

## TECHNICAL DATA SHEET

# violetFluor™ 500 Anti-Mouse CD8a (2.43)

Catalog Number: 85-1886

## PRODUCT INFORMATION

**Contents:** violetFluor™ 500 Anti-Mouse CD8a (2.43)

**Isotype:** Rat IgG2b

**Concentration:** 0.2 mg/mL

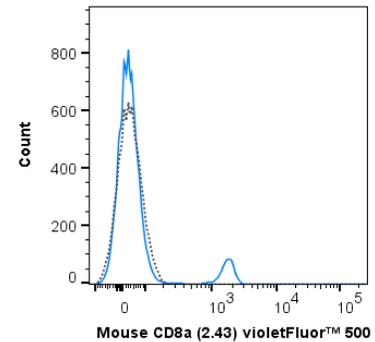
**Clone:** 2.43

**Reactivity:** Mouse

**Use By:** 6 months from date of receipt

**Storage Conditions:** 2-8°C protected from light

**Formulation:** 10 mM NaH<sub>2</sub>PO<sub>4</sub>, 150 mM NaCl, 0.09% NaN<sub>3</sub>, 0.1% gelatin, pH7.2



C57Bl/6 splenocytes were stained with 0.25 ug Anti-Mouse CD8a violetFluor™ 500 (85-1886) (solid line) or 0.125 ug Rat IgG2b violetFluor™ 500 isotype control (dashed line).

## DESCRIPTION

The 2.43 antibody reacts with the 32-34 kDa alpha subunit of mouse CD8, known as CD8a or CD8 alpha. CD8a can form a homodimer (CD8 alpha-alpha), but is more commonly expressed as a heterodimer with a second chain known as CD8b or CD8 beta. CD8 acts as a co-receptor in antigen recognition and subsequent T cell activation induced by binding of the T cell receptor (TCR) to antigen-bearing MHC Class I molecules. The cytoplasmic domains of CD8 provide binding sites for the tyrosine kinase lck and facilitate intracellular signaling events that lead to T cell activation, development, and cytotoxic effector functions. CD8+ cytotoxic T cells (CTLs) play an important role in inducing cell death in tumor cells, as well as in cells infected by virus, bacteria or parasites. The 2.43 antibody is widely used as a phenotypic marker for mouse CD8 on cytotoxic T cells, thymocytes, as well as on certain cell types that do not also express the TCR, including some NK cells and lymphoid dendritic cells.

## PREPARATION & STORAGE

This monoclonal antibody was purified from tissue culture supernatant via affinity chromatography. The purified antibody was conjugated under optimal conditions, with unreacted dye removed from the preparation. It is recommended to store the product undiluted at 4°C, and protected from prolonged exposure to light. Do not freeze.

## APPLICATION NOTES

This antibody preparation has been quality-tested for flow cytometry using mouse spleen cells, or an appropriate cell type (where indicated). Please refer to the figure legend for the optimal concentration used to stain the tissue shown. We recommend titrating the antibody under your specific conditions to determine the optimal concentration of antibody needed in your experimental system.

violetFluor™ 500 dye is excited by the violet (405 nm) laser and has a peak emission of 500 nm. The recommended band pass filter for this dye is 525/20. violetFluor™ 500 can be used as an alternative for BD Horizon™ V500, eFluor® 506 or Pacific Orange®.

## REFERENCES

- Lin J-S, Szaba FM, Kummer LW, Chromy BA, and Smiley ST. 2011. J. Immunol. 187: 897-904. (in vivo depletion)Wozniak KL, Young ML, and Wormley FL. 2011. Clin. Vaccine Immunol. 18(5):717-723. (in vivo depletion)Hufford MM, Kim TS, Sun J, and Braciale TJ. 2011. J. Exp. Med. 208: 167-180 (in vivo depletion) Ou R, zhang M, Huang L, Flavell RA, Koni PA, and Moskophidis D. 2008. J. Virol. 82:2952-2965. (Immunohistochemistry – OCT embedded frozen tissue) Bosselut R, Zhang W, Ashe JM, Kopacz JL, Samelson LE, and Singer A. 1999. J. Exp. Med. 190: 1517-1526. (in vitro activation)Davies A, Kalb, S, Liang B, Aldrich CJ, Lemonnier FA, Jiang H, Cotter R, and Soloski MJ. 2003. J. Immunol. 170: 5027-5033. (Blocking)

Tonbo Biosciences tests all antibodies by flow cytometry. Citations are provided as a resource for additional applications that have not been validated by Tonbo Biosciences. Please choose the appropriate format for each application and consult Materials and Methods sections for additional details about the use of any product in these publications.

For Research Use Only.

Not for use in diagnostic or therapeutic procedures. Not for resale. Not for distribution without written consent. Tonbo Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Tonbo Biosciences, Tonbo Biosciences Logo and all other trademarks are the property of Tonbo Biotechnologies Corporation. © 2013 Tonbo Biosciences.