

Anti-Human CD3 Antibody, Clone UCHT1, APC



Scientists Helping Scientists™ | WWW.STEMCELL.COM

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

INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM

FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

Antibodies

Mouse monoclonal IgG1 antibody
against human, chimpanzee CD3,
APC-conjugated

Catalog #60011AZ
#60011AZ.1

100 Tests 5 µL/test
25 Tests 5 µL/test

Product Description

The UCHT1 antibody reacts with the ~20 kDa CD3ε subunit of the human T cell receptor (TCR)/CD3 complex, which is expressed on the surface of ~95% of mature T cells and NK-T cells, and variably on thymocytes. A majority of T cell neoplasms also express CD3. The CD3 complex, which is assembled from combinations of CD3γ, δ, ε, η and ζ subunits, associates non-covalently with the TCR and is involved in transducing antigen recognition signals into the cytoplasm of T cells and in regulating the cell surface expression of the TCR. Activation of T cells by the TCR involves the cytoplasmic tails of the CD3 subunits, which are structurally related type 1 transmembrane proteins and members of the immunoglobulin super family. Mutations in the CD3 subunits have been associated with various immunodeficiency disorders including severe combined immunodeficiency disorder (SCID).

Target Antigen Name:	CD3
Alternative Names:	CD3e, CD3epsilon, T3
Gene ID:	915
Species Reactivity:	Human, Chimpanzee
Host Species:	Mouse (BALB/c)
Clonality:	Monoclonal
Clone:	UCHT1
Isotype:	IgG1, kappa
Immunogen:	Human infant thymocytes followed by Sézary T cells
Conjugate:	APC

Applications

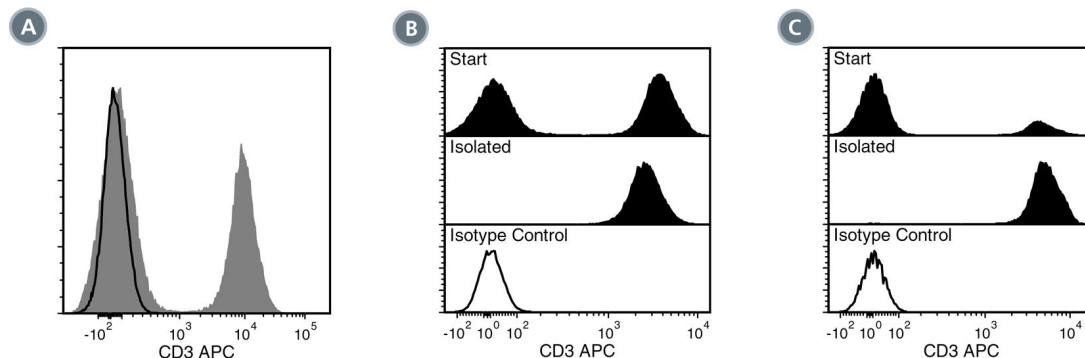
Verified:	FC
Reported:	FC
Special Applications:	This antibody clone has been verified for purity assessments of cells isolated with EasySep™ kits, including EasySep™ Direct Human T Cell Isolation Kit (Catalog #19661), EasySep™ Human CD3 Positive Selection Kit (Catalog #18051; partial blocking may be observed), EasySep™ HLA Whole Blood T Cell Enrichment Kit (Catalog #19951HLA) and EasySep™ HLA Whole Blood CD2 Positive Selection Kit (Catalog #18687HLA).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; 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 APC under optimal conditions. The solution is free of unconjugated APC 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 volume 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 human peripheral blood mononuclear cells (PBMCs) labeled with Anti-Human CD3 Antibody, Clone UCHT1, APC (filled histogram) or a mouse IgG1, kappa APC isotype control antibody (solid line histogram).

