

KIRAVIA Blue 520™ anti-human CD45RO Antibody

Catalog# / Size	376815 / 25 tests 376816 / 100 tests
Clone	S19021B
Regulatory Status	RUO
Other Names	PTPRC, CD45R, B220, T200, GP180
Isotype	Mouse IgG1, λ
Description	CD45RO is a 180 kD single chain membrane glycoprotein. It is a splice variant of tyrosine phosphatase CD45, lacking the A, B, and C determinants. The CD45RO isoform is expressed on activated and memory T cells, some B cell subsets, activated monocytes/macrophages, and granulocytes. CD45RO enhances both T cell receptor and B cell receptor signaling mediated activation. CD45 and its isoforms non-covalently associate with lymphocyte phosphatase-associated phosphoprotein (LPAP) on T and B lymphocytes. CD45 has been reported to be associated with several other cell surface antigens including CD1, CD2, CD3, and CD4. CD45 has also been reported to bind galectin-1 and CD22. CD45 isoform expression can change in response to cytokines.

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Synthetic human CD45 peptide spanning the junction region between exons 3 and 7.
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 KIRAVIA Blue 520™ 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 μ L per million cells in 100 μ L staining volume or 5 μ L per 100 μ L of whole blood. It is recommended that the reagent be titrated for optimal performance for each application. * KIRAVIA Blue 520™ has an excitation maximum of 495 nm, and a maximum emission of 520 nm. KIRAVIA Blue™ 520 is a trademark of Sony. This product is subject to proprietary rights of Sony and is made and sold under license from Sony Corporation. This product is covered by U.S. Patent(s), pending patent applications and foreign equivalents. Sony and the Sony logo are registered trademarks of Sony Corporation.
Excitation Laser	Blue Laser (488 nm)
Application Notes	The S19021B antibody can be used in combination with antibodies against CD45RA to discern memory and naïve T cells. Staining profile by S19021B on human peripheral blood lymphocyte is

comparable to that by clone UCHL1.

Staining signal by clone S19021B on target cells can be completely blocked by pre-incubation with clone UCHL1; staining of UCHL1 on target cells can be partially blocked by pre-incubation with clone S19021B.

Staining signal by clone S19021B can be significantly increased on the cells after neuraminidase treatment, suggesting that S19021B binding epitope is likely affected by glycosylation.

RRID AB_3716901 (BioLegend Cat. No. 376815)
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Antigen Details

Structure	Tyrosine phosphatases, type I transmembrane, 180 kD (isoform of CD45 containing none of the A, B, or C determinants)
Distribution	Activated and memory T cells, B cell subsets, monocytes, macrophages, granulocytes
Function	Enhances TCR and BCR signaling
Cell Type	B cells, Granulocytes, Macrophages, Mesenchymal Stem Cells, Monocytes, T cells, Tregs
Biology Area	Cell Biology, Immunology, Inhibitory Molecules, Neuroscience, Neuroscience Cell Markers, Stem Cells
Molecular Family	CD Molecules
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

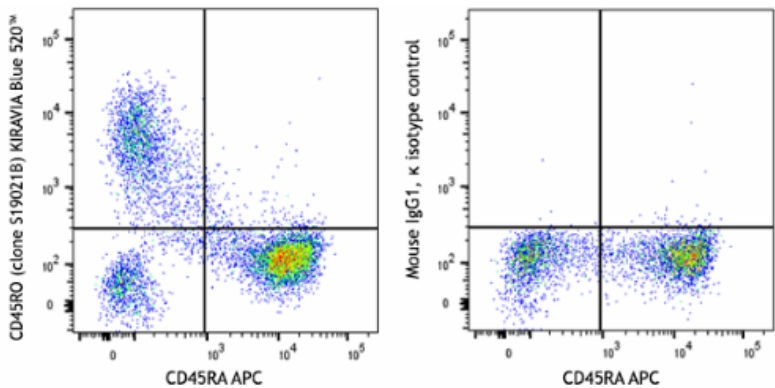
Related Protocols

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

Other Formats

PE anti-human CD45RO, APC anti-human CD45RO, PE/Cyanine7 anti-human CD45RO, Spark PLUS B550™ anti-human CD45RO, KIRAVIA Blue 520™ anti-human CD45RO, APC/Fire™ 750 anti-human CD45RO, PE/Dazzle™ 594 anti-human CD45RO

Product Data



Human peripheral blood lymphocytes were stained with anti-human CD45RA (clone HI100) APC and anti-human CD45RO (clone S19021B) KIRAVIA Blue 520™ (left) or mouse IgG1, κ KIRAVIA Blue 520™ isotype control (right).

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