

CD3 epsilon Rabbit mAb

Catalog # AP75221

Product Information

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|--------------------------|------------------------|
| Application | WB, IHC-P, IP |
| Primary Accession | P07766 |
| Reactivity | Human |
| Host | Rabbit |
| Clonality | Monoclonal Antibody |
| Calculated MW | 23147 |

Additional Information

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|--------------------|--|
| Gene ID | 916 |
| Other Names | CD3E |
| Dilution | WB~~1/500-1/1000 IHC-P~~N/A IP~~N/A |
| Format | 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA. |
| Storage | Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles. |

Protein Information

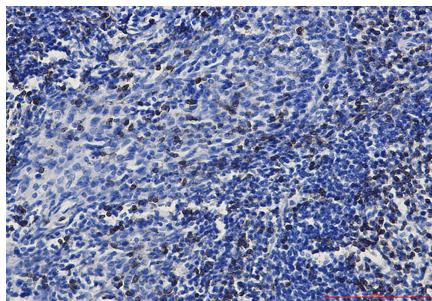
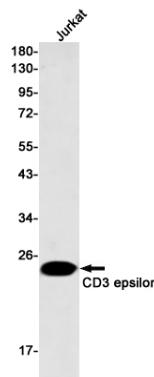
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|-----------------|---|
| Name | CD3E |
| Synonyms | T3E |
| Function | Part of the TCR-CD3 complex present on T-lymphocyte cell surface that plays an essential role in adaptive immune response (PubMed: 15294938 , PubMed: 15546002 , PubMed: 2470098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

Images



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