

GMP PE anti-human CD45RO Antibody

Catalog# / Size	260324 / 100 tests
Clone	UCHL1
Workshop	IV N31
Other Names	CD45RO
Isotype	Mouse IgG2a, κ
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

Reactivity	Human
Reported Reactivity	Chimpanzee, Cynomolgus, Common Marmoset
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	IL-2 dependent T cell line, CA1
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA) and a stabilizer.
Preparation	The antibody was purified by affinity chromatography and conjugated with PE under optimal conditions.
Concentration	20.0 µg/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	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.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Application Notes	The UCHL1 antibody is commonly used in combination with antibodies against CD45RA to discern memory and naive T cells. Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen tissue sections ⁵ and formalin-fixed paraffin-embedded tissue sections ⁴ , Western blotting ² , and immunoprecipitation ³ .
Application References	<ol style="list-style-type: none"> Knapp W, <i>et al.</i> Eds. 1989. Leucocyte Typing IV. Oxford University Press. New York. (FC) Ishii T, <i>et al.</i> 2001. <i>P. Natl. Acad. Sci. USA</i> 98:12138. (WB) Ponsford M, <i>et al.</i> 2001. <i>Clin. Exp. Immunol.</i> 124:315. (IP) Yamada M, <i>et al.</i> 1996. <i>Stroke</i> 27:1155. (IHC) Sakkas LI, <i>et al.</i> 1998. <i>Clin. Diagn. Lab. Immunol.</i> 5:430. (IHC) Baba N, <i>et al.</i> 2010. <i>Int. Immunol.</i> 22:237. PubMed Thakral D, <i>et al.</i> 2008. <i>J. Immunol.</i> 180:7431. (FC) PubMed
(PubMed link indicates BioLegend citation)	

8. Weiss L, et al. 2010. *P. Natl. Acad. Sci. USA* 107:10632. [PubMed](#)
9. Wu YY, et al. 2007. *Infect. Immun.* 75:4357. [PubMed](#)
10. Mozaffarian N, et al. 2008. *Rheumatology* 47:1335. [PubMed](#)
11. Roque S, et al. 2007. *J. Immunol.* 178:8028. [PubMed](#)
12. Yoshino N, et al. 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
13. Smith SH, et al. 1986. *Immunology* 58:63. (Immunogen)
14. Peterson VM, et al. 2017. *Nat. Biotechnol.* 35:936. (PG)

Disclaimer

GMP RUO Flow Cytometry Antibodies. BioLegend GMP RUO fluorophore conjugated antibodies are manufactured in a dedicated GMP facility and compliant with ISO 13485:2016. For research use only. Not for use in diagnostic or therapeutic procedures. Our processes include:

- Batch-to-batch consistency
- Material traceability
- Documented procedures
- Documented employee training
- Equipment maintenance and monitoring records
- Lot-specific certificates of analysis
- Quality audits per ISO 13485:2016
- QA review of released products

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
Ligand/Receptor	CD22
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

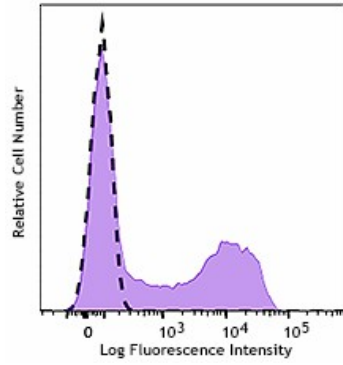
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

APC anti-human CD45RO, FITC anti-human CD45RO, PE anti-human CD45RO, PE/Cyanine5 anti-human CD45RO, Purified anti-human CD45RO, Alexa Fluor® 488 anti-human CD45RO, Pacific Blue™ anti-human CD45RO, Alexa Fluor® 700 anti-human CD45RO, Biotin anti-human CD45RO, Brilliant Violet 421™ anti-human CD45RO, PerCP/Cyanine5.5 anti-human CD45RO, Brilliant Violet 570™ anti-human CD45RO, Brilliant Violet 605™ anti-human CD45RO, APC/Cyanine7 anti-human CD45RO, PE/Cyanine7 anti-human CD45RO, Brilliant Violet 650™ anti-human CD45RO, Brilliant Violet 711™ anti-human CD45RO, Brilliant Violet 785™ anti-human CD45RO, Alexa Fluor® 594 anti-human CD45RO, Purified anti-human CD45RO (Maxpar® Ready), Brilliant Violet 510™ anti-human CD45RO, PE/Dazzle™ 594 anti-human CD45RO, APC/Fire™ 750 anti-human CD45RO, PerCP anti-human CD45RO, TotalSeq™-A0087 anti-human CD45RO, TotalSeq™-B0087 anti-human CD45RO, TotalSeq™-C0087 anti-human CD45RO, Brilliant Violet 750™ anti-human CD45RO, PE/Fire™ 640 anti-human CD45RO, TotalSeq™-D0087 anti-human CD45RO, Spark Violet™ 423 anti-human CD45RO, GMP APC anti-human CD45RO

Product Data



Typical results from human peripheral blood lymphocytes stained either with UCHL1 PE used at 5 μ L/test (filled histogram) or with an isotype control (open histogram).

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