

## Mouse Anti-Human CD4

Cat. No.	Form	Quantity
9522-01	Purified (UNLB) Antibody	0.1 mg
9522-02	Fluorescein (FITC) Conjugate	100 tests
9522-08	Biotin (BIOT) Conjugate	100 tests
9522-09	R-phycoerythrin (R-PE) Conjugate	100 tests
9522-10	R-phycoerythrin-Texas Red® (R-PE-TXRD) Conjugate	100 tests
9522-11	Allophycocyanin (APC) Conjugate	100 tests
9522-13	*Spectral Red™ (SPRD) Conjugate	100 tests
9522-14	Low Endotoxin, Azide-Free (LE/AF)	0.1 mg
9522-15	**Cyanine 5 (CY™5) Conjugate	100 tests
9522-16	**R-phycoerythrin-Cyanine 5.5 (R-PE-CY™5.5) Conjugate	100 tests
9522-17	**R-phycoerythrin-Cyanine 7 (R-PE-CY™7) Conjugate	100 tests
9522-19	** Allophycocyanin -Cyanine 7 (APC-CY™7) Conjugate	100 tests

### DESCRIPTION

<b>Clone</b>	RFT-4g
<b>Ig Isotype</b>	Mouse IgG <sub>1</sub>
<b>Specificity</b>	Human CD4

CD4 is a 59 kDa type I transmembrane glycoprotein and a member of the Ig-SF of cell surface receptors. It is expressed predominantly on the “helper/inducer” subpopulation of mature T lymphocytes, and on monocytes and macrophages. Domains 1 and 2 bind to MHC Class II antigens, while domains 3 and 4 may be involved in cis interactions with the CD3/TCR complex. CD4 functions as an accessory molecule in the recognition of foreign antigens in association with MHC Class II antigens by T cells.<sup>1-6</sup>

### RESEARCH APPLICATIONS

- Flow cytometry
- Immunohistochemistry (frozen sections)
- Immunoprecipitation

### CHARACTERIZATION

To insure lot-to-lot consistency, each batch of product is tested by flow cytometry to conform to the characteristics of a standard reference reagent.

### WORKING DILUTIONS

<b>Flow Cytometry:</b>	Purified antibody	≤ 1 µg/10 <sup>6</sup> cells
	Fluorescein conjugate	10 µL/10 <sup>6</sup> cells
	Biotin conjugate	10 µL/10 <sup>6</sup> cells
	R-phycoerythrin conjugate	10 µL/10 <sup>6</sup> cells
	R-phycoerythrin conjugate-Texas Red®	10 µL/10 <sup>6</sup> cells
	Allophycocyanin conjugate	10 µL/10 <sup>6</sup> cells
	Spectral Red™ conjugate	10 µL/10 <sup>6</sup> cells
	Cyanine 5 conjugate	10 µL/10 <sup>6</sup> cells
	R-phycoerythrin-Cyanine 5.5 conjugate	10 µL/10 <sup>6</sup> cells
	R-phycoerythrin-Cyanine 7 conjugate	10 µL/10 <sup>6</sup> cells
	Allophycocyanin -Cyanine 7 conjugate	10 µL/10 <sup>6</sup> cells

