

**Brilliant Violet 711™ anti-human CD45RO**

**Catalog # / Size:** 2121175 / 25 tests  
2121180 / 100 tests

**Clone:** UCHL1

**Isotype:** Mouse IgG2a, κ

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

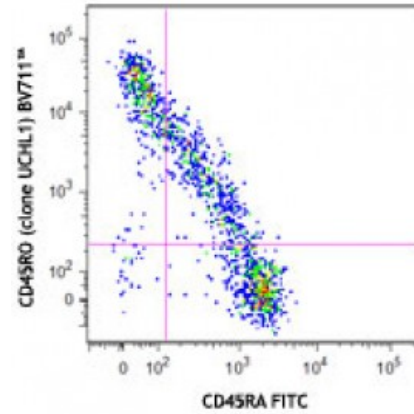
**Reactivity:** Human

**Preparation:** The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 711™ under optimal conditions. The solution is free of unconjugated Brilliant Violet 711™ 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 711™.

**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 711™ excites at 405 nm and emits at 711 nm. The bandpass filter 710/50 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 711™ is a trademark of Sirigen Group Ltd.

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**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:**

- Knapp W, *et al.* Eds. 1989. Leucocyte Typing IV. Oxford University Press. New York. (FC)
- 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** 1. Thomas M. 1989. *Annu. Rev. Immunol.* 7:339.
- References:** 2. Trowbridge I, *et al.* 1994. *Annu. Rev. Immunol.* 12:85.