

Spark PLUS V475™ anti-human CD45RA Antibody

Catalog# / Size	304194 / 25 tests
Clone	HI100
Regulatory Status	RUO
Workshop	IV N906
Other Names	GP180, L-CA, LCA, LY5, T200, PTPRC
Isotype	Mouse IgG2b, κ
Description	CD45RA is a 205-220 kD single chain type I glycoprotein. It is an exon 4 splice variant of the tyrosine phosphatase CD45. The CD45RA isoform is expressed on resting/naïve T cells, medullary thymocytes, B cells and monocytes. CD45RA enhances both T cell receptor and B cell receptor signaling. CD45 non-covalently associates 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. CD45 isoform expression can change in response to cytokines.

Product Details

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 Spark PLUS V475™ 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. * Spark PLUS V475™ has a maximum excitation of 404 nm and a maximum emission of 475 nm.
Excitation Laser	Violet Laser (405 nm)
Application Notes	Additional reported applications (for relevant formats of this clone) include: inhibition of CD45 functions ² , immunohistochemical staining of frozen tissue sections ³ and formalin-fixed paraffin-embedded tissue sections ⁴ , and immunocytochemistry ^{15,16} .

Application References

(PubMed link indicates
BioLegend citation)

1. Knapp W, *et al.* 1989. Leucocyte Typing IV. Oxford University Press. New York.
2. Yamada T, *et al.* 2002. *J. Biol. Chem.* 277:28830. (WB, Block)
3. Weninger W, *et al.* 2003 *J. Immunol.* 170:4638. (IHC-F)
4. Imaniguli MM, *et al.* 2009. *Blood.* 113:3620 (IHC-P)
5. Roque S, *et al.* 2007. *J. Immunol.* 178:8028. (FC) [PubMed](#)
6. Smeltz RB. 2007. *J. Immunol.* 178:4786. (FC) [PubMed](#)
7. Palendira U, *et al.* 2008. *Blood* (FC) [PubMed](#)
8. Kuttruff S, *et al.* 2009. *Blood* 113:358. (FC) [PubMed](#)
9. Thakral D, *et al.* 2008. *J. Immunol.* 180:7431. (FC) [PubMed](#)
10. Alanio C, *et al.* 2010. *Blood* 115:3718. (FC) [PubMed](#)
11. Iannello A, *et al.* 2010. *J. Immunol.* 184:114. (FC) [PubMed](#)
12. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)

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RRID

AB_3720613 (BioLegend Cat. No. 304194)

Antigen Details

Structure	Tyrosine phosphatases, type I transmembrane (exon 4 splicing of CD45 gene), 205-220 kD
Distribution	B cells, naïve T cells, monocytes
Function	Enhances TCR and BCR signaling
Ligand/Receptor	Galectin-1, CD2, CD3, CD4
Cell Type	B cells, Monocytes, T cells, Tregs
Biology Area	Cell Biology, Immunology, Inhibitory Molecules, Neuroscience, Neuroscience Cell Markers
Molecular Family	CD Molecules
Antigen References	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

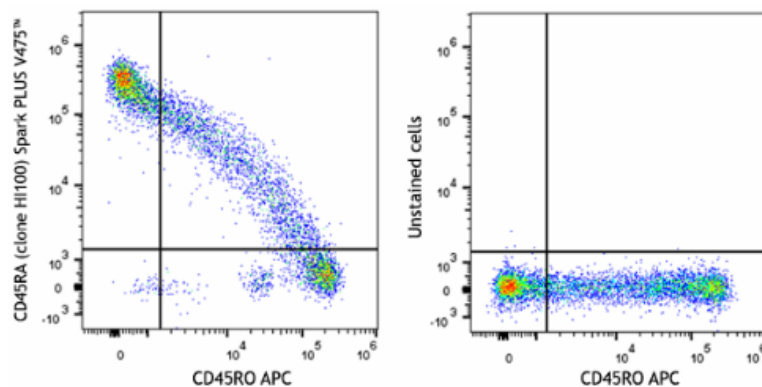
Related Protocols

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

Other Formats

Spark YG™ 581 anti-human CD45RA, TotalSeq™-D0063 anti-human CD45RA, PE/Cyanine7 anti-human CD45RA, GMP FITC anti-human CD45RA, PE/Dazzle™ 594 anti-human CD45RA, APC/Fire™ 750 anti-human CD45RA, Spark UV™ 387 anti-human CD45RA, Spark Blue™ 550 anti-human CD45RA, TotalSeq™-Bn0063 anti-human CD45RA, GMP PE/Dazzle™ 594 anti-human CD45RA, GMP APC/Fire™ 750 anti-human CD45RA, Spark Violet™ 423 anti-human CD45RA, APC anti-human CD45RA, FITC anti-human CD45RA, PE anti-human CD45RA, PE/Cyanine5 anti-human CD45RA, Brilliant Violet 711™ anti-human CD45RA, Biotin anti-human CD45RA, Purified anti-human CD45RA, APC/Cyanine7 anti-human CD45RA, Purified anti-human CD45RA (Maxpar® Ready), Brilliant Violet 650™ anti-human CD45RA, APC/Fire™ 810 anti-human CD45RA, GMP APC anti-human CD45RA, Spark Red™ 718 anti-human CD45RA, GMP PE/Cyanine7 anti-human CD45RA, StarBright UltraViolet 795 anti-human CD45RA, Spark PLUS UV395™ anti-human CD45RA, Alexa Fluor® 488 anti-human CD45RA, Alexa Fluor® 647 anti-human CD45RA, Pacific Blue™ anti-human CD45RA, Alexa Fluor® 700 anti-human CD45RA, PerCP/Cyanine5.5 anti-human CD45RA, TotalSeq™-A0063 anti-human CD45RA, PerCP anti-human CD45RA, TotalSeq™-C0063 anti-human CD45RA, Spark NIR™ 685 anti-human CD45RA, PE/Fire™ 700 anti-human CD45RA Antibody, Spark Blue™ 574 anti-human CD45RA (Flexi-Fluor™), PerCP/Fire™ 806 anti-human CD45RA Antibody, Spark PLUS V475™ anti-human CD45RA, TotalSeq™-B0063 anti-human CD45RA, Brilliant Violet 421™ anti-human CD45RA, Brilliant Violet 570™ anti-human CD45RA, Brilliant Violet 605™ anti-human CD45RA, Brilliant Violet 785™ anti-human CD45RA, Brilliant Violet 510™ anti-human CD45RA, PE/Fire™ 810 anti-human CD45RA, PerCP/Fire™ 780 anti-human CD45RA Antibody, Spark YG™ 593 anti-human CD45RA (Flexi-Fluor™) Antibody, PE/Fire™ 744 anti-human CD45RA Antibody, Alexa Fluor® 594 anti-human CD45RA, Brilliant Violet 750™ anti-human CD45RA, PE/Fire™ 640 anti-human CD45RA

Product Data



Human peripheral blood cells were stained with anti-human CD45RO (clone UCHL1) APC and anti-human CD45RA (clone HI100) Spark PLUS V475™ (left) or stained with anti-human CD45RO (clone UCHL1) APC only (right). Data shown are gated on the lymphocyte population.

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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