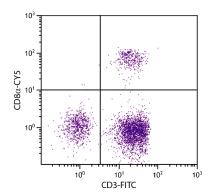
# SouthernBiotech 1



# Mouse Anti-Chicken CD8α

Cat. No.	Format	Size
8220-01	Purified (UNLB)	0.5 mg
8220-02	Fluorescein (FITC)	0.5 mg
8220-08	Biotin (BIOT)	0.5 mg
8220-09	R-phycoerythrin (PE)	0.1 mg
8220-11	Allophycocyanin (APC)	0.1 mg
8220-13	Spectral Red® (SPRD)	0.1 mg
8220-15	Cyanine 5 (CY5)	0.1 mg
8220-26	Pacific Blue™ (PACBLU)	0.1 mg
8220-27	Alexa Fluor® 700 (AF700)	0.1 mg
8220-30	Alexa Fluor® 488 (AF488)	0.1 mg
8220-31	Alexa Fluor® 647 (AF647)	0.1 mg



Chicken peripheral blood lymphocytes were stained with Mouse Anti-Chicken CD8 $\alpha$ -CY5 (SB Cat. No. 8220-15) and Mouse Anti-Chicken CD3-FITC (SB Cat. No. 8200-02).

## **Overview**

Clone CT-8

**Isotype** Mouse (BALB/c)  $IgG_1\kappa$ 

ImmunogenChicken thymocytes and Ig-negative blood leukocytesSpecificityChicken/Turkey/Guinea Fowl/Pigeon CD8α; Mr 34 kDa

Alternate Name(s) N/A

# **Description**

In the chicken, the CD8 molecule is present in two forms - (i) a homodimer of two  $\alpha$  chains and (ii) a heterodimer of an  $\alpha$  chain and a  $\beta$  chain. While the vast majority of CD8 $^+$  cells in the thymus, spleen, and blood of adult chickens express both CD8 $\alpha$ - and CD8 $\beta$ -chains, a relatively large proportion of the CD8 $^+$  TCR $\gamma\delta$  cells in the spleens of embryos and young chicks express only the  $\alpha$ -chain of CD8. Among intestinal epithelial lymphocytes, the major CD8 $^+$  T cell populations present in mice are conserved but there is a population of TCR $\gamma\delta$  CD8 $\alpha\beta$  cells in the chicken that is not found in rodents. Chicken CD8 is expressed on approximately 80% of thymocytes, 15% of blood mononuclear cells, and 50% of spleen cells but less than 1% of cells in the bursa and bone marrow. The monoclonal antibody CT-8 recognizes the CD8 $\alpha$  chain and has been shown to react to a polymorphic determinant in turkey.

#### **Applications**

FC – Quality tested <sup>1,9-16,18</sup> IHC-FS – Reported in literature <sup>2-5</sup> IHC-PS – Reported in literature <sup>17</sup> ICC – Reported in literature <sup>17</sup> IP – Reported in literature <sup>1,17</sup> Block – Reported in literature <sup>1</sup>

## **Working Dilutions**

Flow Cytometry FITC, BIOT, AF488, and PACBLU conjugates  $\leq 1 \,\mu g/10^6 \, cells$  PE and CY5 conjugates  $\leq 0.2 \,\mu g/10^6 \, cells$  APC, SPRD, AF647, and AF700 conjugates  $\leq 0.1 \,\mu g/10^6 \, cells$ 

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.

# **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<sub>3</sub>. 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) and allophycocyanin (APC) 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 Spectral Red<sup>®</sup> (SPRD) conjugate is 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 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.
- The Pacific Blue™ (PACBLU), Alexa Fluor® 488 (AF488), Alexa Fluor® 647 (AF647), and Alexa Fluor® 700 (AF700) conjugates are supplied as 0.1 mg in 0.2 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

