

**Alexa Fluor® 647 anti-human CD8a**

**Catalog # / Size:** 2105110 / 100 tests  
 2105125 / 25 tests  
 2105310 / 100 µg

**Clone:** RPA-T8

**Isotype:** Mouse IgG1, κ

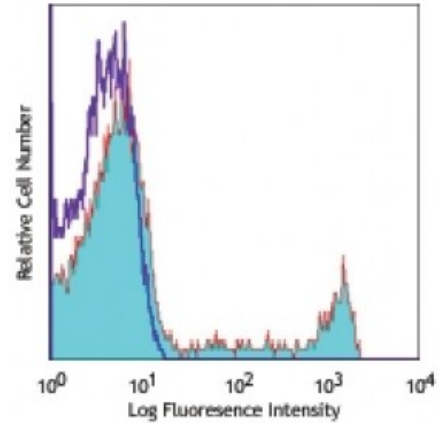
**Reactivity:** Human

**Preparation:** The antibody was purified by affinity chromatography, and conjugated with Alexa Fluor® 647 under optimal conditions.

**Formulation:** microg size: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.  
 test sizes: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA).

**Workshop Number:** IV T171

**Concentration:** microg sizes: 0.5 mg/ml  
 test sizes: lot-specific



Human peripheral blood lymphocytes stained with RPA-T8 Alexa Fluor® 647

**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 using the microg size, the suggested use of this reagent is ≤0.5 microg per million cells in 100 microL volume. For flow cytometric staining using the test sizes, 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.

\* Alexa Fluor® 647 has a maximum emission of 668 nm when it is excited at 633nm / 635nm.

**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:**
- Knapp W, *et al.* Eds. 1989. Leucocyte Typing IV. Oxford University Press. New York.
  - Schlossman S, *et al.* Eds. 1995. Leucocyte Typing V. Oxford University Press. New York.
  - Mack CL, *et al.* 2004. *Pediatr. Res.* 56:79. (IHC)
  - Magidovich E, *et al.* 2007. *P. Natl. Acad. Sci. USA* 104:13022.
  - Thakarl D, *et al.* 2008. *J. immunol.* 180:7431. [PubMed](#)
  - Kmieciak M, *et al.* 2009. *J. Transl. Med.* 7:89. (FC) [PubMed](#)
  - 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**  
**References:** 1. Barclay N, *et al.* 1993. *The Leucocyte Antigen FactsBook*. Academic Press Inc. San Diego.