Antibodies

Anti-Human CD8a Antibody, Clone RPA-T8, PE

Mouse monoclonal IgG1 antibody against human, rhesus, cynomolgus CD8a, PE-conjugated

Catalog #60022PE	100 Tests	5 µL/test
#60022PE.1	25 Tests	5 µL/test

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Product Description

The RPA-T8 antibody reacts with CD8a, a 32 - 34 kDa type I transmembrane glycoprotein which is a subunit of CD8. CD8 is a disulfide-bonded dimer, found either as a heterodimer of CD8a (α) and CD8b (β) subunits (i.e., αβ) or a homodimer (αα). CD8 acts as a co-receptor to the T cell receptor (TCR) during T cell activation by binding MHC Class I molecules presented by an antigen-presenting cell. It functions to strengthen the association between the TCR and MHC I-antigen complex, and to amplify signals from the TCR to the cytoplasm through the interaction of its intracellular domain with cytoplasmic tyrosine kinases such as Lck. The CD8a chain binds to the α3 domain of class I MHC molecules. CD8 is expressed by a majority of thymocytes, a subset of mature peripheral blood T cells (T cytotoxic cells), a proportion of β T cells, and at lower levels by NK cells (which predominantly express CD8a homodimers).

Target Antigen Name:	CD8a
Alternative Names:	Leu2, T8
Gene ID:	925
Species Reactivity:	Human, Rhesus, Cynomolgus, Baboon, Chimpanzee, Pigtailed Macaque, Sooty Mangabey
Host Species:	Mouse
Clonality:	Monoclonal
Clone:	RPA-T8
Isotype:	IgG1, kappa
Immunogen:	Full-length human CD8 protein
Conjugate:	PE (Phycoerythrin)

Applications

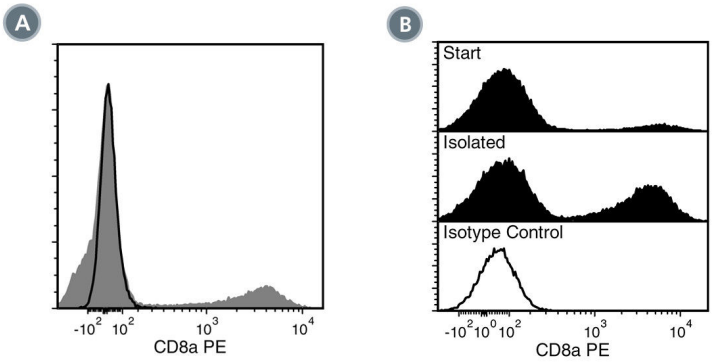
Verified:	CellSep, FC
Reported:	FC
Special Applications:	This antibody clone has been verified for purity assessments of cells isolated with EasySep™ kits, including EasySep™ Direct Human CD8+ T Cell Isolation Kit (Catalog #19663), EasySep™ Human CD8+ T Cell Enrichment Kit (Catalog #19053), EasySep™ Human CD8 Positive Selection Kit II (Catalog #17853), EasySep™ Human CD3 Positive Selection Kit II (Catalog #17851), and EasySep™ HLA T Cell Enrichment Kit (Catalog #19051HLA).

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 solution, pH 7.2, containing 0.09% sodium azide 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 and unconjugated antibody.
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 antibody is 5 µL per 1 x 10^6 cells in 100 µL or per 100 µL of whole blood. It is recommended that the antibody be titrated for optimal performance for each application.

Data



(A) Flow cytometry analysis of peripheral blood mononuclear cells (PBMCs) labeled with Anti-Human CD8a Antibody, Clone RPA-T8, PE (filled histogram) or a mouse IgG1, kappa PE isotype control antibody (solid line histogram).
(B) Flow cytometry analysis of human PBMCs processed with the EasySep™ HLA T Cell Enrichment Kit and labeled with Anti-Human CD8a Antibody, Clone RPA-T8, PE. Histograms show labeling of PBMCs (Start) and isolated cells (Isolated). Labeling of start cells with a mouse IgG1, kappa PE isotype control antibody is shown (solid line histogram).

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

1. Rout N et al. (2010) Paucity of CD4+ natural killer T (NKT) lymphocytes in sooty mangabeys is associated with lack of NKT cell depletion after SIV infection. PLoS One 5(3): e9787. (FC)
2. Kmieciak M et al. (2009) Human T cells express CD25 and Foxp3 upon activation and exhibit effector/memory phenotypes without any regulatory/suppressor function. J Transl Med 7: 89. (FC)
3. Thakral D et al. (2008) Differential expression of the human CD8beta splice variants and regulation of the M-2 isoform by ubiquitination. J Immunol 180(11): 7431–42. (FC)
4. Mack CL et al. (2004) Biliary atresia is associated with CD4+ Th1 cell-mediated portal tract inflammation. Pediatr Res 56(1): 79–87. (IHC)
5. Yoshino N et al. (2000) Upgrading of flow cytometric analysis for absolute counts, cytokines and other antigenic molecules of cynomolgus monkeys (Macaca fascicularis) by using anti-human cross-reactive antibodies. Exp Anim 49(2): 97–110. (FC)
6. Kishimoto T et al. (Eds.). (1998) Leucocyte Typing VI: White cell differentiation antigens (pp. 1114–5). New York: Garland Publishing Inc.
7. Barclay AN et al. (Eds.). (1997) The Leucocyte Antigen Factsbook, Second Edition (pp. 149–51). New York: Academic Press.
8. Sopper S et al. (1997) Lymphocyte subsets and expression of differentiation markers in blood and lymphoid organs of rhesus monkeys. Cytometry 29(4): 351–62.
9. Schlossman S et al. (Eds.). (1995) Leucocyte Typing V: White cell differentiation antigens. New York: Oxford University Press.
10. Reimann KA et al. (1994) Use of human leukocyte-specific monoclonal antibodies for clinically immunophenotyping lymphocytes of rhesus monkeys. Cytometry 17(1): 102–8.