

APC/Fire™ 810 anti-human CD45 Antibody

Catalog# / Size	368563 / 25 tests 368564 / 100 tests
Clone	2D1
Regulatory Status	RUO
Other Names	Leukocyte Common Antigen (LCA), T200
Isotype	Mouse IgG1, κ
Description	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

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Human PBMC
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with APC/Fire™ 810 under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our Certificate of Analysis online tool.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	FC - Quality tested
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 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. * APC/Fire™ 810 has a maximum excitation of 650 nm and a maximum emission of 810 nm. Excessive exposure to light, and commonly used fixation, permeabilization buffers can affect APC/Fire™ 810 fluorescence signal intensity and spread. Please keep conjugates protected from light exposure. For more information and representative data, visit our Fire Dyes page.
Excitation Laser	Red Laser (633 nm)
Application Notes	It was found that the HI30 clone and the 2D1 clone can cross block each other's binding.
Application References	<ol style="list-style-type: none">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.
(PubMed link indicates BioLegend citation)	
RRID	AB_3699009 (BioLegend Cat. No. 368563)

Antigen Details

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

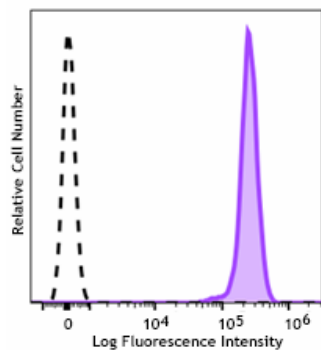
Related Protocols

- [Cell Surface Flow Cytometry Staining Protocol](#)

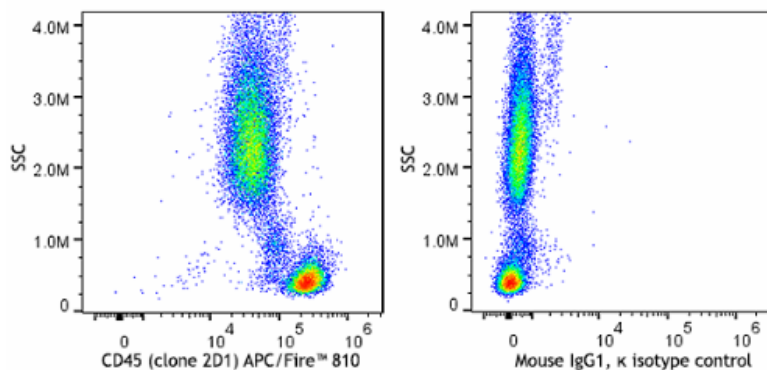
Other Formats

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, Spark Red™ 718 anti-human CD45, APC/Fire™ 810 anti-human CD45 Antibody, Spark YG™ 581 anti-human CD45 (Flexi-Fluor™), Brilliant Violet 570™ anti-human CD45

Product Data



Human peripheral blood lymphocytes were stained with anti-human CD45 (clone 2D1) APC/Fire™ 810 (filled histogram) or mouse IgG1, κ APC/Fire™ 810 isotype control (open histogram).



Human lysed whole blood was stained with anti-human CD45 (clone 2D1) APC/Fire™ 810 (left) or mouse IgG1, κ APC/Fire™ 810 isotype control (right).

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