

## PerCP/Cyanine5.5 anti-human CD45 Antibody

<b>Catalog# / Size</b>	368503 / 25 tests 368504 / 100 tests
<b>Clone</b>	2D1
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Leukocyte Common Antigen (LCA), T200
<b>Isotype</b>	Mouse IgG1, κ
<b>Description</b>	CD45 is a 180 - 240 kD single chain type I membrane glycoprotein also known as leukocyte common antigen (LCA) and T200. It is a tyrosine phosphatase expressed on the plasma membrane of all hematopoietic cells, except erythrocytes or platelets. CD45 is a signaling molecule that regulates a variety of cellular processes including cell growth, differentiation, cell cycle, and oncogenic transformation. CD45 plays a critical role in T and B cell antigen receptor-mediated activation by dephosphorylating substrates including p56Lck, p59Fyn, and other Src family kinases. CD45 non-covalently associates with lymphocyte phosphatase-associated phosphoprotein (LPAP) on T and B lymphocytes. CD45 has been reported to bind galectin-1 and to be associated with several other cell surface antigens including CD1, CD2, CD3, and CD4.

### Product Details

---

<b>Verified Reactivity</b>	Human
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Immunogen</b>	Human PBMC
<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 PerCP/Cyanine5.5 under optimal conditions.
<b>Concentration</b>	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our <a href="#">Concentration and Expiration Lookup</a> or <a href="#">Certificate of Analysis</a> online tools.)
<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.  * PerCP/Cyanine5.5 has a maximum absorption of 482 nm and a maximum emission of 690 nm.
<b>Excitation Laser</b>	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
<b>Application Notes</b>	It was found that the HI30 clone and the 2D1 clone can cross block each other's binding.
<b>Additional Product Notes</b>	BioLegend is in the process of converting the name PerCP/Cy5.5 to PerCP/Cyanine5.5. The dye molecule remains the same, so you should expect the same quality and performance from our PerCP/Cyanine5.5 products. Contact <a href="#">Technical Service</a> if you have any questions.
<b>Application References</b>	1. Bradstock KF, <i>et al.</i> 1980. <i>J. Natl. Cancer Inst.</i> 65:33. 2. Csiba A, <i>et al.</i> 1984. <i>Br. J. Cancer</i> 50:699. 3. Tchilian EZ, <i>et al.</i> 2001. <i>J. Immunol.</i> 166:1308. 4. Lee MS, <i>et al.</i> 2004. <i>Int. Immunol.</i> 16:1109.
<b>(PubMed link indicates BioLegend citation)</b>	

## Product Citations

1. Zaman R, *et al.* 2021. Immunity. .: [PubMed](#)
2. Fujino S, *et al.* 2021. Mol Cancer Res. 19:812. [PubMed](#)
3. Gao Q, *et al.* 2019. J Exp Med. 216:688. [PubMed](#)
4. Eri Yamada *et al.* 2018. Cell host & microbe. 23(1):110-120 . [PubMed](#)
5. Wang X, *et al.* 2020. Signal Transduct Target Ther. 5:35. [PubMed](#)
6. Slingsby MHL, *et al.* 2021. Haematologica. Online ahead of print. [PubMed](#)
7. Hu G, *et al.* 2022. Cell Death Dis. 13:640. [PubMed](#)
8. Appios A, *et al.* 2021. Bio Protoc. 11:e4044. [PubMed](#)
9. Xiang W, *et al.* 2018. Nat Commun. 9:2574. [PubMed](#)
10. Golebski K, *et al.* 2021. Immunity. 54(2):291-307.e7. [PubMed](#)
11. Ramond C *et al.* 2017. eLife. 6 pii: e27564. [PubMed](#)
12. Wang X, *et al.* 2021. Immunity. 54(6):1123-1136.e8. [PubMed](#)

## RRID

AB\_2566351 (BioLegend Cat. No. 368503)  
AB\_2566352 (BioLegend Cat. No. 368504)

## Antigen Details

---

<b>Structure</b>	Type I transmembrane protein, 180 - 240 kD (multiple isoforms)
<b>Distribution</b>	Hematopoietic cells, except circulating erythrocytes or platelets.
<b>Function</b>	Tyrosine phosphatases, signaling, co-stimulation (co-inhibition), TCR and BCR mediated activation.
<b>Ligand/Receptor</b>	Galectin-1, CD2, CD3, and CD4.
<b>Cell Type</b>	B cells, Dendritic cells, Neutrophils
<b>Biology Area</b>	Cell Biology, Immunology, Inhibitory Molecules, Neuroscience, Neuroscience Cell Markers
<b>Molecular Family</b>	CD Molecules, Protein Kinases/Phosphatase, TCRs
<b>Antigen References</b>	1. Thomas M. 1989. <i>Annu. Rev. Immunol.</i> 7:339. 2. Trowbridge I, <i>et al.</i> 1994. <i>Annu. Rev. Immunol.</i> 12:85.
<b>Gene ID</b>	<a href="#">5788</a>

## Related Protocols

---

[Cell Surface Flow Cytometry Staining Protocol](#)

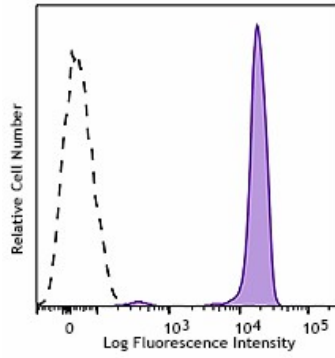
## Other Formats

---

Purified anti-human CD45, PerCP anti-human CD45, FITC anti-human CD45, PE anti-human CD45, APC anti-human CD45, Alexa Fluor® 700 anti-human CD45, APC/Cyanine7 anti-human CD45, PerCP/Cyanine5.5 anti-human CD45, APC/Fire™ 750 anti-human CD45, Alexa Fluor® 594 anti-human CD45, Brilliant Violet 510™ anti-human CD45, Brilliant Violet 421™ anti-human CD45, PE/Dazzle™ 594 anti-human CD45, Brilliant Violet 605™ anti-human CD45, PE/Cyanine7 anti-human CD45, Pacific Blue™ anti-human CD45, Alexa Fluor® 647 anti-human CD45, Biotin anti-human CD45, Alexa Fluor® 488 anti-human CD45, TotalSeq™-A0048 anti-human CD45, Brilliant Violet 750™ anti-human CD45, TotalSeq™-C0048 anti-human CD45, TotalSeq™-B0048 anti-human CD45, Spark Blue™ 550 anti-human CD45, Spark NIR™ 685 anti-human CD45, TotalSeq™-D0048 anti-human CD45, PE/Cyanine5 anti-human CD45, Spark Blue™ 574 anti-human CD45 Antibody, Spark Violet™ 500 anti-human CD45

## Product Data

---



Human peripheral blood lymphocytes were stained with CD45 (clone 2D1) PerCP/Cyanine5.5 (filled histogram), or mouse IgG1, ? PerCP/Cyanine5.5 isotype control (open histogram).

For research use only. Not for diagnostic use. Not for resale. BioLegend will not be held responsible for patent infringement or other violations that may occur with the use of our products.

\*These products may be covered by one or more Limited Use Label Licenses (see the BioLegend Catalog or our website, [www.biolegend.com/ordering#license](http://www.biolegend.com/ordering#license)). BioLegend products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products, reverse engineer functionally similar materials, or to provide a service to third parties without written approval of BioLegend. By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

8999 BioLegend Way, San Diego, CA 92121 [www.biolegend.com](http://www.biolegend.com)  
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587