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

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

## HANDLING AND STORAGE

- The purified (UNLB) antibody is supplied as 0.1 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.* Store at 2-8°C.
- The fluorescein (FITC) and Cyanine 5 (CY<sup>TM</sup>5) conjugates are supplied as 100 tests in 1.0 mL PBS/NaN<sub>3</sub>. Store at 2-8°C.
- The biotin (BIOT) conjugate is supplied as 100 tests in 1.0 mL PBS/NaN<sub>3</sub>. Store at 2-8°C.
- The R-phycoerythrin (R-PE) and Allophycocyanin (APC) conjugates are supplied as 100 tests in 1.0 mL of PBS/NaN<sub>3</sub> and a stabilizing agent. Store at 2-8°C. **Do not freeze!**
- The Spectral Red<sup>TM</sup> (SPRD), R-phycoerythrin -Texas Red<sup>®</sup> (R-PE-TXRD), R-phycoerythrin-Cyanine 5.5 (R-PE-CY<sup>TM</sup>5.5), R-phycoerythrin-Cyanine 7 (R-PE-CY<sup>TM</sup>7) and Allophycocyanin-Cyanine 7 (APC-CY<sup>TM</sup>7) conjugates are supplied as 100 tests in 1.0 mL of PBS/NaN<sub>3</sub> and a stabilizing agent. Store at 2-8°C. **Do not freeze!**
- The low endotoxin, azide-free (LE/AF) antibody is supplied as 0.5 mg purified immunoglobulin in 0.2 mL of PBS. **Aliquot and store at or below -20°C.**
- Protect conjugated forms from light. Aliquot and freeze the low endotoxin, azide-free product at -20°C immediately upon receipt. Each reagent is stable for the period shown on the bottle label if stored as directed.

## WARNING

Reagents contain sodium azide which is very toxic if ingested or inhaled. Avoid contact with skin, eyes, or clothing. Wear eye or face protection when handling. If skin or eye contact occurs, wash with copious amounts of water. If ingested or inhaled, contact a physician immediately. Sodium azide yields toxic hydrazoic acid under acidic conditions. Dilute azide-containing compounds in running water before discarding to avoid accumulation of potentially explosive deposits in lead or copper plumbing.

## REFERENCES

1. McMichael, A.K., P.C.L. Beverly, S. Cobbold, M.J. Crumpton, W. Gilks, F.M. Gotch, N. Hogg, M. Horton, N. Ling, I.C.M. MacLennan, D.Y. Mason, C. Milstein, D. Spiegelhalter, and H. Waldmann, eds. 1987. *Leukocyte Typing III: White Cell Differentiation Antigens*, Oxford University Press, Oxford.
2. Barclay, A.N., M.H. Brown, S.K.A. Law, A.J. McKnight, M.G. Tomlinson, and P.A. van der Merwe, eds. 1997. *The Leukocyte Antigens Facts Book, 2nd Edition*, CD4 Section, Academic Press, New York, p. 141.
3. Parne, J.R. 1984. *Adv. Immunol.* 44:265.
4. Littman, D.R., ed. 1996. The CD4 Molecule. In: *Curr. Top. Microbiol. Immunol.* 205.
5. Sakihama, T., A. Smolyar, and E.L. Reinherz. 1995. *Immunol. Today* 16:581.
6. Vignali, D.A., R.T. Carson, B. Chang, R.S. Mittler, and J.L. Strominger. 1996. *J. Exp. Med.* 183:2097.

Texas Red<sup>®</sup> is a registered trademark of Molecular Probes, Inc.

Spectral Red<sup>TM</sup> is a registered trademark of Southern Biotechnology Associates, Inc.

\*Spectral Red<sup>TM</sup> is a PE/Cy<sup>TM</sup>5 tandem conjugate. \*\*Cy<sup>TM</sup>5, Cy<sup>TM</sup>7 and Cy<sup>TM</sup>5.5 are trademarks of Amersham Biosciences Corp. Cy<sup>TM</sup>5, Cy<sup>TM</sup>7 and Cy<sup>TM</sup>5.5 are for non-commercial research use only, not for therapeutic or in vivo applications. Other use needs license from Amersham Biosciences Corp., under U.S. Patent Nos. 4,981,977 and 5,268,486 and other patents pending. This material (or portions of this material) is subject to proprietary rights of Amersham Biosciences Corp. and Carnegie Mellon University and made and sold under license from Amersham Biosciences Corp.. This product is licensed for sale only for research. It is not licensed for any other use. There is no implied license hereunder for any commercial use. Commercial Use shall include; 1. sale, lease, license or other transfer of the material or any material derived or produced from it. 2. sale, lease, license or other grant of rights to use this material or any material derived or produced from it. 3. Use of this material to perform services for a fee for third parties. If you require a commercial license to use this material and do not have one, return this material, unopened to Southern Biotechnology, 160A Oxmoor Blvd, Birmingham, AL 35209, USA and any money paid for the material will be refunded.