

CD45 Mouse Monoclonal Antibody (2D1) - Biotium Choice

CD45 (clone 2D1) is a validated mouse monoclonal antibody that recognizes CD45, a transmembrane glycoprotein expressed in hematopoietic cells. The antibody belongs to the Biotium Choice list of select antibodies that have been validated and optimized in-house for optimal performance.



Product Description

CD45 (clone 2D1) is a mouse monoclonal antibody that recognizes transmembrane glycoprotein CD45. This antibody belongs to the Biotium Choice list of select antibodies that have been validated and optimized in-house for optimal performance. The antibody is available conjugated to CF® Dyes and Astral™ tandem dyes. They are supplied in PBS, 0.1% BSA, 0.05% azide. CD45, also designated CD45R and PTPRC, has been identified as a transmembrane glycoprotein, broadly expressed among hematopoietic cells. Multiple isoforms of CD45R are distributed throughout the immune system according to cell type. These isoforms arise because of alternative splicing of exons 4, 5, and 6. The corresponding protein domains are characterized by the binding of monoclonal antibodies specific for CD45RA (exon 4), CD45RB (exon 5), CD45RC (exon 6) and CD45RO (exons 4 to 6 spliced out). The variation in these isoforms is localized to the extracellular domain of CD45R, while the intracellular domain is conserved. CD45R functions as a phosphor-tyrosine phosphatase. This MAb reacts with all isoforms of CD45R expressed by all hematopoietic cells, except erythrocytes, having a higher level of expression on lymphocytes than on granulocytes (Workshop IV). Antibody to CD45 is useful in differential diagnosis of lymphoid tumors from non-hematopoietic undifferentiated neoplasms. As an isotype control, we recommend [Isotype Control, Monoclonal Mouse IgG1 Kappa \(IGG1/1331\)](#) for this antibody. [View our full catalog of Biotium Choice antibodies](#), optimized and validated for the best results in flow cytometry.

Product attributes

| | |
|---------------------------------------|-----------------------------------------------------------------------------------|
| Antibody number | P012 |
| Antibody reactivity (target) | CD45 |
| Biotium Choice Antibody | Primary |
| Antibody type | Biotium Choice Flow Antibodies, Primary |
| Host species | Mouse |
| Clonality | Monoclonal |
| Clone | 2D1 |
| Isotype | IgG1, kappa |
| Molecular weight | 180 – 240 kDa (multiple isoforms) |
| Synonyms | Leukocyte Common Antigen (LCA), PTPRC, T200 |
| Human gene symbol | CD45 |
| Entrez gene ID | 5788 |
| SwissProt | P08575 |
| Unigene | 654514 |
| Immunogen | Human |
| Antibody target cellular localization | Plasma membrane |
| Verified antibody application | Flow (surface) (verified) |
| Species reactivity | Human |
| Antibody application notes | Recommended concentration for flow cytometry: 5 uL per million cells/0.1 mL |
| Positive control | Human peripheral blood mononuclear cells (PBMCs) |
| Shipping condition | Room temperature |
| Storage Conditions | Protect fluorescent conjugates from light |
| Shelf life | Guaranteed for at least 24 months from date of receipt when stored as recommended |
| Regulatory status | For research use only (RUO) |
| Volume per assay | 5 uL/test |
| Antibody/conjugate formulation | Conjugates: PBS/0.1% BSA/0.05% azide |
| Antibody research areas | Immunology |
| Cell/tissue expression | Lymphocytes |

| Conjugation | Ex/Em | Conc. | Size | Catalog No. |
|--------------------------------|----------------------|-----------|-----------------------------------------|----------------------------------------------------------------|
| CF®405M | 416/452 nm | 20 ug/mL | 25 tests (125 uL) 100 tests (500 uL) | P012-405M-125 P012-405M-500 |
| CF®488A | 490/516 nm | 200 ug/mL | 25 tests (125 uL) 100 tests (500 uL) | P012-488A-125 P012-488A-500 |
| RPE-Astral™616 | 496, 546, 566/617 nm | 100 ug/mL | 25 tests (125 uL) 100 tests (500 uL) | P012-R616-125 P012-R616-500 |
| CF®647Plus | 652/668 nm | 100 ug/mL | 25 tests (125 uL) 100 tests (500 uL) | P012-647P-125 P012-647P-500 |
| APC-Astral™813 | 633, 638/813 nm | 100 ug/mL | 25 tests (125 uL) 100 tests (500 uL) | P012-A813-125 P012-A813-500 |
| R-PE | 496, 546, 565/576 nm | 50 ug/mL | 25 tests (125 uL) 100 tests (500 uL) | P012-RPE-125 P012-RPE-500 |
| APC | 651/660 nm | 100 ug/mL | 25 tests (125 uL) 100 tests (500 uL) | P012-APC-125 P012-APC-500 |

Dye Features

[CF®405M Features](#)

[CF®488A Features](#)