- 1. Chan MM, Chen CH, Ager LL, Cooper MD. Identification of the avian homologues of mammalian CD4 and CD8 antigens. J Immunol. 1988;140:2133-8. (Immunogen, FC, IP, Block)
- 2. Tanimura N, Sharma JM. Appearance of T cells in the bursa of Fabricius and cecal tonsils during the acute phase of infectious bursal disease virus infection in chickens. Avian Dis. 1997;41:638-45. (IHC-FS)
- 3. Pantin-Jackwood MJ, Brown TP, Huff GR. Proventriculitis in broiler chickens: immunohistochemical characterization of the lymphocytes infiltrating the proventricular glands. Vet Pathol. 2004;41:641-8. (IHC-FS)
- 4. Abdul-Careem MK, Hunter DB, Thanthrige-Don N, Haghighi HR, Lambourne MD, Sharif S. Cellular and cytokine responses associated with dinitrofluorobenzene-induced contact hypersensitivity in the chicken. Vet Immunol Immunopathol. 2008;122:275-84. (IHC-FS)
- 5. Rauf A, Khatri M, Murgia MV, Saif YM. Fas/FasL and perforin-granzyme pathways mediated T cell cytotoxic responses in infectious bursal disease virus infected chickens. Results Immunol. 2012;2:112-9. (IHC-FS)
- 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)
- 7. Rebel JM, Peeters B, Fijten H, Post J, Cornelissen J, Vervelde L. Highly pathogenic or low pathogenic avian influenza virus subtype H7N1 infection in chicken lungs: small differences in general acute responses. Vet Res. 2011;42:10. (IHC-PS)
- 8. Teixeira AR, Gomes C, Nitz N, Sousa AO, Alves RM, Guimaro MC, et al. Trypanosoma cruzi in the chicken model: Chagas-like heart disease in the absence of parasitism. PLoS Negl Trop Dis. 2011;5(3):e1000. (IHC-PS)
- 9. Li Z, Nestor KE, Saif YM, Fan Z, Luhtala M, Vainio O. Cross-reactive anti-chicken CD4 and CD8 monoclonal antibodies suggest polymorphism of the turkey CD8α molecule. Poult Sci. 1999;78:1526-31. (FC, Turkey Polymorphic Determinant Reactivity)
- 10. Sheela RR, Babu U, Mu J, Elankumaran S, Bautista DA, Raybourne RB, et al. Immune responses against Salmonella enterica serovar enteritidis infection in virally immunosuppressed chickens. Clin Diagn Lab Immunol. 2003;10:670-9. (FC)
- 11. Norup LR, Dalgaard TS, Pedersen AR, Juul-Madsen HR. Assessment of Newcastle disease-specific T cell proliferation in different inbred MHC chicken lines. Scand J Immunol. 2011;74:23-30. (FC)
- 12. Xue M, Shi X, Zhao Y, Cui H, Hu S, Cui X, et al. Effects of reticuloendotheliosis virus infection on cytokine production in SPF chickens. PLoS One. 2013;8(12):e83918. (FC)
- 13. Laniewski P, Kuczkowski M, Chrząstek K, Woźniak A, Wyszyńska A, Wieliczko A, et al. Evaluation of the immunogenicity of Campylobacter jejuni CjaA protein delivered by Salmonella enterica sv. Typhimurium strain with regulated delayed attenuation in chickens. World J Microbiol Biotechnol. 2014;30:281-92. (FC)
- Peng X, Zhang K, Bai S, Ding X, Zeng Q, Yang J, et al. Histological lesions, cell cycle arrest, apoptosis and T cell subsets changes of spleen in chicken fed aflatoxin-contaminated corn. Int J Environ Res Public Health. 2014;11:8567-80. (FC)
- Machado PC Jr, Beirão BC, Filho TF, Lourenço MC, Joineau ML, Santin E, et al. Use of blends of organic acids and oregano extracts in feed and water of broiler chickens to control Salmonella Enteritidis persistence in the crop and ceca of experimentally infected birds. J Appl Poult Res. 2014;23:671-82. (FC)
- 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. (FC, Turkey and Guinea Fowl Reactivity)
- 17. Hu Q, Pan Z, Deen S, Meng S, Zhang X, et al. New alleles of chicken CD8α and CD3d found in Chinese native and western breeds. Vet Immunol Immunopathol. 2007;120:223-33. (IP, ICC)
- 18. Dudek K, Bednarek D. Cellular immune response of pigeons in the conditions of endotoxin fever and pyrogenic tolerance. Pol J Vet Sci. 2011;14:127-33. (FC, Pigeon Reactivity)

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

Spectral Red® is a PE/CY5 tandem conjugate.

Cy® is a registered trademark of GE Healthcare.

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 (b) its 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 Probes, Inc., Business Development, 29851 Willow Creek Road, Eugene, OR 97402, USA, Tel: (541) 465-8300. Fax: (541) 335-0504.

TB8220 09-Jul-18