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: T3, CD3epsilon, CD3e
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: Unconjugated

Applications

Verified: CellSep, FC
Reported: CyTOF®, FA, FC, ICC, IF, IHC, IP, WB
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 saline
Purification: The antibody was purified by affinity chromatography.
Stability and Storage: Product stable at 2 - 8°C when stored undiluted. Do not freeze. Addition of 0.1% sodium azide (final) is recommended once the vial has been opened. For product expiry date, please contact techsupport@stemcell.com.
Directions for Use: The suggested use of this antibody is: FC and blocking, < 1 μg 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, followed by goat anti-mouse IgG, FITC (filled histogram). Labeling with a mouse IgG1, kappa isotype control antibody followed by goat anti-mouse IgG, FITC is shown (solid line histogram).

(B) Flow cytometry analysis of PBMCs prior to being processed with EasySep™ Human CD3 Positive Selection Kit (Catalog #18051), which uses Anti-Human CD3 Antibody, Clone UCHT1, to select CD3+ cells. The cells were labeled with Anti-Human CD4 Antibody, Clone OKT4, Alexa Fluor® 488 (Catalog #60016AD) and Anti-Human CD8 Antibody, Clone RPA-T8, PE (Catalog #60022PE).

(C) Flow cytometry analysis of PBMCs processed with EasySep™ Human CD3 Positive Selection Kit and labeled with Anti-Human CD4 Antibody, Clone OKT4, Alexa Fluor® 488 (Catalog #60016AD) and Anti-Human CD8 Antibody, Clone RPA-T8 (Catalog #60022PE).

**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. 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)

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