10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

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

Mouse Monoclonal Antibody
Catalog # ALS14323

Specification

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

Application	**WB, IP, IHC**
Primary Accession	P20963
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: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).

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

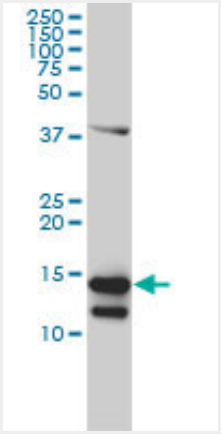
Tissue Location
CD3Z is expressed in normal lymphoid tissue and in peripheral blood mononuclear cells (PBMCs) (PubMed:11722641)

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

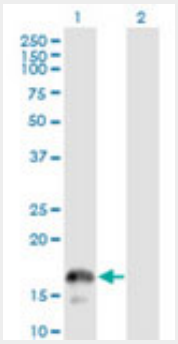
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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

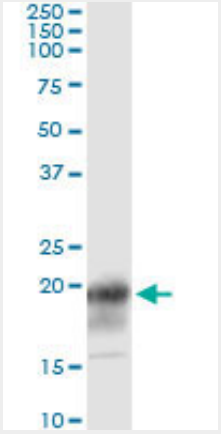


Western blot of CD247 expression in Jurkat cell lysate..

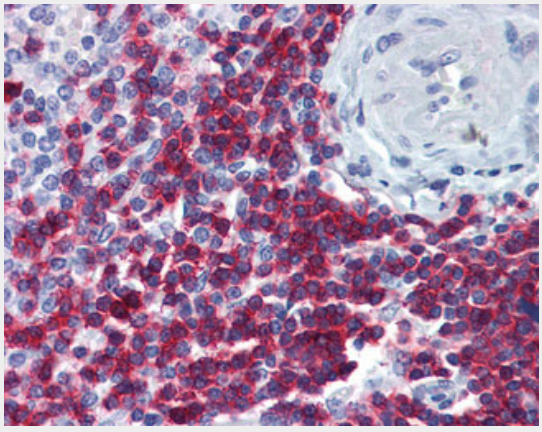


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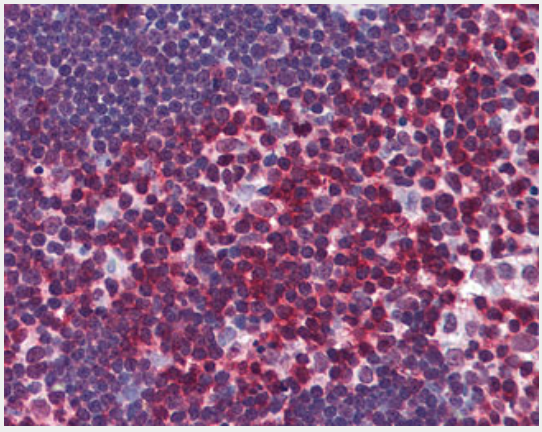
Western blot of CD247 expression in transfected 293T cell line.



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).