

TECHNICAL DATA SHEET

# violetFluor™ 500 Anti-Human CD8a (RPA-T8)

Catalog Number: 85-0088

## PRODUCT INFORMATION

**Contents:** violetFluor™ 500 Anti-Human CD8a (RPA-T8)

**Isotype:** Mouse IgG1, kappa

**Concentration:** 5 uL (0.5 ug)/test

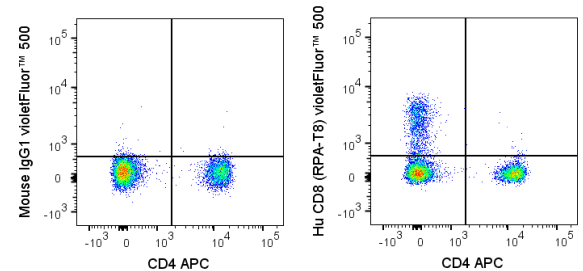
**Clone:** RPA-T8

**Reactivity:** Human

**Use By:** 12 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



Human peripheral blood lymphocytes were stained with APC Anti-Human CD4 (20 -0047) and 5 uL (0.5 ug) violetFluor™ 500 Anti-Human CD8 (85-0088) (right panel) or 0.5 ug violetFluor™ 500 Mouse IgG1 isotype control (left panel).

## DESCRIPTION

The RPA-T8 antibody is specific for the 32-34 kDa alpha chain of human 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 for antigen recognition and subsequent T cell activation that is initiated upon 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, facilitating 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 of tumor cells, as well as cells infected by virus, bacteria or parasites. The RPA-T8 antibody is widely used as a phenotypic marker for 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. It is cross-reactive with CD8 in several non-human species, including Baboon, Chimpanzee, Cynomolgus and Rhesus. If used together with an alternative Anti-Human CD8a clone, Hit8a, the RPA-T8 antibody will not block binding of Hit8a to CD8a.

## 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 pre-titrated and quality-tested for flow cytometry using an appropriate cell type. The antibody has been diluted for use at 5 uL per test, defined as the amount of antibody that will stain a cell sample in a final volume of approximately 100 uL. The number of cells within a sample should be determined empirically, but typically ranges between 1x10<sup>5</sup> to 1x10<sup>8</sup> cells.

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 or Pacific Orange®.

## REFERENCES

Estes JD, Gordon SN, Zeng M, Chahroudi AM, Dunham RM, Staprans SI, Reilly CS, Silvestri G, and Haase AT. 2008. *J. Immunol.* 180: 6798-6807. (Flow cytometry - Rhesus macaque and Sooty Mangabey)Chlereth B, Fichtner I, Lorenczewski G, Kleindienst P, Brischwein K, da Silva A, Kufer P, Lutterbueser R, Junghahn I, Kasimir-Bauer S, Wimberger P, Kimmig R and Baeuerle PA. 2005. *Cancer Res.* 65: 2882-2889. (Immunohistochemistry – frozen tissue)Mack CL, Tucker RM, Sokol RJ, Darrer FM, Kotzin BL, Whittington PF and Miller SD. 2004. *Pediatr. Res.* 56(1):79-87. (Immunohistochemistry – frozen tissue)Huang Z-Y, Hunter S, Kim M-K, Chien P, Worth RG, Indik ZK, and Schreiber AD. 2004. *J. Leukoc. Biol.* 76:491-499. (in vitro activation)Kayagaki N, Yamaguchi N, Nagao F, Matsuo S, Maeda H, Okumura K, and Yagita H. 1997. *Proc. Natl. Acad. Sci.* 94:3914-3919. (Immunoprecipitation – transfected cells)Deng MC, Bell S, Huie P, Pinto F, Hunt SA, Stinson EB, Sibley R, Hall BM, and Valantine HA. 1995. *Circulation.* 91: 1647-1654. (Immunohistochemistry – OCT embedded frozen tissue)

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.