

PE/Fire™ 700 anti-human CD45 Antibody

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| Catalog# / Size | 304077 / 25 tests 304078 / 100 tests |
| Clone | HI30 |
| Regulatory Status | RUO |
| Workshop | IV N816 |
| Other Names | 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 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

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| Verified Reactivity | Human |
| Reported Reactivity | Chimpanzee |
| Antibody Type | Monoclonal |
| Host Species | Mouse |
| 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 PE/Fire™ 700 under optimal conditions. |
| Concentration | Lot-specific (to obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.) |
| 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. * PE/Fire™ 700 has a maximum excitation of 565 nm and a maximum emission of 695 nm. |
| Excitation Laser | Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm) |
| Application Notes | Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen tissue sections and formalin-fixed paraffin-embedded tissue sections ⁹ , inhibition of CD45 functions ⁴ , immunofluorescence ¹¹ , Western blotting ³ , and spatial biology (IBEX) ^{16,17} . It was found that the HI30 clone and the 2D1 clone can cross block each other's binding. |
| Application References | 1. Knapp W, <i>et al.</i> 1989. Leucocyte Typing IV. Oxford University Press. New York. |

(PubMed link indicates BioLegend citation)

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RRID AB_2876597 (BioLegend Cat. No. 304077)
AB_2876597 (BioLegend Cat. No. 304078)

Antigen Details

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| Structure | Tyrosine phosphatases, type I transmembrane protein, 180-240 kD (multiple isoforms) |
| Distribution | Hematopoietic cells, not expressed in circulating erythrocytes or platelets |
| Function | TCR and BCR mediated activation |
| Ligand/Receptor | Galectin-1, CD2, CD3, CD4 |
| Cell Type | Hematopoietic stem and progenitors, Mesenchymal Stem Cells |
| Biology Area | Cell Biology, Immunology, Inhibitory Molecules, Innate Immunity, Neuroscience, Neuroscience Cell Markers, Stem Cells |
| Molecular Family | CD Molecules |
| Antigen References | <ol style="list-style-type: none">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. |
| Gene ID | 5788 |

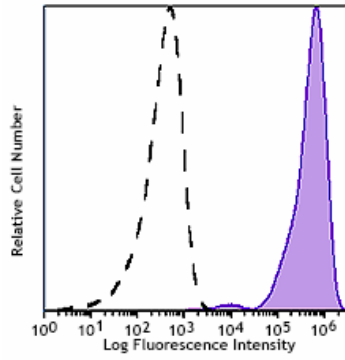
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

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



Human peripheral blood lymphocytes were stained with anti-human CD45 PE/Fire™ 700 (clone HI30) (filled histogram), or cells were left unstained (open histogram).

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