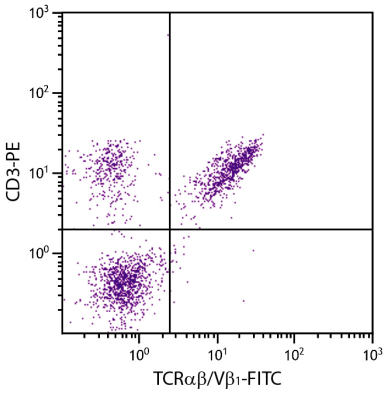
SouthernBiotech

Mouse Anti-Chicken TCRαβ/Vβ$_1$

Cat. No.	Format	Size
8240-01	Purified (UNLB)	0.5 mg
8240-02	Fluorescein (FITC)	0.5 mg
8240-08	Biotin (BIOT)	0.5 mg
8240-09	R-phycoerythrin (PE)	0.1 mg



Chicken peripheral blood lymphocytes were stained with Mouse Anti-Chicken TCRαβ/Vβ1-FITC (SB Cat. No. 8240-02) and Mouse Anti-Chicken CD3-PE (SB Cat. No. 8200-09).

Overview

Clone TCR-2
Isotype Mouse (BALB/c) IgG$_1$κ
Immunogen White Leghorn chick thymocytes and blood mononuclear cells
Specificity Chicken/Turkey/Peacock/Guinea Fowl TCRαβ/Vβ$_1$; Mr 50 & 40 kDa
Alternate Name(s) T3/TCR complex, TCR alpha/beta

Description

The monoclonal antibody TCR-2 precipitates a CD3-associated heterodimer of Mr 90 kDa (two bands of Mr 50 kDa and 40 kDa upon reduction) on chicken peripheral blood T cells. Deglycosylation of the heterodimer yields two polypeptides of Mr 34 kDa and 29 kDa. In the chicken, two distinct subpopulations of αβ T cells appear in the thymus subsequent to the appearance of γδ T cells. These subpopulations, originally denoted as TCR2 and TCR3, arise sequentially in the thymus during ontogeny and are now known to represent two distinct Vβ families, Vβ$_1$ and Vβ$_2$, respectively. The TCR-2 monoclonal antibody 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 TCR2$^+$ thymocytes express both CD4 and CD8 antigens. The TCR2$^+$ cells in blood were found to express either CD4 (74 ± 2%) or CD8 (26 ± 4%). TCR2$^+$ cells in the spleen also express either CD4 (37 ± 1%) or CD8 (64 ± 4%). Surprisingly, a relatively large subpopulation of CD8$^+$ cells in the spleen are negative for TCR2. This observation led to the demonstration that 71 ± 6% of the TCRγδ$^+$ cells in the spleen express CD8.

Applications

FC – Quality tested [2,9-12]
IHC-FS – Reported in literature [3-5,12]
IHC-PS – Reported in literature [6]
IP – Reported in literature [2,12]
Depletion – Reported in literature [7]
Stim – Reported in literature [8]

Working Dilutions

Flow Cytometry	FITC and BIOT conjugates	≤ 1 μg/10^6 cells
	PE conjugate	≤ 0.2 μg/10^6 cells
	For flow cytometry, the suggested use of these reagents is in a final volume of 100 μL	
Other Applications	Since applications vary, you should determine the optimum working dilution for the product that is appropriate for your specific need.	

For Research Use Only. Not for Diagnostic or Therapeutic Use.

Corporate Offices: 160 Oxmoor Blvd • Birmingham, AL 35209 • USA **Mailing Address:** P.O. Box 26221 • Birmingham, AL 35260 • USA
Tel: 205.945.1774 • U.S. and Canada: 800.722.2255 • **Fax:** 205.945.8768
Email: info@southernbiotech.com • **Website:** www.southernbiotech.com

Handling and Storage

- The purified (UNLB) antibody is supplied as 0.5 mg of purified immunoglobulin in 1.0 mL of borate buffered saline, pH 8.2. *No preservatives or amine-containing buffer salts added*. Store at 2-8°C.
- The fluorescein (FITC) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN_3. Store at 2-8°C.
- The biotin (BIOT) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN_3. Store at 2-8°C.
- The R-phycoerythrin (PE) conjugate is supplied as 0.1 mg in 1.0 mL of PBS/NaN_3 and a stabilizing agent. Store at 2-8°C. **Do not freeze!**
- Protect fluorochrome-conjugated forms from light. Reagents are stable for the period shown on the label if stored as directed.

Warning

Some reagents contain sodium azide. Please refer to product specific SDS.

References

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6. Solcan C, Solcan G, Cotea C. Immunotoxic action of ochratoxine A on lymphocytes from lymphoid tissues associated to gut mucosa in chickens. Bulletin UASVM Agriculture. 2010;67:283-90. (IHC-PS)
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8. Göbel TW, Schneider K, Schaerer B, Mejri I, Puehler F, Weigend S, et al. IL-18 stimulates the proliferation and IFN-γ release of $CD4^+$ T cells in the chicken: conservation of a Th1-like system in a nonmammalian species. J Immunol. 2003;171:1809-15. (Stim)
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11. Schusser B, Collarini EJ, Yi H, Izquierdo SM, Fesler J, Pedersen D, et al. Immunoglobulin knockout chickens via efficient homologous recombination in primordial germ cells. Proc Natl Acad Sci USA. 2013;110:20170-5. (FC)
12. Char D, Sanchez P, Chen CH, Bucy RP, Cooper MD. A third sublineage of avian T cells can be identified with a T cell receptor-3-specific antibody. J Immunol. 1990;145:3547-55. (IP, FC, IHC-FS, Turkey, Peacock, and Guinea Fowl Reactivity)

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