

GMP APC anti-human CD45RO Antibody

Catalog# / Size	260052 / 100 tests
Clone	UHL1
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
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, 0.2% (w/v) BSA (origin USA) and a stabilizer.
Preparation	The antibody was purified by affinity chromatography and conjugated with APC under optimal conditions.
Concentration	100 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	Red Laser (633 nm)
Application Notes	The UHL1 antibody is commonly used in combination with antibodies against CD45RA to discern memory and naïve 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

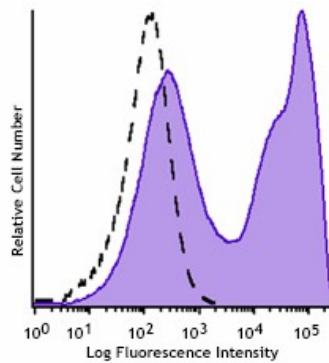
Structure	Tyrosine phosphatases, type I transmembrane, 180 kD (isoform of CD45 containing none of the A, B, or C determinants)
Distribution	Activated and memory T cells, B cell subsets, monocytes, macrophages, granulocytes
Function	Enhances TCR and BCR signaling
Ligand/Receptor	CD22
Cell Type	B cells, 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	<ol style="list-style-type: none"> 1. Thomas M. 1989. <i>Annu Rev Immunol.</i> 7:339-69. 2. Trowbridge I, et al. 1994. <i>Annu Rev Immunol.</i> 12:85-116.
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



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

Symbols Glossary*

Symbol	Meaning	Symbol Title	Symbol No.	Symbol	Meaning	Symbol Title	Symbol No.
	Catalog number	Catalogue number	5.1.6		Indicates the need for the user to consult the instructions for use.	Consult instructions for use	5.4.3
	Indicates the temperature limits to which the medical device can be safely exposed.	Temperature limit	5.3.7		Indicates a medical device that needs protection from light sources.	Keep away from sunlight	5.3.2
	Indicates the upper limit of temperature to which the medical device can be safely exposed.	Upper limit of temperature	5.3.6		Indicates the date after which the medical device is not to be used.	Use-by date	5.1.4
	Indicates the medical device manufacturer.	Manufacturer	5.1.1		Indicates the authorized representative in the European Community.	Authorized representative in the European Community	5.1.2
	Indicates the manufacturer's batch code so that the batch or lot can be identified.	Batch code	5.1.5		Indicates a medical device that is intended to be used as an in vitro diagnostic medical device.	<i>In vitro</i> diagnostic medical device	5.5.1

* Symbol information is from EN ISO 15223-1:2016 Medical devices – Symbols to be used with medical device labels, labelling and information to be supplied – Part 1: General requirements

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