentially in the thymus during ontogeny and are now known to represent two distinct V β families, V β_1 and V β_2 , respectively.⁴ The TCR-2 MAb reacts with approximately 40% of thymocytes, 40-50% of blood mononuclear cells and 40% of splenocytes in the chicken. Two-color immunofluorescence has revealed that most of the TCR-2⁺ thymocytes express both CD4 and CD8 antigens. The TCR-2⁺ cells in blood were found to express either CD4 (74 \pm 2%) or CD8 (26 \pm 4%). TCR-2⁺ cells in the spleen also express either CD4 (37 \pm 1%) or CD8 (64 \pm 4%).

A relatively large subpopulation of CD8⁺ cells in the spleen are negative for TCR-2.¹⁻³ This observation led to the demonstration that 71 \pm 6% of the TCR-1($\gamma\delta$)⁺ cells in the spleen express the CD8 marker.¹⁻⁴

APPLICATIONS

- Flow cytometry¹
- Immunohistochemistry (acetone-fixed, frozen sections)
- *In ovo* suppression of the development of TCR-V β_1 cells^{5,6}
- Immunoprecipitation¹

CHARACTERIZATION

To ensure lot-to-lot consistency, each batch of product is tested to conform with characteristics of a standard reference reagent using flow cytometry.

WORKING DILUTIONS

Flow Cytometry:

FITC conjugate	$\leq 1 \mu\text{g}/10^6$ cells
BIOT conjugate	$\leq 1 \mu\text{g}/10^6$ cells
PE conjugate	$\leq 0.2 \mu\text{g}/10^6$ cells

Other Applications: Since applications vary, determine the optimum working dilution of the product that is appropriate for your specific needs.

HANDLING AND STORAGE

- The purified (UNLB) antibody is supplied as 0.5 mg of purified immunoglobulin in 1.0 mL of 100 mM borate buffered saline, pH 8.0. No preservatives or amine-containing buffer salts added.
- The fluorescein (FITC) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN₃.
- The biotin (BIOT) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN₃.
- The phycoerythrin (PE) conjugate is supplied as 0.1 mg in 1.0 mL of PBS/NaN₃ and a stabilizing agent.
- Protect fluorochrome-conjugated forms from light. Do not freeze.
- Reagent is stable until the expiration date on the vial when stored at 2-8°C.

STATEMENT OF WARNINGS

1. Specimens, samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.
2. Never pipet by mouth and avoid contact of samples with skin and mucous membranes.
3. Do not use reagent beyond the expiration date on the vial label.
4. Minimize exposure of reagent to light during storage or incubation.
5. Avoid microbial contamination of reagent or erroneous results may occur.
6. Use Good Laboratory Practice (GLP) when handling this reagent.
7. Harmful if swallowed.
8. After contact with skin, wash immediately with plenty of water.
9. Contains sodium azide. Sodium azide under acidic conditions yields hydrazoic acid, an extremely toxic compound. Azide compounds should be flushed with running water while being discarded. These precautions are recommended to avoid deposits in metal piping in which explosive conditions can develop. If skin or eye contact occurs, immediately wash excessively with water.

TRADEMARKS

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For additional information or if damaged product is received, contact your local Beckman Coulter Representative.

REFERENCES

1. Chen CL, Cihak J, Losch U and Cooper MD. 1988. Differential expression of two T cell receptors, TcR1 and TcR2, on chicken lymphocytes. *Eur J Immunol*, 18:539-543.
2. Chen CH, Sowder JT, Lahti JM, Cihak J, Losch U and Cooper MD. 1989. TCR3: a third T-cell receptor in the chicken. *Proc Natl Acad Sci USA*, 86:2351-2355.
3. Char D, Sanchez P, Chen CL, Bucy RP and Cooper MD. 1990. A third sublineage of avian T cells can be identified with a T cell receptor-3-specific antibody. *J Immunol*, 145:3547-3555.
4. Chen CH, Gobel TW, Kubota T and Cooper MD. 1994. T cell development in the chicken. *Poult Sci*, 73:1012-1018.
5. Sowder JT, Chen C, Cihak J, Losch U and Cooper MD. 1988. T cell ontogeny: suppressive effects of embryonic treatment with monoclonal antibodies to T3, TCR1, or TCR2. *FASEB J*, 2:A446.
6. Cihak J, Losch U, Hoffmann-Fezer G, Chen CH, Cooper MD and Ziegler-Heitbrock HW. 1993. In vivo depletion of chicken T-cell subsets. *Scand J Immunol*, 38:123-129.



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