

Datasheet for ABIN638434

anti-CD3 antibody

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Overview

Quantity:	0.1 mg
Target:	CD3
Reactivity:	Human, Non-Human Primate
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This CD3 antibody is un-conjugated
Application:	Flow Cytometry (FACS), Immunoprecipitation (IP), Immunohistochemistry (Frozen Sections) (IHC (fro)), Functional Studies (Func), Cytometry by Time of Flight (CyTOF)

Product Details

Immunogen:	human thymocytes followed by Sezary T cells
Clone:	UCHT1
Isotype:	IgG1
Specificity:	The antibody UCHT1 recognizes an extracellular epitope on CD3 antigen of the TCR/CD3 complex on mature human T cells. The UCHT1 antibody reacts with the epsilon chain of the CD3 complex.
Cross-Reactivity (Details):	Human, Non-Human Primates
Purification:	Purified by protein-A affinity chromatography.
Purity:	> 95 % (by SDS-PAGE)
Endotoxin Level:	Endotoxin level is less than 0.01 EU/μg of the protein, as determined by the LAL test.

Target Details

Target:	CD3
Alternative Name:	CD3 (CD3 Products)
Background:	<p>CD3 antigen, epsilon polypeptide, 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., CD3E, T3E, TCRE</p>
Gene ID:	916
UniProt:	P07766
Pathways:	TCR Signaling , Ubiquitin Proteasome Pathway

Application Details

Application Notes:	<p>Functional application: The immobilized UCHT1 antibody initiates a signaling pathway resulting in T cell activation and proliferation.</p> <p>Immunocytochemistry and immunohistochemistry (frozen sections): The epitope for UCHT1 is resistant to fixation.</p> <p>Flow cytometry: Extracellular and intracellular staining, recommended dilution: 1-4 µg/mL.</p>
Restrictions:	For Research Use only

Handling

Concentration:	1 mg/mL
Buffer:	Phosphate buffered saline (PBS), pH 7.4
Preservative:	Azide free
Handling Advice:	Do not freeze.

Handling

Storage: 4 °C

Storage Comment: Store at 2-8°C. Do not freeze.

Publications

Product cited in:

Siegers, Swamy, Fernández-Malavé, Minguet, Rathmann, Guardo, Pérez-Flores, Regueiro, Alarcón, Fisch, Schamel: "Different composition of the human and the mouse gammadelta T cell receptor explains different phenotypes of CD3gamma and CD3delta immunodeficiencies." in: **The Journal of experimental medicine**, Vol. 204, Issue 11, pp. 2537-44, (2007) ([PubMed](#)).

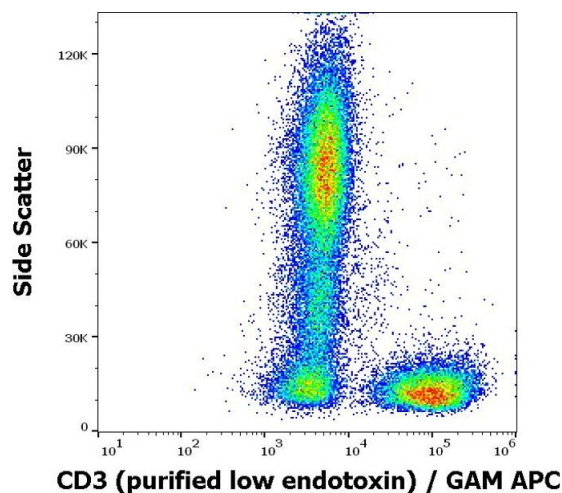
Rieux-Laucat, Hivroz, Lim, Mateo, Pellier, Selz, Fischer, Le Deist: "Inherited and somatic CD3zeta mutations in a patient with T-cell deficiency." in: **The New England journal of medicine**, Vol. 354, Issue 18, pp. 1913-21, (2006) ([PubMed](#)).

Demedts, Brusselle, Vermaelen, Pauwels: "Identification and characterization of human pulmonary dendritic cells." in: **American journal of respiratory cell and molecular biology**, Vol. 32, Issue 3, pp. 177-84, (2005) ([PubMed](#)).

Arnett, Harrison, Wiley: "Crystal structure of a human CD3-epsilon/delta dimer in complex with a UCHT1 single-chain antibody fragment." in: **Proceedings of the National Academy of Sciences of the United States of America**, Vol. 101, Issue 46, pp. 16268-73, (2004) ([PubMed](#)).

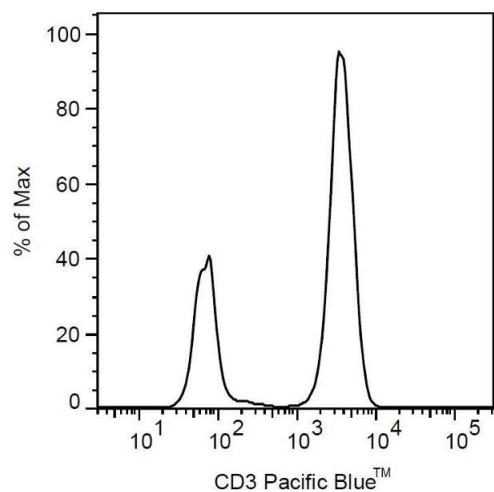
Torres, Alcover, Zapata, Arnaud, Pacheco, Martín-Fernández, Villasevil, Sanal, Regueiro: "TCR dynamics in human mature T lymphocytes lacking CD3 gamma." in: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 170, Issue 12, pp. 5947-55, (2003) ([PubMed](#)).

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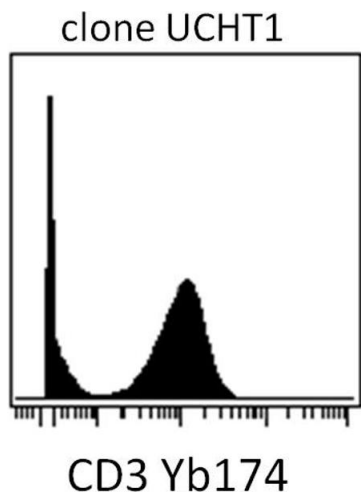
Flow Cytometry

Image 1. Flow cytometry surface staining pattern of human peripheral whole blood stained using anti-human CD3 (UCHT1) purified antibody (low endotoxin, concentration in sample 2 µg/mL) GAM APC.



Flow Cytometry

Image 2. Surface staining of human peripheral blood cells with anti-human CD3 (UCHT1) Pacific Blue TM. Cells in the lymphocyte gate were used for analysis.



Cytometry by Time of Flight

Image 3. Mass cytometry (surface staining) of PBMC after Ficoll-Paque separation with anti-human CD3 (UCHT1) Yb174. Gated on singlets.

Please check the [product details page](#) for more images. Overall 4 images are available for ABIN638434.