

# CD3E antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)  
Catalog # AP22411b

## Product Information

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<b>Application</b>	WB, E
<b>Primary Accession</b>	<a href="#">P07766</a>
<b>Reactivity</b>	Human
<b>Host</b>	Rabbit
<b>Clonality</b>	polyclonal
<b>Isotype</b>	Rabbit IgG
<b>Clone Names</b>	R04078
<b>Calculated MW</b>	23147

## Additional Information

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<b>Gene ID</b>	916
<b>Other Names</b>	T-cell surface glycoprotein CD3 epsilon chain, T-cell surface antigen T3/Leu-4 epsilon chain, CD3e, CD3E, T3E
<b>Target/Specificity</b>	This antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between amino acids from human.
<b>Dilution</b>	WB~~1:2000 E~~Use at an assay dependent concentration.
<b>Format</b>	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
<b>Storage</b>	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
<b>Precautions</b>	CD3E antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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<b>Name</b>	CD3E
<b>Synonyms</b>	T3E
<b>Function</b>	Part of the TCR-CD3 complex present on T-lymphocyte cell surface that plays an essential role in adaptive immune response (PubMed: <a href="#">15294938</a> , PubMed: <a href="#">15546002</a> , PubMed: <a href="#">2470098</a> , PubMed: <a href="#">40592325</a> , PubMed: <a href="#">8490660</a> ). When antigen presenting cells (APCs) activate T-cell receptor (TCR),

TCR-mediated signals are transmitted across the cell membrane by the CD3 chains CD3D, CD3E, CD3G and CD247/CD3Z (PubMed:[2470098](#), PubMed:[40592325](#)). All CD3 chains contain immunoreceptor tyrosine-based activation motifs (ITAMs) in their cytoplasmic domain (PubMed:[2470098](#), PubMed:[40592325](#)). Upon TCR engagement, these motifs become phosphorylated by Src family protein tyrosine kinases LCK and FYN, resulting in the activation of downstream signaling pathways (PubMed:[2470098](#), PubMed:[40592325](#)). CD3E ITAM phosphorylation creates docking sites for the protein kinase ZAP70 leading to ZAP70 phosphorylation and its conversion into a catalytically active enzyme (By similarity). In addition of this role of signal transduction in T-cell activation, CD3E plays an essential role in correct T-cell development (By similarity). Also participates in internalization and cell surface down-regulation of TCR-CD3 complexes via endocytosis sequences present in CD3E cytosolic region (PubMed:[10384095](#), PubMed:[26507128](#)). In addition to its role as a TCR coreceptor, it serves as a receptor for ITPR1L1 (PubMed:[38614099](#)). Ligand recognition inhibits T-cell activation by promoting interaction with NCK1, which prevents CD3E-ZAP70 interaction and blocks the ERK- NFkB signaling cascade and calcium influx (PubMed:[12110186](#), PubMed:[38614099](#)).

## Cellular Location

Cell membrane; Single-pass type I membrane protein

## Background

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Part of the TCR-CD3 complex present on T-lymphocyte cell surface that plays an essential role in adaptive immune response. When antigen presenting cells (APCs) activate T-cell receptor (TCR), TCR- mediated signals are transmitted across the cell membrane by the CD3 chains CD3D, CD3E, CD3G and CD3Z. All CD3 chains contain immunoreceptor tyrosine-based activation motifs (ITAMs) in their cytoplasmic domain. Upon TCR engagement, these motifs become phosphorylated by Src family protein tyrosine kinases LCK and FYN, resulting in the activation of downstream signaling pathways (PubMed:[2470098](#)). In addition of this role of signal transduction in T-cell activation, CD3E plays an essential role in correct T-cell development. Initiates the TCR-CD3 complex assembly by forming the two heterodimers CD3D/CD3E and CD3G/CD3E. Participates also in internalization and cell surface down- regulation of TCR-CD3 complexes via endocytosis sequences present in CD3E cytosolic region (PubMed:[10384095](#), PubMed:[26507128](#)).

## References

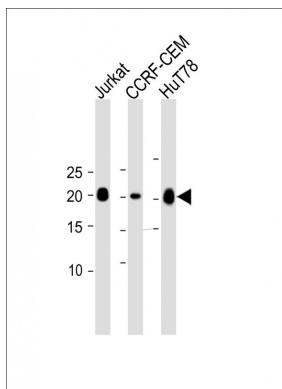
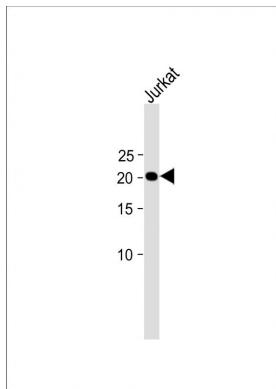
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Gold D.P.,et al.Nature 321:431-434(1986).  
Terhorst C.,et al.Submitted (JAN-1987) to the EMBL/GenBank/DDBJ databases.  
Clevers H.C.,et al.Proc. Natl. Acad. Sci. U.S.A. 85:8156-8160(1988).  
Ota T.,et al.Nat. Genet. 36:40-45(2004).  
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.

## Images

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All lanes: Anti-CD3E antibody (C-term) at 1:2000 dilution + Jurkat whole cell lysate Lysates/proteins at 20 µg per lane.  
Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 23 KDa Blocking/Dilution buffer: 5% NFDM/TBST.



All lanes: Anti-CD3E antibody (C-term) at 1:2000 dilution  
Lane 1: Jurkat whole cell lysate Lane 2: CCRF-CEM whole cell lysate Lane 3: HuT78 whole cell lysate  
Lysates/proteins at 20  $\mu$ g per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 23 KDa  
Blocking/Dilution buffer: 5% NFDM/TBST.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.