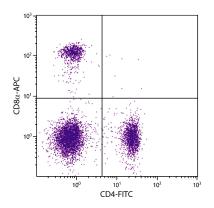
# SouthernBiotech T



## Rat Anti-Mouse CD8a

Cat. No.	Format	Size
1550-01	Purified (UNLB)	0.5 mg
1550-02	Fluorescein (FITC)	0.5 mg
1550-02S	Fluorescein (FITC)	0.1 mg
1550-08	Biotin (BIOT)	0.5 mg
1550-09	R-phycoerythrin (PE)	0.1 mg
1550-09L	R-phycoerythrin (PE)	0.2 mg
1550-10	R-phycoerythrin-Texas Red® (PE/TXRD)	0.1 mg
1550-11	Allophycocyanin (APC)	0.1 mg
1550-13	Spectral Red® (SPRD)	0.1 mg
1550-14	Low Endotoxin, Azide-Free (LE/AF)	0.5 mg
1550-15	Cyanine 5 (CY5)	0.1 mg
1550-16	R-phycoerythrin-Cyanine 5.5 (PE/CY5.5)	0.1 mg
1550-17	R-phycoerythrin-Cyanine 7 (PE/CY7)	0.1 mg
1550-18	Allophycocyanin-Cyanine 5.5 (APC/CY5.5)	0.1 mg
1550-19	Allophycocyanin-Cyanine 7 (APC/CY7)	0.1 mg
1550-26	Pacific Blue™ (PACBLU)	0.1 mg
1550-27	Alexa Fluor® 700 (AF700)	0.1 mg
1550-30	Alexa Fluor® 488 (AF488)	0.1 mg
1550-31	Alexa Fluor <sup>®</sup> 647 (AF647)	0.1 mg



BALB/c mouse splenocytes were stained with Rat Anti-Mouse CD8 $\alpha$ -APC (SB Cat. No. 1550-11) and Rat Anti-Mouse CD4-FITC (SB Cat. No. 1540-02).

#### **Overview**

**Clone** 53-6.7

Isotype Rat (LOU/Ws1/M) IgG<sub>2a</sub>κ

Immunogen Spleen cells or thymocyte membranes

 $\begin{array}{ll} \textbf{Specificity} & \textbf{Mouse CD8}\alpha; \ \textbf{Mr} \ 32\text{-}34 \ \textbf{kDa} \\ \textbf{Alternate Name(s)} & \textbf{Ly-2, Ly-35, Ly-B, T8} \\ \end{array}$ 

#### **Description**

In the mouse, CD8 exists in two forms – (i) a CD8 heterodimer composed of an  $\alpha$  chain (CD8 $\alpha$ ) and a  $\beta$  chain (CD8 $\beta$ ); and (ii) a homodimer of two  $\alpha$  chains. The heterodimer is found on the surface of essentially all thymocytes and the "suppressor/cytotoxic" subpopulation of mature T lymphocytes. Subsets of intestinal intraepithelial lymphocytes express CD8 $\alpha$  without CD8 $\beta$ . It has been suggested that CD8 $^+\beta^-$  T cells mature extrathymically, while development of the CD8 $\alpha^+\beta^+$  population of T cells is thymus-dependent. CD8 acts as a coreceptor with MHC Class I-restricted T cell receptors in antigen recognition and positive selection of MHC class I-restricted CD8 $^+$  T cells. *In vivo* and *in vitro* treatment with the 53-6.7 monoclonal antibody effectively depletes CD8 $\alpha^+$  cells. The 53-6.7 monoclonal antibody also blocks allogeneic help specific for class I MHC antigens and T cell responses to IL-2.

