Antibodies

Anti-Human CD45RA Antibody, Clone HI100, PE

Mouse monoclonal IgG2b antibody against human, chimpanzee CD45RA, PE-conjugated

Catalog #100-0319	25 tests	5 µL/test
Catalog #100-0320	100 tests	5 µL/test

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TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713
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Product Description

The HI100 antibody reacts with an extracellular epitope on the CD45RA isoform of CD45, a type I transmembrane glycoprotein and member of the protein tyrosine phosphatase family (receptor class 1/6 subfamily). Alternative splicing of exons 4, 5, and 6 that encode the extracellular RA, RB, and RC polypeptides of CD45 gives rise to several isoforms with molecular masses of 180 - 240 kDa. Excision of exon 4 generates the ~220-kDa CD45RA isoform, which is expressed on naïve T cells, subsets of B cells and monocytes, and medullary thymocytes. CD45RA functions to enhance signaling through both the T cell receptor and B cell receptor. The HI100 antibody is commonly used in combination with antibodies against the CD45RO isoform to discern naïve and memory T cells and is useful for identifying the suppressor/inducer subset of CD4+ lymphocytes. The proportion of CD45RA+ T cells typically decreases with age.

Target Antigen Name:	CD45RA
Alternative Names:	B220, CD45, GP180, L-CA, LCA, Lyt-4, Ly-5, Ly5, Protein tyrosine phosphatase receptor type C, PTPRC, T200
Gene ID:	5788
Species Reactivity:	Human, Chimpanzee
Host Species:	Mouse
Clonality:	Monoclonal
Clone:	HI100
Isotype:	IgG2b, kappa
Immunogen:	CD45RA of human origin
Conjugate:	PE (Phycoerythrin)

Applications

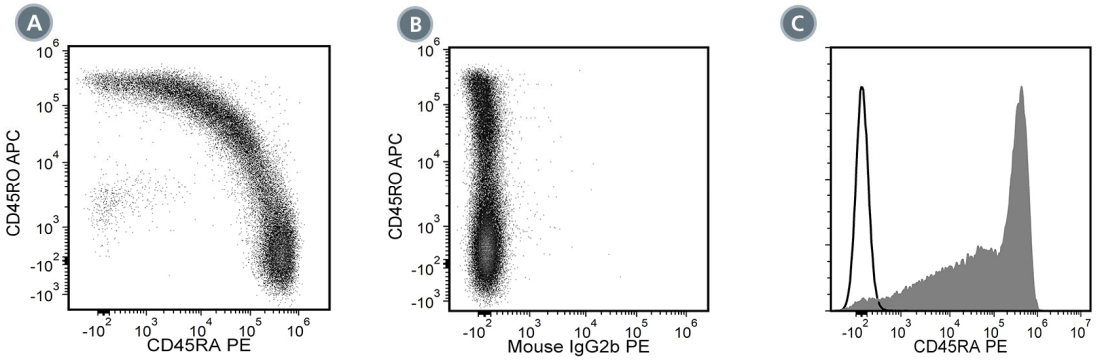
Verified:	FC
Reported:	FC
Special Applications:	This antibody clone has been verified for purity assessments of cells isolated with EasySep™ Human Naïve CD4+ T Cell Isolation Kit II (Catalog #17555).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence-activated cell sorting; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

Properties

Formulation:	Phosphate-buffered saline, pH 7.2, containing 0.09% sodium azide, 0.1% gelatin, and < 0.2% (w/v) bovine serum albumin
Purification:	The antibody was purified by affinity chromatography and conjugated with PE under optimal conditions. The solution is free of unconjugated PE.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. Protect product from prolonged exposure to light. For product expiry date, please contact techsupport@stemcell.com.
Directions for Use:	For flow cytometry, the suggested use of this reagent is ≤ 5 µL per 1 x 10^6 cells in 100 µL. It is recommended that the antibody be titrated for optimal performance for each application.

Data



(A) Flow cytometry analysis of human peripheral blood mononuclear cells (PBMCs; gated on viable lymphocytes) labeled with Anti-Human CD45RA Antibody, Clone HI100, PE, and anti-human CD45RO antibody, clone UCHL1, APC.
(B) Flow cytometry analysis of human PBMCs labeled with a mouse IgG2b, kappa PE isotype control antibody and anti-human CD45RO antibody, clone UCHL1, APC.
(C) Flow cytometry analysis of human PBMCs labeled with Anti-Human CD45RA Antibody, Clone HI100, PE (filled histogram) or a mouse IgG2b, kappa PE isotype control antibody (solid line histogram). Viable lymphocytes were gated for analysis.

Related Products

For a complete list of antibodies, including other conjugates, sizes, and clones, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/antibodies or contact us at techsupport@stemcell.com.

References

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3. Thibaudin M et al. (2015) Human ectonucleotidase-expressing CD25high Th17 cells accumulate in breast cancer tumors and exert immunosuppressive functions. Oncoimmunology 5(1): e1055444. (FACS, FC)
4. Libri V et al. (2011) Cytomegalovirus infection induces the accumulation of short-lived, multifunctional CD4+CD45RA+ CD27- T cells: the potential involvement of interleukin-7 in this process. Immunology 132(3): 326–39. (FC)
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