

**CD3  $\zeta$  Polyclonal Antibody**  
Catalog # AP74215**Specification****CD3  $\zeta$  Polyclonal Antibody - Product Information**

Application	IHC
Primary Accession	<a href="#">P20963</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal

**CD3  $\zeta$  Polyclonal Antibody - Additional Information****Gene ID** 919**Other Names**

T-cell surface glycoprotein CD3 zeta chain (T-cell receptor T3 zeta chain) (CD antigen CD247)

**Dilution**

IHC~~IHC-p 1:50-200, ELISA 1:10000-20000

**Format**

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

**Storage Conditions**

-20°C

**CD3  $\zeta$  Polyclonal Antibody - Protein Information****Name** CD247**Synonyms** CD3Z, T3Z, TCRZ**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: [1384049](http://www.uniprot.org/citations/1384049), PubMed: [1385158](http://www.uniprot.org/citations/1385158), PubMed: [2470098](http://www.uniprot.org/citations/2470098), PubMed: [7509083](http://www.uniprot.org/citations/7509083)). CD3Z ITAMs phosphorylation creates multiple docking sites for the protein kinase ZAP70 leading to ZAP70 phosphorylation and its conversion into a catalytically active enzyme (PubMed: [7509083](http://www.uniprot.org/citations/7509083), PubMed: [7509083](http://www.uniprot.org/citations/7509083)). Plays an important role in intrathymic T-cell differentiation.

Additionally, participates in the activity-dependent synapse formation of retinal ganglion cells (RGCs) in both the retina and dorsal lateral geniculate nucleus (dLGN) (By similarity).

#### Cellular Location

Cell membrane {ECO:0000250|UniProtKB:P24161}; Single-pass type I membrane protein

#### Tissue Location

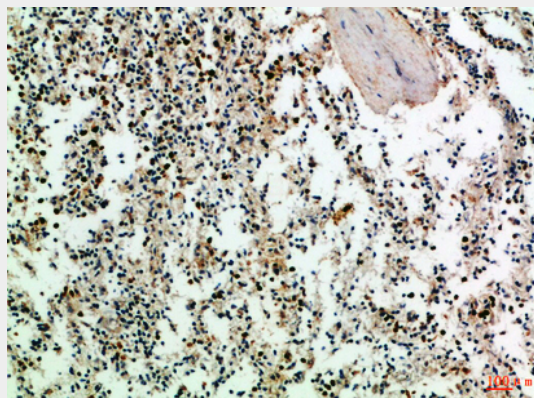
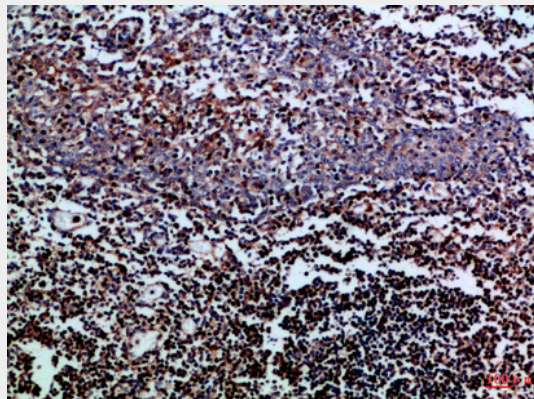
CD3Z is expressed in normal lymphoid tissue and in peripheral blood mononuclear cells (PBMCs) (PubMed:11722641)

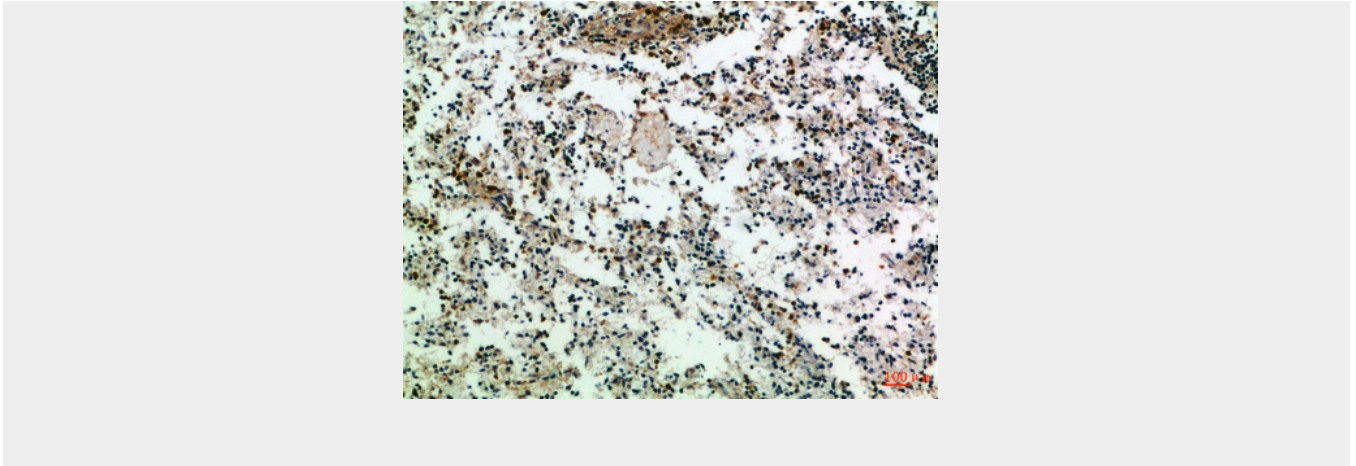
### CD3 $\zeta$ Polyclonal Antibody - Protocols

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 $\zeta$ Polyclonal Antibody - Images





### **CD3 $\zeta$ 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, PubMed:7509083). CD3Z ITAMs phosphorylation creates multiple docking sites for the protein kinase ZAP70 leading to ZAP70 phosphorylation and its conversion into a catalytically active enzyme (PubMed:7509083). Plays an important role in intrathymic T-cell differentiation. Additionally, participates in the activity-dependent synapse formation of retinal ganglion cells (RGCs) in both the retina and dorsal lateral geniculate nucleus (dLGN) (By similarity).