Anti-Human CD3 Antibody, Clone UCHT1, Alexa Fluor® 488

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 superfamly. 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: Alexa Fluor® 488

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™ HLA Whole Blood CD2 Positive Selection Kit (Catalog #18687HLA).

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 Alexa Fluor® 488 under optimal conditions. The solution is free of unconjugated Alexa Fluor® 488.
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.

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
Data

Flow cytometry analysis of human peripheral blood mononuclear cells (PBMCs) labeled with Anti-Human CD3 Antibody, Clone UCHT1, Alexa Fluor® 488 (filled histogram) or a mouse IgG1, kappa Alexa Fluor® 488 isotype control antibody (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, please visit our website at www.stemcell.com/antibodies or contact us at techsupport@stemcell.com.

References

10. Salmeron 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)