Biotin anti-human CD45RA Antibody

Catalog# / Size	304104 / 100 µg
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.
Preparation	The antibody was purified by affinity chromatography, and conjugated with biotin under optimal conditions.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C. **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 ≤ 0.5 µg per 10^6 cells in 100 µl volume or 100 µl of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.
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. Imanguli 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)
13. Guereau-de-Arellan M, *et al.* 2011. *Brain.* 134:3578. PubMed
14. Canque B, *et al.* 2000. *Blood* 96:3748. (ICC)

15. Imanguli MM, *et al.* 2009. *Blood* 13:3620. (ICC)
16. Stoeckius M, et al. 2017. Nat. Methods. 14:865. (PG)
17. Peterson VM, et al. 2017. Nat. Biotechnol. 35:936. (PG)

RRID AB_314408 (BioLegend Cat. No. 304104)

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. *Annu. Rev. Immunol.* 7:339. 2. Trowbridge I, *et al.* 1994. *Annu. Rev. Immunol.*12:85.
Gene ID	5788

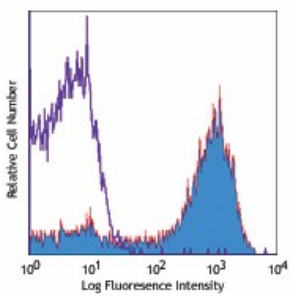
Related Protocols

Cell Surface Flow Cytometry Staining Protocol

Other Formats

APC anti-human CD45RA, Biotin anti-human CD45RA, FITC anti-human CD45RA, PE anti-human CD45RA, PE/Cyanine5 anti-human CD45RA, Purified 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, PE/Cyanine7 anti-human CD45RA, APC/Cyanine7 anti-human CD45RA, Brilliant Violet 421™ anti-human CD45RA, Brilliant Violet 570™ anti-human CD45RA, Brilliant Violet 605™ anti-human CD45RA, Brilliant Violet 650™ anti-human CD45RA, Brilliant Violet 711™ anti-human CD45RA, Brilliant Violet 785™ anti-human CD45RA, Brilliant Violet 510™ anti-human CD45RA, Purified anti-human CD45RA (Maxpar® Ready), PE/Dazzle™ 594 anti-human CD45RA, APC/Fire™ 750 anti-human CD45RA, PerCP anti-human CD45RA, TotalSeq™-A0063 anti-human CD45RA, Alexa Fluor® 594 anti-human CD45RA, TotalSeq™-B0063 anti-human CD45RA, TotalSeq™-C0063 anti-human CD45RA, Brilliant Violet 750™ anti-human CD45RA, Spark NIR™ 685 anti-human CD45RA, PE/Fire™ 640 anti-human CD45RA, PE/Fire™ 700 anti-human CD45RA Antibody, Spark YG™ 581 anti-human CD45RA, TotalSeq™-D0063 anti-human CD45RA, Spark Violet™ 423 anti-human CD45RA, GMP FITC anti-human CD45RA, Spark UV™ 387 anti-human CD45RA

Product Data



Human peripheral blood lymphocytes stained with biotinylated HI100,followed by Sav-PE

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