(B) Flow cytometry analysis of human buffy coat nucleated cells processed with the EasySep™ HLA Whole Blood CD3 Positive Selection Kit and labeled with Anti-Human CD3 Antibody, Clone UCHT1, APC. Histograms show labeling of buffy coat nucleated cells (Start) and isolated cells (Isolated). Labeling of start cells with a mouse IgG1, kappa APC isotype control antibody is shown (open histogram).

(C) Flow cytometry analysis of human whole blood nucleated cells processed with the EasySep™ HLA Whole Blood T Cell Enrichment Kit and labeled with Anti-Human CD3 Antibody, Clone UCHT1, APC. Histograms show labeling of HetaSep™-treated whole blood cells (Start) and isolated cells (Isolated). Labeling of start cells with a mouse IgG1, kappa APC isotype control antibody is shown (open histogram).

Related Products

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

References

1. Wunderlich M et al. (2014) OKT3 prevents xenogeneic GVHD and allows reliable xenograft initiation from unfractionated human hematopoietic tissues. *Blood* 123(24): e134–44. (FA, FC)
2. 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)
3. Arnett KL et al. (2004) Crystal structure of a human CD3-epsilon/delta dimer in complex with a UCHT1 single-chain antibody fragment. *Proc Natl Acad Sci U S A* 101(46): 16268–73.
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. Thompson AG et al. (2004) T cells signaled by NF-kappa B- dendritic cells are sensitized not anergic to subsequent activation. *J Immunol* 173(3): 1671–80. (FA)
6. Ryschich E et al. (2003) Expression of HLA class I/II antigens and T cell immune response in human neuroendocrine tumors of the pancreas. *Tissue Antigens* 62(1): 48–54. (IHC)
7. 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)
8. Sakkas LI et al. (1998) T cells and T-cell cytokine transcripts in the synovial membrane in patients with osteoarthritis. *Clin Diagn Lab Immunol* 5(4): 430–7. (IHC)
9. Graves JD & Cantrell DA. (1991) An analysis of the role of guanine nucleotide binding proteins in antigen receptor/CD3 antigen coupling to phospholipase C. *J Immunol* 146(7): 2102–7. (FA)
10. Salmerón A et al. (1991) A conformational epitope expressed upon association of CD3-epsilon with either CD3-delta or CD3-gamma is the main target for recognition by anti-CD3 monoclonal antibodies. *J Immunol* 147(9): 3047–52. (IP)
11. Van Dongen JJ et al. (1988) Cytoplasmic expression of the CD3 antigen as a diagnostic marker for immature T-cell malignancies. *Blood* 71(3): 603–12. (WB)
12. McMichael AJ et al. (Eds.) (1987) *Leucocyte Typing III: White Cell Differentiation Antigens*. New York: Oxford University Press.
13. Beverley PC & Callard RE. (1981) Distinctive functional characteristics of human "T" lymphocytes defined by E rosetting or a monoclonal anti-T cell antibody. *Eur J Immunol* 11(4): 329–34.

STEMCELL TECHNOLOGIES INC.'S QUALITY MANAGEMENT SYSTEM IS CERTIFIED TO ISO 13485. PRODUCTS ARE FOR RESEARCH USE ONLY AND NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES UNLESS OTHERWISE STATED.

Copyright © 2016 by STEMCELL Technologies Inc. All rights reserved including graphics and images. STEMCELL Technologies & Design, STEMCELL Shield Design, Scientists Helping Scientists and EasySep are trademarks of STEMCELL Technologies Inc. All other trademarks are the property of their respective holders. Alexa Fluor® is a registered trademark of Life Technologies Corporation. This product is licensed for internal research use only and its sale is expressly conditioned on the buyer not using it for manufacturing, performing a service, or medical test, or otherwise generating revenue. For use other than research, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad, CA 92008 USA or outlicensing@lifetech.com. While STEMCELL has made all reasonable efforts to ensure that the information provided by STEMCELL and its suppliers is correct, it makes no warranties or representations as to the accuracy or completeness of such information.