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# CD3 zeta Antibody

Rabbit mAb
Catalog # AP91026

## Product Information

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| **Application** | IF, FC, ICC |
| **Primary Accession** | P20963 |
| **Reactivity** | Human |
| **Clonality** | Monoclonal |
| **Other Names** | CD3-zeta; T-cell receptor T3 zeta chain; T3Z; TCRZ; CD247; |
| **Isotype** | Rabbit IgG |
| **Host** | Rabbit |
| **Calculated MW** | 18696 |

## Additional Information

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| **Dilution** | ICC/IF 1:100~1:200 FC 1:20 |
| **Purification** | Affinity-chromatography |
| **Immunogen** | A synthesized peptide derived from human CD3 zeta |
| **Description** | Defects in CD3D are a cause of severe combined immunodeficiency autosomal recessive T-cell-negative/B-cell-positive/NK-cell-positive (T(-)/B(+)/NK(+) SCID) [MIM:608971]. A form of severe combined immunodeficiency (SCID), a genetically and clinically heterogeneous group of rare congenital disorders characterized by impairment of both humoral and cell-mediated immunity, leukopenia, and low or absent antibody levels. |
| **Storage Condition and Buffer** | Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle. |

## Protein Information

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| **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, PubMed:1385158, 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 |

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| | 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) |