

## Alexa Fluor® 488 anti-human CD45RA Antibody

<b>Catalog# / Size</b>	304114 / 100 tests
<b>Clone</b>	HI100
<b>Regulatory Status</b>	RUO
<b>Workshop</b>	IV N906
<b>Other Names</b>	GP180, L-CA, LCA, LY5, T200, PTPRC
<b>Isotype</b>	Mouse IgG2b, κ
<b>Description</b>	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.

### Product Details

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<b>Verified Reactivity</b>	Human
<b>Reported Reactivity</b>	Chimpanzee
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 488 under optimal conditions.
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">FC - Quality tested</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by <a href="#">immunofluorescent staining with flow cytometric analysis</a> . For flow cytometric staining, the suggested use of this reagent is 5 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood.  * Alexa Fluor® 488 has a maximum emission of 519 nm when it is excited at 488 nm.  Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation.  <a href="#">View full statement regarding label licenses</a>
<b>Excitation Laser</b>	Blue Laser (488 nm)
<b>Application Notes</b>	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 immunocytochemistry <sup>15,16</sup> .
<b>Application References</b>	<ol style="list-style-type: none"> <li>Knapp W, <i>et al.</i> 1989. Leucocyte Typing IV. Oxford University Press. New York.</li> <li>Yamada T, <i>et al.</i> 2002. <i>J. Biol. Chem.</i> 277:28830. (WB, Block)</li> <li>Weninger W, <i>et al.</i> 2003 <i>J. Immunol.</i> 170:4638. (IHC-F)</li> <li>Imanguli MM, <i>et al.</i> 2009. <i>Blood.</i> 113:3620 (IHC-P)</li> <li>Roque S, <i>et al.</i> 2007. <i>J. Immunol.</i> 178:8028. (FC) <a href="#">PubMed</a></li> <li>Smeltz RB. 2007. <i>J. Immunol.</i> 178:4786. (FC) <a href="#">PubMed</a></li> <li>Palendira U, <i>et al.</i> 2008. <i>Blood</i> (FC) <a href="#">PubMed</a></li> <li>Kuttruff S, <i>et al.</i> 2009. <i>Blood</i> 113:358. (FC) <a href="#">PubMed</a></li> </ol>

9. Thakral D, *et al.* 2008. *J. Immunol.* 180:7431. (FC) [PubMed](#)
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11. Iannello A, *et al.* 2010. *J. Immunol.* 184:114. (FC) [PubMed](#)
12. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
13. Guereau-de-Arellan M, *et al.* 2011. *Brain.* 134:3578. [PubMed](#)
14. Canque B, *et al.* 2000. *Blood* 96:3748. (ICC)
15. Imanquli MM, *et al.* 2009. *Blood* 13:3620. (ICC)
16. Stoeckius M, *et al.* 2017. *Nat. Methods.* 14:865. (PG)
17. Peterson VM, *et al.* 2017. *Nat. Biotechnol.* 35:936. (PG)

#### Product Citations

1. Chiu YL, *et al.* 2018. *Immun Ageing.* 15:27. [PubMed](#)
2. Mashiko S, *et al.* 2015. *J Allergy Clin Immunol.* 136: 351-359. [PubMed](#)
3. Yang R, *et al.* 2020. *Cell.* 183(7):1826-1847. e31. [PubMed](#)
4. Bao EL, *et al.* 2020. *Nature.* 769:586. [PubMed](#)
5. Elias G, *et al.* 2022. *Elife.* 11:. [PubMed](#)
6. Rakshit S, *et al.* 2020. *Cell Rep.* 33:108451. [PubMed](#)
7. Shan L, *et al.* 2017. *Immunity.* 47:766. [PubMed](#)

#### RRID

AB\_528816 (BioLegend Cat. No. 304114)

## Antigen Details

<b>Structure</b>	Tyrosine phosphatases, type I transmembrane (exon 4 splicing of CD45 gene), 205-220 kD
<b>Distribution</b>	B cells, naïve T cells, monocytes
<b>Function</b>	Enhances TCR and BCR signaling
<b>Ligand/Receptor</b>	Galectin-1, CD2, CD3, CD4
<b>Cell Type</b>	B cells, Monocytes, T cells, Tregs
<b>Biology Area</b>	Cell Biology, Immunology, Inhibitory Molecules, Neuroscience, Neuroscience Cell Markers
<b>Molecular Family</b>	CD Molecules
<b>Antigen References</b>	<ol style="list-style-type: none"> <li>1. Thomas M. 1989. <i>Annu. Rev. Immunol.</i> 7:339.</li> <li>2. Trowbridge I, <i>et al.</i> 1994. <i>Annu. Rev. Immunol.</i> 12:85.</li> </ol>
<b>Gene ID</b>	<a href="#">5788</a>

## Related Protocols

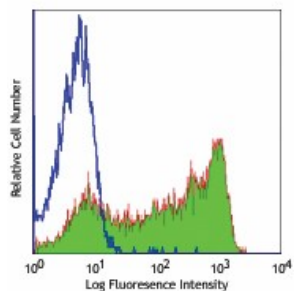
[Cell Surface Flow Cytometry Staining Protocol](#)

## Other Formats

APC anti-human CD45RA, Biotin anti-human CD45RA, FITC anti-human CD45RA, PE anti-human CD45RA, PE/Cyanine5 anti-human CD45RA, Purified anti-human CD45RA, Alexa Fluor® 488 anti-human CD45RA, Alexa Fluor® 647 anti-human CD45RA, Pacific Blue™ anti-human CD45RA, Alexa Fluor® 700 anti-human CD45RA, PerCP/Cyanine5.5 anti-human CD45RA, PE/Cyanine7 anti-human CD45RA, APC/Cyanine7 anti-human CD45RA, Brilliant Violet 421™ anti-human CD45RA, Brilliant Violet 570™ anti-human CD45RA, Brilliant Violet 605™ anti-human CD45RA, Brilliant Violet 650™ anti-human CD45RA, Brilliant Violet 711™ anti-human CD45RA, Brilliant Violet 785™ anti-human CD45RA, Brilliant Violet 510™ anti-human CD45RA, Purified anti-human CD45RA (Maxpar® Ready), PE/Dazzle™ 594 anti-human CD45RA, APC/Fire™ 750 anti-human CD45RA, PerCP anti-human CD45RA, TotalSeq™-A0063 anti-human CD45RA, Alexa Fluor® 594 anti-human CD45RA, TotalSeq™-B0063 anti-human CD45RA, TotalSeq™-C0063 anti-human CD45RA, Brilliant Violet 750™ anti-human CD45RA, Spark NIR™ 685 anti-human CD45RA, PE/Fire™ 640 anti-human CD45RA, PE/Fire™ 700 anti-human CD45RA Antibody, Spark YG™ 581 anti-human CD45RA, TotalSeq™-D0063 anti-human CD45RA, Spark Violet™ 423 anti-human CD45RA, GMP FITC anti-human CD45RA, Spark UV™ 387 anti-human CD45RA

## Product Data

Human peripheral blood lymphocytes  
stained with HI100 Alexa Fluor® 488



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