

**Brilliant Violet 650™ anti-human CD45RO**

**Catalog # / Size:** 2121160 / 100 tests  
2121155 / 25 tests

**Clone:** UCHL1

**Isotype:** Mouse IgG2a, κ

**Immunogen:** IL-2 dependent T cell line, CA1

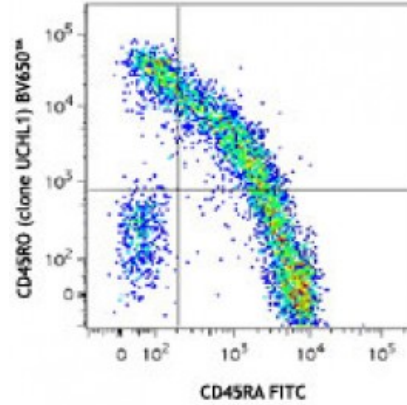
**Reactivity:** Human

**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 N31

**Concentration:** Lot-specific

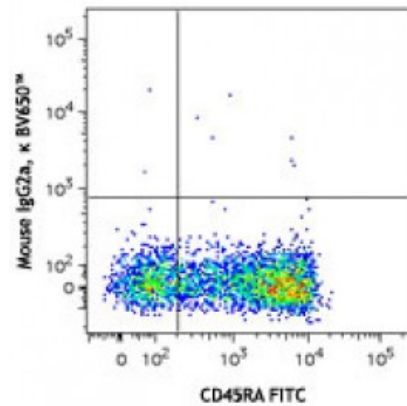


Human peripheral blood lymphocytes were stained with CD45RA FITC and CD45RO (clone UCHL1) Brilliant Violet 650™ (top) or mouse IgG2a, κ Brilliant Violet 650™ isotype control (bottom).

**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 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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the purchased product for research purposes only. This product may not be resold or incorporated in any manner into another product for resale. Any use for therapeutics or diagnostics is strictly prohibited. This product is covered by U.S. Patent(s), pending patent applications and foreign equivalents.

**Application Notes:** The UCHL1 antibody is commonly used in combination with antibodies against CD45RA to discern memory and naïve T cells. Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen tissue sections<sup>5</sup> and formalin-fixed paraffin-embedded tissue sections<sup>4</sup>, Western blotting<sup>2</sup>, and immunoprecipitation<sup>3</sup>.

**Application References:**

1. Knapp W, *et al.* Eds. 1989. Leucocyte Typing IV. Oxford University Press. New York. (FC)
2. Ishii T, *et al.* 2001. *P. Natl. Acad. Sci. USA* 98:12138. (WB)
3. Ponsford M, *et al.* 2001. *Clin. Exp. Immunol.* 124:315. (IP)
4. Yamada M, *et al.* 1996. *Stroke* 27:1155. (IHC)
5. Sakkas LI, *et al.* 1998. *Clin. Diagn. Lab. Immunol.* 5:430. (IHC)
6. Baba N, *et al.* 2010. *Int. Immunol.* 22:237. [PubMed](#)
7. Thakral D, *et al.* 2008. *J. Immunol.* 180:7431. (FC) [PubMed](#)
8. Weiss L, *et al.* 2010. *P. Natl. Acad. Sci. USA* 107:10632. [PubMed](#)
9. Wu YY, *et al.* 2007. *Infect. Immun.* 75:4357. [PubMed](#)
10. Mozaffarian N, *et al.* 2008. *Rheumatology* 47:1335. [PubMed](#)
11. Roque S, *et al.* 2007. *J. Immunol.* 178:8028. [PubMed](#)
12. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
13. Smith SH, *et al.* 1986. *Immunology* 58:63. (Immunogen)

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**Description:** CD45RO is a 180 kD single chain membrane glycoprotein. It is a splice variant of tyrosine phosphatase CD45, lacking the A, B, and C determinants. The CD45RO isoform is expressed on activated and memory T cells, some B cell subsets, activated monocytes/macrophages, and granulocytes. CD45RO enhances both T cell receptor and B cell receptor signaling mediated activation. CD45 and its isoforms non-covalently associate with lymphocyte phosphatase-associated phosphoprotein (LPAP) on T and B lymphocytes. CD45 has been reported to be associated with several other cell surface antigens including CD1, CD2, CD3, and CD4. CD45 has also been reported to bind galectin-1 and CD22. CD45 isoform expression can change in response to cytokines.

**Antigen References:**

1. Thomas M. 1989. *Annu. Rev. Immunol.* 7:339.
2. Trowbridge I, *et al.* 1994. *Annu. Rev. Immunol.* 12:85.