

## GMP Pacific Blue™ anti-human CD45 Antibody

<b>Catalog# / Size</b>	260108 / 100 tests
<b>Clone</b>	HI30
<b>Other Names</b>	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 and 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>Reactivity</b>	Human
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide, 0.2% (w/v) BSA (origin USA) and a stabilizer.
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with Pacific Blue™ under optimal conditions.
<b>Concentration</b>	200 µg/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="#">FC - Quality tested</a>
<b>Recommended Usage</b>	<p>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. It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>* Pacific Blue™ has a maximum emission of 455 nm when it is excited at 405 nm. Prior to using Pacific Blue™ conjugate for flow cytometric analysis, please verify your flow cytometer's capability of exciting and detecting the fluorochrome.</p> <p>Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation.</p> <p><a href="#">View full statement regarding label licenses</a></p>
<b>Excitation Laser</b>	Violet Laser (405 nm)
<b>Application Notes</b>	<p>Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen tissue sections and formalin-fixed paraffin-embedded tissue sections<sup>9</sup>, inhibition of CD45 functions<sup>4</sup>, immunofluorescence<sup>11</sup>, Western blotting<sup>3</sup>, and spatial biology (IBEX)<sup>16,17</sup>.</p> <p>It was found that the HI30 clone and the 2D1 clone can cross block each other's binding.</p>
<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>Kishihara K, <i>et al.</i> 1993. <i>Cell</i> 74:143.</li> <li>Esser M, <i>et al.</i> 2001. <i>J. Virol.</i> 75:6173. (WB)</li> </ol>
<b>(PubMed link indicates BioLegend citation)</b>	

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16. Radtke AJ, *et al.* 2020. *Proc Natl Acad Sci USA.* 117:33455-33465. (SB) [PubMed](#)
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**RRID** AB\_2922516 (BioLegend Cat. No. 260108)

**Disclaimer** **GMP RUO Flow Cytometry Antibodies.** BioLegend GMP RUO fluorophore conjugated antibodies are manufactured in a dedicated GMP facility and compliant with ISO 13485:2016. For research use only. Not for use in diagnostic or therapeutic procedures. Our processes include:

- Batch-to-batch consistency
- Material traceability
- Documented procedures
- Documented employee training
- Equipment maintenance and monitoring records
- Lot-specific certificates of analysis
- Quality audits per ISO 13485:2016
- QA review of released products

## Antigen Details

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<b>Structure</b>	Tyrosine phosphatases, type I transmembrane protein, 180-240 kD (multiple isoforms)
<b>Distribution</b>	Hematopoietic cells, not expressed in circulating erythrocytes or platelets
<b>Function</b>	TCR and BCR mediated activation
<b>Ligand/Receptor</b>	Galectin-1, CD2, CD3, CD4
<b>Cell Type</b>	Hematopoietic stem and progenitors, Mesenchymal Stem Cells
<b>Biology Area</b>	Cell Biology, Immunology, Inhibitory Molecules, Innate Immunity, Neuroscience, Neuroscience Cell Markers, Stem Cells
<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

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[Cell Surface Flow Cytometry Staining Protocol](#)

## Other Formats

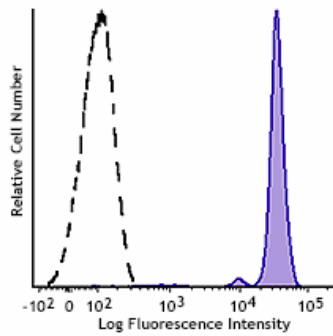
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APC anti-human CD45, Biotin anti-human CD45, FITC anti-human CD45, PE anti-human CD45, PE/Cyanine5 anti-human CD45, Purified anti-human CD45, APC/Cyanine7 anti-human CD45, PE/Cyanine7 anti-human CD45, Alexa Fluor® 488 anti-human CD45, Alexa Fluor® 647 anti-human CD45, Pacific Blue™ anti-human CD45, Alexa Fluor® 700 anti-human CD45, PerCP anti-human CD45, PerCP/Cyanine5.5 anti-human CD45, Brilliant Violet 421™ anti-human CD45, Brilliant Violet 570™ anti-human CD45, Brilliant Violet 510™ anti-human CD45, Brilliant Violet 605™ anti-human CD45, Brilliant Violet 650™ anti-human CD45, Purified anti-human CD45 (Maxpar® Ready), Brilliant Violet 785™ anti-human CD45, Brilliant Violet 711™ anti-human CD45, PE/Dazzle™ 594 anti-human CD45, Alexa Fluor® 594 anti-human CD45, APC/Fire™ 750 anti-human CD45, TotalSeq™-A0391 anti-human CD45, TotalSeq™-B0391 anti-human CD45, TotalSeq™-C0391 anti-human CD45, PE/Fire™ 640 anti-human CD45, APC/Fire™ 810 anti-human CD45, Spark YG™ 570 anti-human CD45, PE/Fire™ 700 anti-human CD45, Alexa Fluor® 660 anti-human CD45 Antibody,

Spark Violet™ 538 anti-human CD45, Spark YG™ 593 anti-human CD45, GMP APC/Fire™ 750 anti-human CD45, GMP APC anti-human CD45, Spark UV™ 387 anti-human CD45, GMP Pacific Blue™ anti-human CD45, GMP PerCP anti-human CD45, GMP FITC anti-human CD45, GMP PE/Dazzle™ 594 anti-human CD45, GMP PerCP/Cyanine5.5 anti-human CD45

## Product Data

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Typical results from human peripheral blood lymphocytes stained either with H130 Pacific Blue™ used at 5 µL/test (filled histogram) or with an isotype control (open histogram).

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