

**Alexa Fluor® 647 anti-human CD45RA**

**Catalog # / Size:** 2120770 / 100 tests  
2120765 / 25 tests

**Clone:** HI100

**Isotype:** Mouse IgG2b, κ

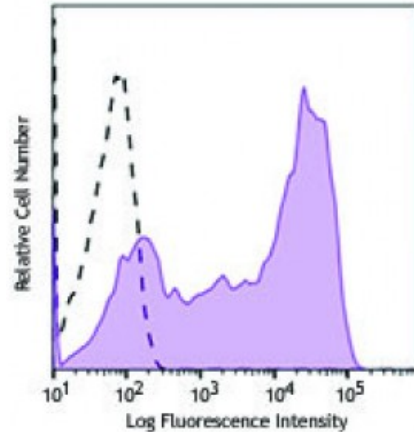
**Reactivity:** Human

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

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

**Workshop Number:** IV N906

**Concentration:** Lot-specific



Human peripheral blood lymphocytes were stained with CD45RA (clone HI100) Alexa Fluor® 647 (filled histogram) or mouse IgG2b, κ Alexa Fluor® 647 isotype control (open histogram).

**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.

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

**Application Notes:** Additional reported applications (for relevant formats of this clone) include: inhibition of CD45 functions<sup>2</sup>, immunohistochemical staining of frozen tissue sections<sup>3</sup> and formalin-fixed paraffin-embedded tissue sections<sup>4</sup>, and immunofluorescence<sup>15,16</sup>.

**Application References:**

1. Knapp W, *et al.* 1989. Leucocyte Typing IV. Oxford University Press. New York.
2. Yamada T, *et al.* 2002. *J. Biol. Chem.* 277:28830. (WB, Block)
3. Weninger W, *et al.* 2003 *J. Immunol.* 170:4638. (IHC)
4. Imanguli MM, *et al.* 2009. *Blood.* 113:3620 (IHC)
5. Roque S, *et al.* 2007. *J. Immunol.* 178:8028. (FC) [PubMed](#)
6. Smeltz RB. 2007. *J. Immunol.* 178:4786. (FC) [PubMed](#)
7. Palendira U, *et al.* 2008. *Blood* (FC) [PubMed](#)
8. Kuttruff S, *et al.* 2009. *Blood* 113:358. (FC) [PubMed](#)
10. Thakral D, *et al.* 2008. *J. Immunol.* 180:7431. (FC) [PubMed](#)
11. Alanio C, *et al.* 2010. *Blood* 115:3718. (FC) [PubMed](#)
12. Iannello A, *et al.* 2010. *J. Immunol.* 184:114. (FC) [PubMed](#)
13. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
14. Guereau-de-Arellan M, *et al.* 2011. *Brain.* 134:3578. [PubMed](#)
15. Canque B, *et al.* 2000. *Blood* 96:3748. (IF)
16. Imanguli MM, *et al.* 2009. *Blood* 13:3620. (IF)

**Description:** CD45RA is a 205-220 kD single chain type I glycoprotein. It is an exon 4 splice variant of the tyrosine phosphatase CD45. The CD45RA isoform is expressed on resting/naïve T cells, medullary thymocytes, B cells and monocytes. CD45RA enhances both T cell receptor and B cell receptor signaling. CD45 non-covalently associates 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. 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.