

**CD247 / CD3 Zeta Antibody (clone 4A12-F6)**  
**Mouse Monoclonal Antibody**  
**Catalog # ALS14323****Specification**

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**CD247 / CD3 Zeta Antibody (clone 4A12-F6) - Product Information**

Application	WB, IP, IHC
Primary Accession	<a href="#">P20963</a>
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	19kDa KDa

**CD247 / CD3 Zeta Antibody (clone 4A12-F6) - Additional Information****Gene ID** 919**Other Names**

T-cell surface glycoprotein CD3 zeta chain, T-cell receptor T3 zeta chain, CD247, CD247, CD3Z, T3Z, TCRZ

**Target/Specificity**

Human CD247

**Reconstitution & Storage**

Aliquot and store at -20°C or -80°C. Avoid freeze-thaw cycles.

**Precautions**

CD247 / CD3 Zeta Antibody (clone 4A12-F6) is for research use only and not for use in diagnostic or therapeutic procedures.

**CD247 / CD3 Zeta Antibody (clone 4A12-F6) - 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: <http://www.uniprot.org/citations/2470098> target="\_blank">2470098</a>, PubMed: <http://www.uniprot.org/citations/7509083> target="\_blank">7509083</a>). 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:<a href="http://www.uniprot.org/citations/7509083" target="\_blank">7509083</a>). 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

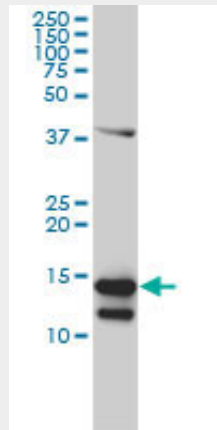
CD3Z is expressed in normal lymphoid tissue and in peripheral blood mononuclear cells (PBMCs) (PubMed:11722641)

### CD247 / CD3 Zeta Antibody (clone 4A12-F6) - Protocols

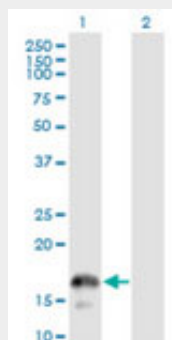
Provided below are standard protocols that you may find useful for product applications.

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

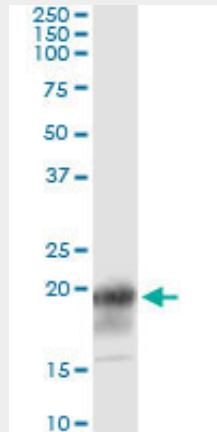
### CD247 / CD3 Zeta Antibody (clone 4A12-F6) - Images



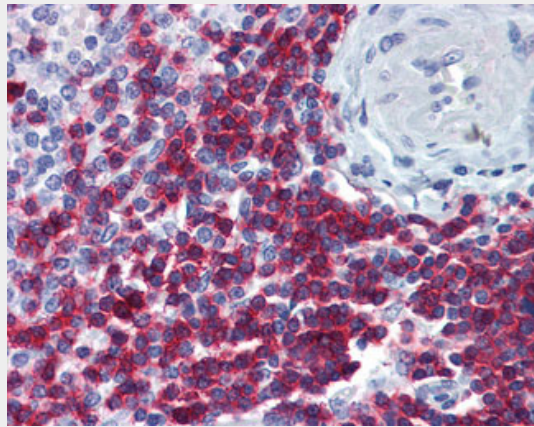
Western blot of CD247 expression in Jurkat cell lysate..



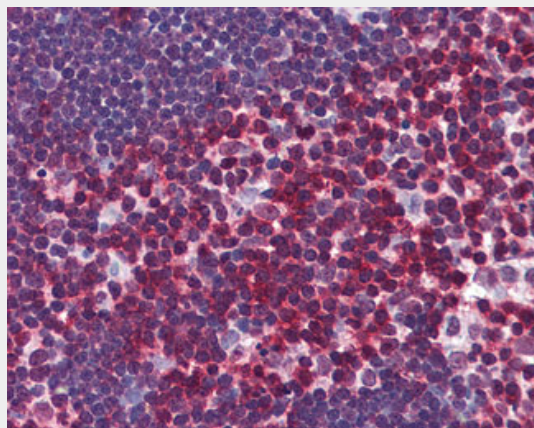
Western blot of CD247 expression in transfected 293T cell line.



Immunoprecipitation of CD247 transfected lysate using anti-CD247 monoclonal antibody and Protein...



Anti-CD247 / CD3-Zeta antibody IHC of human spleen.



Anti-CD247 / CD3-Zeta antibody IHC of human thymus.

#### **CD247 / CD3 Zeta Antibody (clone 4A12-F6) - Background**

Probable role in assembly and expression of the TCR complex as well as signal transduction upon antigen triggering.

#### **CD247 / CD3 Zeta Antibody (clone 4A12-F6) - References**

Weissman A.M., et al. Proc. Natl. Acad. Sci. U.S.A. 85:9709-9713(1988).  
Ota T., et al. Nat. Genet. 36:40-45(2004).  
Gregory S.G., et al. Nature 441:315-321(2006).  
Mural R.J., et al. Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.  
Howe A.Y., et al. J. Virol. 72:9827-9834(1998).