EXBIO Antibodies

PRODUCT DATA SHEET

T9-514-T025

Monoclonal Antibody to CD3 PerCP-Cy™5.5 conjugated (25 tests)

Clone: UCHT1

Isotype: Mouse IgG1

Specificity: The antibody UCHT1 recognizes the CD3 antigen of the TCR/CD3 complex on mature human T cells. The UCHT1 antibody reacts with the epsilon chain of the CD3 complex.
HLDA I; WS Code T 3
HLDA III; WS Code T 126
HLDA III; WS Code T 471
HLDA VI; WS Code T 6T-CD3.1

Regulatory Status: RUO

Immunogen: human thymocytes followed by Sezary T cells

Species Reactivity: Human, Non-Human Primates

Preparation: The purified antibody is conjugated with tandem dye PerCP-Cy™5.5 under optimum conditions. The conjugate is purified by size-exclusion chromatography and adjusted for direct use. No reconstitution is necessary.

Storage Buffer: The reagent is provided in stabilizing phosphate buffered saline (PBS) solution containing 15mM sodium azide.

Storage / Stability: Store in the dark at 2-8°C. Do not freeze. Avoid prolonged exposure to light. Do not use after expiration date stamped on vial label.

Usage: The reagent is designed for Flow Cytometry analysis of human blood cells using 4 µl reagent / 100 µl of whole blood or 10^6 cells in a suspension.
The content of a vial (0.1 ml) is sufficient for 25 tests.

Expiration: See vial label

Lot Number: See vial label

Background: CD3 complex is crucial in transducing antigen-recognition signals into the cytoplasm of T cells and in regulating the cell surface expression of the TCR complex. T cell activation through the antigen receptor (TCR) involves the cytoplasmic tails of the CD3 subunits CD3 gamma, CD3 delta, CD3 epsilon and CD3 zeta. These CD3 subunits are structurally related members of the immunoglobulins super family encoded by closely linked genes on human chromosome 11. The CD3 components have long cytoplasmic tails that associate with cytoplasmic signal transduction molecules. This association is mediated at least in part by a double tyrosine-based motif present in a single copy in the CD3 subunits. CD3 may play a role in TCR-induced growth arrest, cell survival and proliferation.
The CD3 antigen is present on 68-82% of normal peripheral blood lymphocytes, 65-85% of thymocytes and Purkinje cells in the cerebellum. It is never expressed on B or NK cells. Decreased percentages of T lymphocytes may be observed in some autoimmune diseases.

For laboratory research only, not for drug, diagnostic or other use.

EXBIO Praha | Nad Safinou II 341 | 252 50 Vestec u Prahy | Czech Republic
Tel: +420 261 090 666 | Fax: +420 261 090 660 | orders@exbio.cz | www.exbio.cz

References:

*Huang Y, Wange RL: T cell receptor signaling: beyond complex complexes. J Biol Chem. 2004 Jul 9;279(28):28827-30.
*Kuhns MS, Davis MM, Garcia KC: Deconstructing the form and function of the TCR/CD3 complex. Immunity. 2006 Feb;24(2):133-9.
*Alarcón B, Swamy M, van Santen HM, Schamel WW: T-cell antigen-receptor stoichiometry: pre-clustering for sensitivity. EMBO Rep. 2006 May;7(5):490-5.
*Garson JA, Beverley PC, Coakham HB, Harper EI: Monoclonal antibodies against human T lymphocytes label Purkinje neurones of many species. Nature. 1982 Jul 22;298(5872):375-7.
*Leukocyte Typing III., McMichael A. J. et al (Eds.), Oxford University Press (1987).
*Leukocyte Typing VI., Kishimoto T. et al. (Eds.), Garland Publishing Inc. (1997).
*Barclay, Brown et al.: The Leukocyte Antigen FactsBook, 2nd edition, Harcourt Brace & Company, London, (1997).
*Siegers GM, Swamy M, Fernández-Malavé E, Minguet S, Rathmann S, Guardo AC, Pérez-Flores V, Regueiro JR, Alarcón B, Fisch P, Schamel WW: Different composition of the human and the mouse gammadelta T cell receptor explains different phenotypes of CD3gamma and CD3delta immunodeficiencies. J Exp Med. 2007 Oct 29;204(11):2537-44.
*Fisch P, Malkovsky M, Braakman E, Sturm E, Bolhuis RL, Prieve A, Sosman JA, Lam VA, Sondel PM: Gamma/delta T cell clones and natural killer cell clones mediate distinct patterns of non-major histocompatibility complex-restricted cytolysis. J Exp Med. 1990 May 1;171(5):1567-79.
*Demedts IK, Brusselle GG, Vermaelen KY, Pauwels RA: Identification and characterization of human pulmonary dendritic cells. Am J Respir Cell Mol Biol. 2005 Mar;32(3):177-84.
*Lin CW, Liu TY, Chen SU, Wang KT, Medeiros LJ, Hsu SM: CD94 1A transcripts characterize lymphoblastic lymphoma/leukemia of immature natural killer cell origin with distinct clinical features. Blood. 2005 Nov 15;106(10):3567-74.
*le Gouvello S, Manceau V, Sobel A: Serine 16 of stathmin as a cytosolic target for Ca2+/calmodulin-dependent kinase II after CD2 triggering of human T lymphocytes. J Immunol. 1998 Aug 1;161(3):1113-22.
*Torres PS, Alcover A, Zapata DA, Arnaud J, Pacheco A, Martín-Fernández JM, Villasevil EM, Sanal O, Regueiro JR: TCR dynamics in human mature T lymphocytes lacking CD3 gamma. J Immunol. 2003 Jun 15;170(12):5947-55.
*Arnett KL, Harrison SC, Wiley DC: 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. 2004 Nov 16;101(46):16268-73.
*Rieux-Laucat F, Hivroz C, Lim A, Mateo V, Pellier I, Selz F, Fischer A, Le Deist F: Inherited and somatic CD3zeta mutations in a patient with T-cell deficiency. N Engl J Med. 2006 May 4;354(18):1913-21.
*And many other.

EXBIO Praha | Nad Safinou II 341 | 252 50 Vestec u Prahy | Czech Republic
Tel: +420 261 090 666 | Fax: +420 261 090 660 | orders@exbio.cz | www.exbio.cz