

**CD3-ε Polyclonal Antibody**  
**Catalog # AP73642****Specification**

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**CD3-ε Polyclonal Antibody - Product Information**

Application	<b>WB, IHC-P</b>
Primary Accession	<a href="#">P07766</a>
Reactivity	<b>Human</b>
Host	<b>Rabbit</b>
Clonality	<b>Polyclonal</b>

**CD3-ε Polyclonal Antibody - Additional Information****Gene ID** 916**Other Names**

CD3E; T3E; T-cell surface glycoprotein CD3 epsilon chain; T-cell surface antigen T3/Leu-4 epsilon chain; CD3e

**Dilution**

WB~~Western Blot: 1/500 - 1/2000. IHC-p: 1/100-1/300. ELISA: 1/20000. Not yet tested in other applications.

IHC-P~~N/A

**Format**

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

**Storage Conditions**

-20°C

**CD3-ε Polyclonal Antibody - 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: <http://www.uniprot.org/citations/2470098> target="\_blank">2470098</a>). 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:<a href="http://www.uniprot.org/citations/10384095" target="\_blank">10384095</a>, PubMed:<a href="http://www.uniprot.org/citations/26507128" target="\_blank">26507128</a>). 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:<a href="http://www.uniprot.org/citations/38614099" target="\_blank">38614099</a>).

#### **Cellular Location**

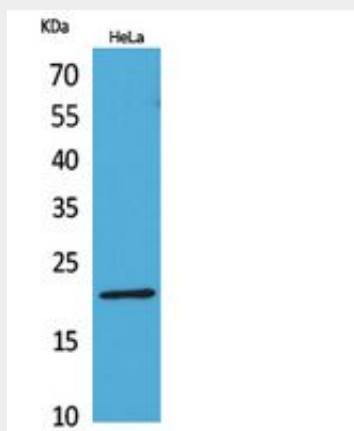
Cell membrane; Single-pass type I membrane protein

#### **CD3-ε Polyclonal Antibody - Protocols**

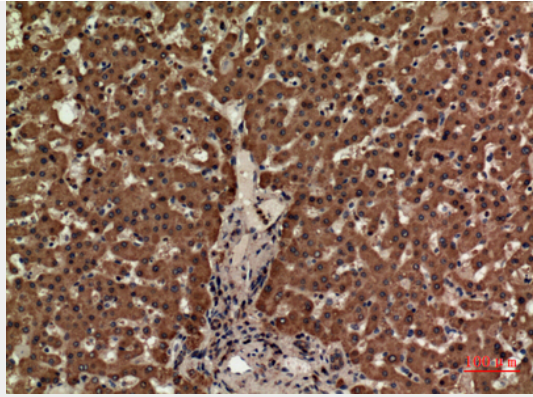
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

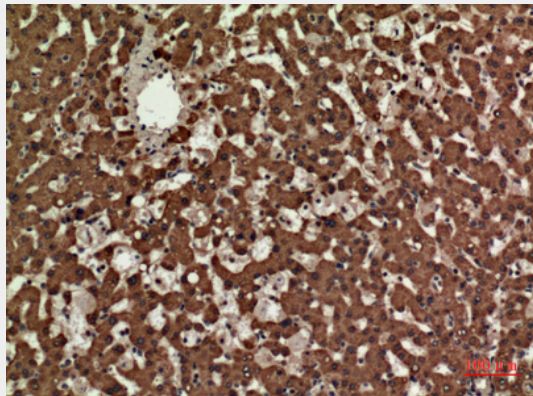
#### **CD3-ε Polyclonal Antibody - Images**



Western Blot analysis of HeLa cells using CD3-ε Polyclonal Antibody.. Secondary antibody was diluted at 1:20000



Immunohistochemical analysis of paraffin-embedded human-liver, antibody was diluted at 1:100



Immunohistochemical analysis of paraffin-embedded human-liver, antibody was diluted at 1:100

### **CD3-ε Polyclonal Antibody - Background**

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).