

Alexa Fluor® 594 anti-human CD45 Antibody

Catalog# / Size	368520 / 100 µg
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.
Preparation	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 594 under optimal conditions.
Concentration	0.5 mg/ml
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	IHC-P - Quality tested
Recommended Usage	<p>Each lot of this antibody is quality control tested by formalin-fixed paraffin-embedded immunohistochemical staining. For immunohistochemistry, a concentration range of 2.5 - 10 µg/ml is suggested. It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>* Alexa Fluor® 594 has an excitation maximum of 590 nm, and a maximum emission of 617 nm.</p> <p>Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation.</p> <p>View full statement regarding label licenses</p>
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"> Bradstock KF, <i>et al.</i> 1980. <i>J. Natl. Cancer Inst.</i> 65:33. Csiba A, <i>et al.</i> 1984. <i>Br. J. Cancer</i> 50:699. Tchilian EZ, <i>et al.</i> 2001. <i>J. Immunol.</i> 166:1308. Lee MS, <i>et al.</i> 2004. <i>Int. Immunol.</i> 16:1109.
(PubMed link indicates BioLegend citation)	
Product Citations	<ol style="list-style-type: none"> Ishibashi R, <i>et al.</i> 2019. <i>Oncol Lett.</i> 5:192361111. PubMed Si L, <i>et al.</i> 2021. <i>Nat Biomed Eng.</i> 5:815. PubMed

RRID

AB_2629598 (BioLegend Cat. No. 368520)

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

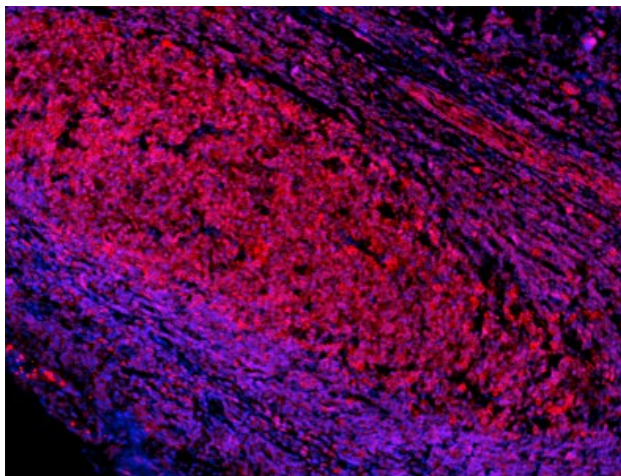
Related Protocols

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

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 paraffin-embedded tonsil tissue slices were prepared with a standard protocol of deparaffination and rehydration. Antigen retrieval was done with Tris-Buffered Saline 20X (1.0M, pH7.4) at 95°C for 40 minutes. The tissue was washed with PBS/ 0.05% Tween20 twice for five minutes and blocked with 5% FBS and 0.2% Gelatin for 30 minutes. Then, the tissue was stained with 5 µg/ml of anti-human CD45 (clone 2D1) Alexa Fluor® 594 (red) at 4°C overnight. Nuclei were counterstained with DAPI (blue). The image was captured with a 10X objective.

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