**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:** 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:** PE (Phycoerythrin)

**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).

**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

Flow cytometry analysis of human peripheral blood mononuclear cells (PBMCs) labeled with Anti-Human CD3 Antibody, Clone UCHT1, PE (filled histogram) or a mouse IgG1, kappa PE 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)