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# CD3Z Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1413b

## Product Information

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| **Application** | WB, FC, E |
| **Primary Accession** | P20963 |
| **Other Accession** | Q9XSJ9 |
| **Reactivity** | Human, Mouse |
| **Predicted** | Pig |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | Rabbit IgG |
| **Clone Names** | RB13638 |
| **Calculated MW** | 18696 |
| **Antigen Region** | 113-141 |

## Additional Information

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| **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** | This CD3Z antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 113-141 amino acids from the C-terminal region of human CD3Z. |
| **Dilution** | WB~~1:1000 FC~~1:25 E~~Use at an assay dependent concentration. |
| **Format** | Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification. |
| **Storage** | Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| **Precautions** | CD3Z Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | CD247 |
| **Synonyms** | CD3Z, T3Z, TCRZ |

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| **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 CD247/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, PubMed:1385158, PubMed:2470098, PubMed:7509083). CD247/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** | Expressed in normal lymphoid tissue and in peripheral blood mononuclear cells (PBMCs) (PubMed:11722641) |

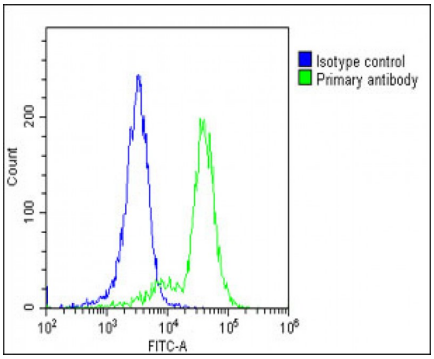
## Background

T-cell receptor zeta, together with T-cell receptor alpha/beta and gamma/delta heterodimers, and with CD3-gamma, -delta and -epsilon, forms the T-cell receptor-CD3 complex. The zeta chain plays an important role in coupling antigen recognition to several intracellular signal-transduction pathways. Low expression of the antigen results in impaired immune response.

## References

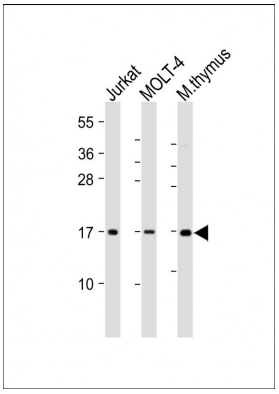

Miyagawa,H., Rheumatology (Oxford) 47 (2), 158-164 (2008)
Gorman,C.L., J. Immunol. 180 (2), 1060-1070 (2008)
Eleftheriadis,T., Am. J. Nephrol. 28 (1), 152-157 (2008)


## Images




Overlay histogram showing K562 cells stained with AP1413b(green line). The cells were fixed with 2% paraformaldehyde (10 min). The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP1413b, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(1583138) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.

All lanes : Anti-CD3Z Antibody (C-term) at 1:4000-1:8000 dilution Lane 1: Jurkat whole cell lysate Lane 2: MOLT-4 whole cell lysate Lane 3: Mouse thymus lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000




dilution. Predicted band size : 19 kDa Blocking/Dilution buffer: 5% NFDM/TBST.