Anti-Human CD3 Antibody, Clone UCHT1, APC

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 NKT 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 superfamily. Mutations in the CD3 subunits have been associated with various immunodeficiency disorders including severe combined immunodeficiency (SCID).

Target Antigen Name: CD3
Alternative Names: CD3ε, 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 (Allophycocyanin)

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 II (Catalog #17851; partial blocking may be observed), EasySep™ HLA Whole Blood T Cell Enrichment Kit (Catalog #19951HLA), and EasySep Human CD2 Positive Selection Kit II (Catalog #17883).

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 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. Stable until expiry date (EXP) on label.
Directions for Use: For flow cytometry, the suggested use of this antibody is ≤ 0.25 µg per 1 x 10^6 cells in 100 µL. It is recommended that the antibody be titrated for optimal performance for each application.

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
(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 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 (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
2. Camelo A et al. (2017) IL-33, IL-25, and TSLP induce a distinct phenotypic and activation profile in human type 2 innate lymphoid cells. Blood Adv 1(10): 577–89. (FC)