



# Anti-CD3E monoclonal antibody, clone UCHT1 [R-PE/Cy5®] (CABT-48661MH)

This product is for research use only and is not intended for diagnostic use.

## PRODUCT INFORMATION

### Product Overview

Mouse anti Human CD3 antibody, clone UCHT1 recognizes the human T-cell surface glycoprotein CD3 epsilon chain, also known as T-cell surface antigen T3/Leu-4 epsilon chain or CD3ε. CD3ε is a 207 amino acid, ~21kDa single pass type 1 transmembrane protein containing a single Ig-like and a single ITAM domain. Mouse anti Human CD3 antibody, clone UCHT1 was originally described as only binding to CD3ε when complexed with either the CD3δ or CD3γ subunits, as indicated by co-transfection immunofluorescence studies on COS cells. Mouse anti Human CD3 antibody, clone UCHT1 binds to a region in the ectodomain of human CD3ε and has been shown to bind to a discontinuous epitope near an acidic region of CD3ε opposite the dimer interface; as shown by crystallographic studies of the CD3ε/δ dimer complexed with a single chain UCHT1 antibody fragment. CD3 is expressed by all T lymphocytes and is seen in all lymphoid organs including lymph nodes and spleen. It is involved in thymocyte differentiation. Deficiency of the CD3ε chain contributes to blocking T-cell development and presentation of a severe combined immunodeficiency phenotype. Mouse anti Human CD3 antibody, clone UCHT1 has been used successfully for the activation of human peripheral blood lymphocytes by cross linking and subsequently for CD3ε surface expression by flow cytometry. Flow Cytometry Use 10ul of the suggested working dilution to label 10<sup>6</sup> cells or cells or 100ul whole blood.

<b>Specificity</b>	CD3E
<b>Immunogen</b>	Human infant thymocytes and lymphocytes from a patient with Sezary Syndrome.
<b>Isotype</b>	IgG1
<b>Source/Host</b>	Mouse
<b>Species Reactivity</b>	Human, Chimpanzee
<b>Clone</b>	UCHT1

<b>Conjugate</b>	PE/Cy5
<b>Applications</b>	FC
<b>Format</b>	Purified IgG conjugated to RPE-Cy5 - liquid
<b>Size</b>	1 ml
<b>Preservative</b>	0.09% Sodium Azide
<b>Storage</b>	Store at +4°C. DO NOT FREEZE. This product should be stored undiluted. in frost free freezers is not recommended. This product is photosensitive and should be protected from light. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

## GENE INFORMATION

<b>Gene Name</b>	<a href="#">CD3E CD3e molecule, epsilon (CD3-TCR complex) [ Homo sapiens (human) ]</a>
<b>Official Symbol</b>	CD3E
<b>Synonyms</b>	CD3E; CD3e molecule, epsilon (CD3-TCR complex); T3E; TCRE; IMD18; T-cell surface glycoprotein CD3 epsilon chain; CD3-epsilon; T-cell surface antigen T3/Leu-4 epsilon chain; CD3e antigen, epsilon polypeptide (TIT3 complex); T-cell antigen receptor complex,
<b>Entrez Gene ID</b>	<a href="#">916</a>
<b>Protein Refseq</b>	<a href="#">NP_000724</a>
<b>UniProt ID</b>	P07766
<b>Chromosome Location</b>	11q23
<b>Pathway</b>	Adaptive Immune System; CXCR4-mediated signaling events; Chagas disease (American trypanosomiasis); Costimulation by the CD28 family; Downstream TCR signaling; Downstream signaling in naive CD8+ T cells; Generation of second messenger molecules; HTLV-I infection;
<b>Function</b>	SH3 domain binding; T cell receptor binding; protein binding; protein heterodimerization activity; protein kinase binding; receptor signaling complex scaffold activity; receptor signaling protein activity; transmembrane signaling receptor activity;