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Anti-CD3e Antibody

Catalog # AP53293

Product Information

Application	WB
Primary Accession	P07766
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	23147

Additional Information

Gene ID	916
Other Names	T3E; T-cell surface glycoprotein CD3 epsilon chain; T-cell surface antigen T3/Leu-4 epsilon chain; CD3e
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human CD3e. The exact sequence is proprietary.
Dilution	WB~~ 1:1000
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	CD3E
Synonyms	T3E
Function	Part of the TCR-CD3 complex present on T-lymphocyte cell surface that plays an essential role in adaptive immune response (PubMed:15294938, PubMed:15546002, PubMed:2470098, PubMed:40592325, PubMed:8490660). 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

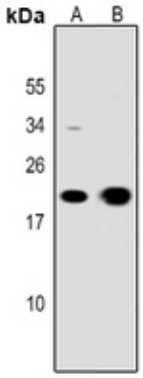
into a catalytically active enzyme (By similarity). In addition of this role of signal transduction in T-cell activation, CD3E plays an essential role in correct T-cell development (By similarity). Also participates in internalization and cell surface down-regulation of TCR-CD3 complexes via endocytosis 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 ITPRIPL1 (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

References

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



Western blot analysis of CD3e expression in Jurkat (A), Hela (B), NIHC3T3 (C) whole cell lysates. (Predicted band size: 23 kD; Observed band size: 21 kD)

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