#### **Applications**

FC – Quality tested <sup>1,6,7,9-15</sup> IHC-FS – Reported in literature <sup>2-5</sup> ICC – Reported in literature <sup>7</sup> IP – Reported in literature <sup>1,6</sup> Depletion – Reported in literature <sup>8</sup> Block – Reported in literature <sup>6</sup>

### **Working Dilutions**

Flow Cytometry	Purified (UNLB) antibody	≤ 2 μg/10 <sup>6</sup> cells
	FITC and BIOT conjugates	$\leq 2 \mu g/10^6$ cells
	AF488 conjugate	$\leq$ 1 $\mu$ g/10 <sup>6</sup> cells
	PE, APC, SPRD, PE/TXRD, CY5, PE/CY5.5, PE/CY7,	≤ 0.2 µg/10 <sup>6</sup> cells

APC/CY5.5, APC/CY7, PACBLU, AF647, and AF700 conjugates

For flow cytometry, the suggested use of these reagents is in a final volume of 100  $\mu$ L

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.

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 or 0.1 mg in 1.0 mL of PBS/NaN₃. Store at 2-8°C.
- The biotin (BIOT) conjugate is supplied as 0.5 mg in 1.0 mL of PBS/NaN<sub>3</sub>. Store at 2-8°C.
- The R-phycoerythrin (PE) conjugate is supplied as 0.1 mg in 1.0 mL or 0.2 mg in 2.0 mL of PBS/NaN₃ and a stabilizing agent. Store at 2-8°C. **Do not freeze!**
- The allophycocyanin (APC) conjugate is supplied as 0.1 mg 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® (SPRD), R-phycoerythrin-Cyanine 7 (PE/CY7), R-phycoerythrin-Cyanine 5.5 (PE/CY5.5), allophycocyanin-Cyanine 5.5 (APC/CY5.5), allophycocyanin-Cyanine 7 (APC/CY7), and R-phycoerythrin-Texas Red® (PE/TXRD) conjugates are supplied as 0.1 mg in 1.0 mL of PBS/NaN₃ 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 1.0 mL of PBS. Contains no preservative; handle under aseptic conditions. Store at 2-8°C or aliquot into smaller volumes and store at -20°C. Avoid multiple freeze / thaw cycles.
- The Alexa Fluor<sup>®</sup> 488 (AF488), Alexa Fluor<sup>®</sup> 647 (AF647), Alexa Fluor<sup>®</sup> 700 (AF700), and Pacific Blue<sup>™</sup> (PACBLU) conjugates are supplied as 0.1 mg in 0.2 mL of PBS/NaN<sub>3</sub>. Store at 2-8°C.
- The Cyanine 5 (CY5) conjugate is supplied as 0.1 mg in 1.0 mL of PBS/NaN<sub>3</sub>. Store at 2-8°C.
- 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

