SONY

Product Data Sheet

Brilliant Violet 570™ anti-human CD8a

Catalog # / Size: 2105185 / 25 tests
2105190 / 100 tests

Clone: RPA-T8

Isotype: Mouse IgG1, κ

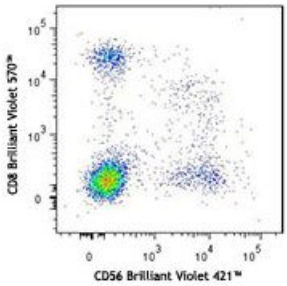
Reactivity: Human, Non-human primate, Other

Preparation: The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 570™ under optimal conditions.

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

Workshop Number: IV T171

Concentration: Lot-specific



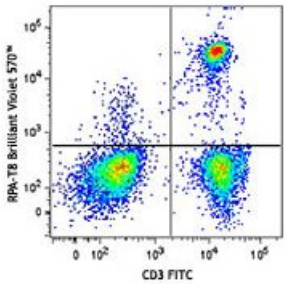
Human peripheral blood lymphocytes were stained with CD3 and CD8 (clone RPA-T8) Brilliant Violet 570™ (top) or mouse IgG1, κ Brilliant Violet 570™ isotype control (bottom).

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 µl per million cells or 5 µl per 100 µl of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

Brilliant Violet 570™ excites at 405 nm and emits at 570 nm. The bandpass filter 585/42 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 570™ is a trademark of Sirigen Group Ltd.



Human peripheral blood lymphocytes were stained with CD3 and CD8 (clone RPA-T8) Brilliant Violet 570™ (top) or mouse IgG1, κBrilliant Violet 570™ isotype control (bottom).

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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 sections3 and costimulation of T cell responses4. 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. Thakarl D, *et al.* 2008.*J. immunol.* 180:7431. PubMed
6. Kmieciak M, *et al.* 2009. *J. Transl. Med.* 7:89. (FC) PubMed
7. Thakral D, *et al.* 2008. *J. Immunol.* 180:7431. (FC) PubMed
8. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
9. Rout N, *et al.* 2010. *PLoS One* 5:e9787. (FC)
10. Stoeckius M, *et al.* 2017. *Nat. Methods.* 14:865. (PG)

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 α_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.

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