

**Brilliant Violet 650™ anti-human CD8a**

**Catalog # / Size:** 2105205 / 25 tests  
2105210 / 100 tests

**Clone:** RPA-T8

**Isotype:** Mouse IgG1, κ

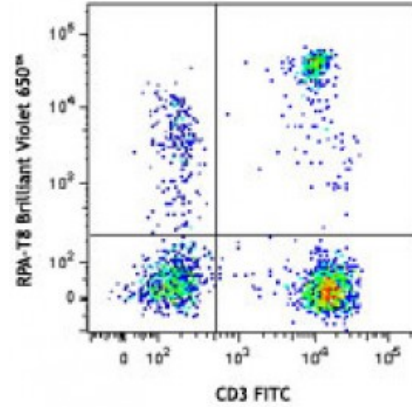
**Reactivity:** Human

**Preparation:** The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 650™ under optimal conditions. The solution is free of unconjugated Brilliant Violet 650™ and unconjugated antibody.

**Formulation:** Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA).

**Workshop Number:** IV T171

**Concentration:** Lot-specific



Human peripheral blood lymphocytes were stained with CD3 FITC and CD8 (clone RPA-T8) Brilliant Violet 650™.

**Applications:**

**Applications:** Flow Cytometry

**Recommended Usage:** Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is ≤5 microL per million cells or 5 microL per 100 microL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

Brilliant Violet 650™ excites at 405 nm and emits at 645 nm. The bandpass filter 660/20 nm is recommended for detection, although filter optimization may be required depending on other fluorophores used. **Be sure to verify that your cytometer configuration and software setup are appropriate for detecting this channel.** Refer to your instrument manual or manufacturer for support. Brilliant Violet 650™ is a trademark of Sirigen Group Ltd.

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**Application Notes:** The RPA-T8 antibody does not block the binding of HIT8a antibody to CD8a. Additional reported applications of this antibody (for the relevant formats) include: immunohistochemical staining of paraformaldehyde-fixed frozen sections<sup>3</sup> and costimulation of T cell responses<sup>4</sup>. This clone was tested in-house and does not work on formalin fixed paraffin-embedded (FFPE) tissue. The LEAF™ purified antibody (Endotoxin <0.1 EU/μg, Azide-Free, 0.2 μm filtered) is recommended for functional assays (Cat. No. 301018).

**Application References:** 1. Knapp W, *et al.* Eds. 1989. Leucocyte Typing IV. Oxford University Press. New York.  
2. Schlossman S, *et al.* Eds. 1995. Leucocyte Typing V. Oxford University Press.

New York.

3. Mack CL, *et al.* 2004. *Pediatr. Res.* 56:79. (IHC)
  4. Magidovich E, *et al.* 2007. *P. Natl. Acad. Sci. USA* 104:13022.
  5. Thakral D, *et al.* 2008. *J. Immunol.* 180:7431. [PubMed](#)
  5. Kmiecik M, *et al.* 2009. *J. Transl. Med.* 7:89. (FC) [PubMed](#)
  6. Thakral D, *et al.* 2008. *J. Immunol.* 180:7431. (FC) [PubMed](#)
  7. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
  8. Rout N, *et al.* 2010. *PLoS One* 5:e9787. (FC)
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**Description:** CD8a is a 32-34 kD type I glycoprotein. It forms a homodimer (CD8a/a) or heterodimer (CD8a/b) with CD8b. CD8, also known as T8 and Leu2, is a member of the immunoglobulin superfamily found on the majority of thymocytes, a subset of peripheral blood T cells, and NK cells (which express almost exclusively CD8a homodimers). CD8 acts as a co-receptor with MHC class I-restricted T cell receptors in antigen recognition and T cell activation, and has been shown to play a role in thymic differentiation. Two domains in CD8a are important for function: the extracellular IgSF domain binds the  $\alpha_3$  domain of MHC class I and the cytoplasmic CXCP motif binds the tyrosine kinase p56 Lck.

**Antigen** 1. Barclay N, *et al.* 1993. *The Leucocyte Antigen FactsBook*. Academic Press Inc.  
**References:** San Diego.