

CD3 epsilon Antibody

Rabbit mAb

Catalog # AP90584

Product Information

Application	WB, IHC, FC, IP
Primary Accession	P07766
Reactivity	Human
Clonality	Monoclonal
Other Names	T3E; TCRE; IMD18; CD3E;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	23147

Additional Information

Dilution	WB 1:500~1:2000 IHC 1:50~1:200 IP 1:30 FC 1:100
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human CD3 epsilon
Description	The protein encoded by this gene is the CD3-epsilon polypeptide, which together with CD3-gamma, -delta and -zeta, and the T-cell receptor alpha/beta and gamma/delta heterodimers, forms the T-cell receptor-CD3 complex. This complex plays an important role in coupling antigen recognition to several intracellular signal-transduction pathways. The genes encoding the epsilon, gamma and delta polypeptides are located in the same cluster on chromosome 11.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

Protein Information

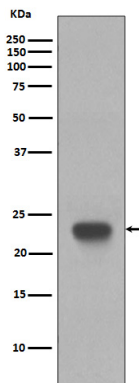
Name	CD3E
Synonyms	T3E
Function	Part of the TCR-CD3 complex present on T-lymphocyte cell surface that plays an essential role in adaptive immune response. When antigen presenting cells (APCs) activate T-cell receptor (TCR), TCR- mediated signals are transmitted across the cell membrane by the CD3 chains 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. 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. 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:[38614099](#)).

Cellular Location

Cell membrane; Single-pass type I membrane protein

Images



Western blot analysis of CD3 epsilon expression in Jurkat cell lysate.

Image not found : 202311/AP90584-IHC.jpg

Immunohistochemical analysis of paraffin-embedded human colon cancer, using CD3 epsilon Antibody.

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