

TECHNICAL DATA SHEET

# violetFluor™ 450 Anti-Human CD8a (Hit8a)

Catalog Number: 75-0089

## PRODUCT INFORMATION

**Contents:** violetFluor™ 450 Anti-Human CD8a (Hit8a)

**Isotype:** Mouse IgG1, kappa

**Concentration:** 5 µL (1.0 µg)/test

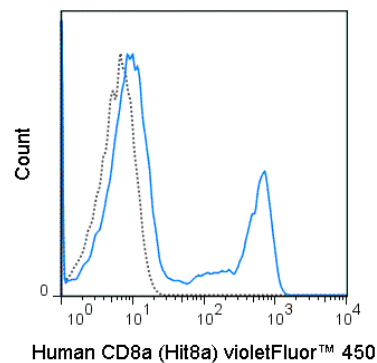
**Clone:** Hit8a

**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 5 µL (1 µg) violetFluor™ 450 Anti-Human CD8a (75-0089) (solid line) or 1 µg violetFluor™ 450 Mouse IgG1 isotype control (dashed line).

## DESCRIPTION

The Hit8a 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 Hit8a 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. If used together with an alternative Anti-Human CD8a clone RPA-T8, the Hit8a antibody will not block binding of RPA-T8 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 µL per test, defined as the amount of antibody that will stain a cell sample in a final volume of approximately 100 µL. 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™ 450 dye is excited by the violet (405 nm) laser and has a peak emission of 450 nm. The most common band pass filters for this dye are 440/40 or 450/50. violetFluor™ 450 can be used as an alternative for Pacific Blue®, BD Horizon™ V450 or eFluor® 450.

## REFERENCES

- Coppieters KT, Dotta F, Amirian N, Campbell PD, Kay TWH, Atkinson MA, Roep BO and von Herrath MG. 2012. J. Exp. Med. 109: 51-60. (in situ tetramer staining / Immunohistochemistry – frozen tissue)
- Kumari A, Brendel C, Hochlaus A, Neubauer A, and Burchert A. 2012. Blood. 119: 530-539. (Flow cytometry)
- Kryczek I, Banerjee M, Cheng P, Vatan L, et al. 2009. Blood. 114: 1141-1149. (Immunofluorescence microscopy)

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.

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