- Ledbetter JA, Herzenberg LA. Xenogeneic monoclonal antibodies to mouse lymphoid differentiation antigens. Immunol Rev. 1979;47:63-90. (Immunogen, IP, FC)
- Konno A, Takada K, Saegusa J, Takiguchi M. Presence of B7-2<sup>+</sup> dendritic cells and expression of Th1 cytokines in the early development of sialodacryoadenitis in the IQI/Jic mouse model of primary Sjörgren's syndrome. Autoimmunity. 2003;36:247-54. (IHC-FS)
- 3. Delong P, Tanaka T, Kruklitis R, Henry AC, Kapoor V, Kaiser LR, et al. Use of cyclooxygenase-2 inhibition to enhance the efficacy of immunotherapy. Cancer Res. 2003;63:7845-52. (IHC-FS)
- 4. Wehling-Henricks M, Jordan MC, Gotoh T, Grody WW, Roos KP, Tidball JG. Arginine metabolism by macrophages promotes cardiac and muscle fibrosis in mdx muscular dystrophy. PloS One. 2010;5(5):e10763. (IHC-FS)
- Kunikata N, Sano K, Honda M, Ishii K, Matsunaga J, Okuyama R, et al. Peritumoral CpG oligodeoxynucleotide treatment inhibits tumor growth and metastasis of B16F10 melanoma cells. J Invest Dermatol. 2004;123:395-402. (IHC-FS)
- Ledbetter JA, Seaman WE, Tsu TT, Herzenberg LA. Lyt-2 and lyt-3 antigens are on two different polypeptide subunits linked by disulfide bonds. Relationship of subunits to T cell cytolytic activity. J Exp Med. 1981;153:1503-16. (IP, FC, Block)
- 7. Choi J, Oh S, Lee D, Oh HJ, Park JY, Lee SB, et al. Mst1-FoxO signaling protects naïve T lymphocytes from cellular oxidative stress in mice. PloS One. 2009;4(11):e8011. (FC, ICC)
- B. Hathcock KS. T cell depletion by cytotoxic elimination. Curr Protoc Immunol. 1991;3:4.1. (Depletion)
- Lagrota-Candido J, Vasconcellos R, Cavalcanti M, Bozza M, Savino W, Quirico-Santos T. Résolution of skeletal muscle inflammation in mdx dystrophic mouse is accompanied by increased immunoglobulin and interferon-γ production. Int J Exp Path. 2002;83:121-32. (FC)
- Parmo-Cabañas M, García-Bernal D, García-Verdugo R, Kremer L, Márquez G, Teixidó J. Intracellular signaling required for CCL25-stimulated T cell adhesion mediated by the integrin α4β1. J Leukoc Biol. 2007;82:380-91. (FC)
- 11. Fink LN, Frøkiær H. Dendritic cells from Peyer's patches and mesenteric lymph nodes differ from spleen dendritic cells in their response to commensal gut bacteria. Scand J Immunol. 2008;68:270-9. (FC)
- 12. Jordan KR, Buhrman JD, Sprague J, Moore BL, Gao D, Kappler JW, et al. TCR hypervariable regions expressed by T cells that respond to effective tumor vaccines. Cancer Immunol Immunother. 2012;61:1627-38. (FC)
- 13. Elgbratt K, Jansson A, Hultgren-Hörnquist E. A quantitative study of the mechanisms behind thymic atrophy in Gαi2-deficient mice during colitis development. PLoS One. 2012;7(5):e36726. (FC)
- 14. Domingos-Pereira S, Decrausaz L, Derré L, Bobst M, Romero P, Schiller JT, et al. Intravaginal TLR agonists increase local vaccine-specific CD8 T cells and human papillomavirus-associated genital-tumor regression in mice. Mucosal Immunol. 2013;6:393-404. (FC)
- 15. Grodeland G, Mjaaland S, Roux KH, Fredriksen AB, Bogen B. DNA vaccine that targets hemagglutinin to MHC class II molecules rapidly induces antibody-mediated protection against influenza. J Immunol. 2013;191:3221-31. (FC)

Texas Red® is a registered trademark of Molecular Probes, Inc.

Spectral Red® is a registered trademark of Southern Biotechnology Associates, Inc.

Spectral Red® is a PE/CY5 tandem conjugate.

Cy™ is a trademark of Cytiva or one of its subsidiaries.

Alexa Fluor® 488, 647, 700 and Pacific Blue™ are provided under an agreement between Molecular Probes, Inc. (a wholly owned subsidiary of Invitrogen Corporation), and Southern Biotechnology Associates, Inc., and the manufacture, use, sale or import of this product may be subject to one or more U.S. patents, pending applications, and corresponding non-U.S. equivalents, owned by Molecular Probes, Inc. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product (bits components or (c) materials made using this product or its components to a third party or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes. Commercial Purposes means any activity by a party for consideration and may include, but is not limited to: (1) use of the product or its components in manufacturing; (2) use of the product or its components to provide a service, information, or data; (3) use of the product or its components for therapeutic, diagnostic or prophylactic purposes; or (4) resale of the product or its components, whether or not such product or its components are resold for use in research. For information on purchasing a license to this product for any other use, contact Molecular Probes, Inc., Business Development, 29851 Willow Creek Road, Eugene, OR 97402, USA, Tel: (541) 465-8300. Fax: (541) 335-0504.

TB1550 07-Oct-21

Email: info@southernbiotech.com • Website: www.southernbiotech.com