

## Alexa Fluor<sup>®</sup> 594 anti-human CD45RA Antibody

<b>Catalog# / Size</b>	304159 / 25 µg 304160 / 100 µg
<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.
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor <sup>®</sup> 594 under optimal conditions.
<b>Concentration</b>	0.5 mg/ml
<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="#">IHC-P - Quality tested</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by formalin-fixed paraffin-embedded immunohistochemical staining. For immunohistochemistry, a concentration range of 5 - 10 µg/ml is suggested. It is recommended that the reagent be titrated for optimal performance for each application. * Alexa Fluor <sup>®</sup> 594 has an excitation maximum of 590 nm, and a maximum emission of 617 nm.  Alexa Fluor <sup>®</sup> and Pacific Blue™ are trademarks of Life Technologies Corporation.  <a href="#">View full statement regarding label licenses</a>
<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> </ol>
<b>(PubMed link indicates BioLegend citation)</b>	

8. Kuttruff S, et al. 2009. *Blood* 113:358. (FC) [PubMed](#)
9. Thakral D, et al. 2008. *J. Immunol.* 180:7431. (FC) [PubMed](#)
10. Alanio C, et al. 2010. *Blood* 115:3718. (FC) [PubMed](#)
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. Imanjoli 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)

**RRID** AB\_2783164 (BioLegend Cat. No. 304159)  
 AB\_2783165 (BioLegend Cat. No. 304160)

## Antigen Details

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<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>	1. Thomas M. 1989. <i>Annu. Rev. Immunol.</i> 7:339. 2. Trowbridge I, et al. 1994. <i>Annu. Rev. Immunol.</i> 12:85.
<b>Gene ID</b>	<a href="#">5788</a>

## Related Protocols

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[Immunohistochemistry Protocol for Paraffin-Embedded Sections](#)

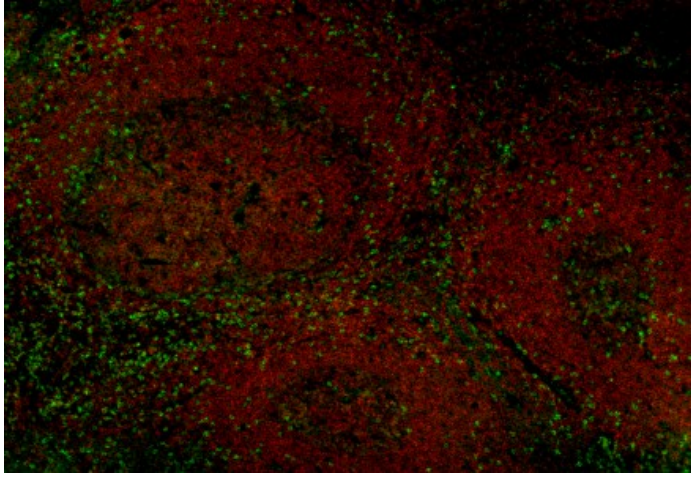
## Other Formats

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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

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Human paraffin-embedded tonsil tissue slices were prepared with a standard protocol of deparaffinization and rehydration. Antigen retrieval was done with Citrate Buffered 1X (10mM, pH6.0) at 95°C for 40 minutes. Tissue was washed with PBS/0.05% Tween 20 twice for five minutes and blocked with 5% FBS and 0.2% gelatin for 30 minutes. Then, the tissue was stained with 10µg/mL of Alexa Fluor® 647 anti-CD8a (Clone C8/144B) antibody (green) and Alexa Fluor® 594 anti-CD45RA (Clone HI100) antibody (red) over night at 4°C. The image was scanned with a 10X objective and stitched with MetaMorph® software.

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