

GMP APC anti-human CD45RO Antibody

Catalog# / Size	260052 / 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
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	25 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 UCHL1 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

(PubMed link indicates BioLegend citation)

- Knapp W, *et al.* Eds. 1989. Leucocyte Typing IV. Oxford University Press. New York. (FC)
- Ishii T, *et al.* 2001. *P. Natl. Acad. Sci. USA* 98:12138. (WB)
- Ponsford M, *et al.* 2001. *Clin. Exp. Immunol.* 124:315. (IP)
- Yamada M, *et al.* 1996. *Stroke* 27:1155. (IHC)
- Sakkas LI, *et al.* 1998. *Clin. Diagn. Lab. Immunol.* 5:430. (IHC)
- Baba N, *et al.* 2010. *Int. Immunol.* 22:237. [PubMed](#)
- Thakral D, *et al.* 2008. *J. Immunol.* 180:7431. (FC) [PubMed](#)
- Weiss L, *et al.* 2010. *P. Natl. Acad. Sci. USA* 107:10632. [PubMed](#)
- Wu YY, *et al.* 2007. *Infect. Immun.* 75:4357. [PubMed](#)
- 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)

RRID AB_2910361 (BioLegend Cat. No. 260052)

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- 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. *Annu Rev Immunol.* 7:339-69.
2. Trowbridge I, *et al.* 1994. *Annu Rev Immunol.* 12:85-116.

Gene ID [5788](#)

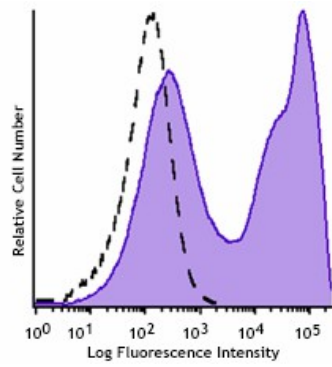
Related Protocols

- [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, Spark Violet™ 423 anti-human CD45RO, GMP APC anti-human CD45RO, TotalSeq™-Bn1369 anti-human CD45RO, GMP PE anti-human CD45RO, Spark UV™ 387 anti-human CD45RO

Product Data



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

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