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

# CD3 Antibody (Ascites)

Mouse Monoclonal Antibody (Mab)
Catalog # AM2153a

## Product Information

| | |
|---|---|
| **Application** | WB |
| **Primary Accession** | P07766 |
| **Other Accession** | P09693, P20963, P04234 |
| **Reactivity** | Mouse |
| **Host** | Mouse |
| **Clonality** | Monoclonal |
| **Isotype** | IgG2a |
| **Clone Names** | OKT3 |
| **Calculated MW** | 23147 |

## Additional Information

| | |
|---|---|
| **Gene ID** | 916 |
| **Other Names** | T-cell surface glycoprotein CD3 epsilon chain, T-cell surface antigen T3/Leu-4 epsilon chain, CD3e, CD3E, T3E |
| **Target/Specificity** | This CD3 Monoclonal antibody is generated from mouses immunized with a KLH conjugated synthetic peptide selected from human CD3. |
| **Dilution** | WB~~1:100~1600 E~~Use at an assay dependent concentration. |
| **Format** | Mouse monoclonal antibody supplied in crude ascites with 0.09% (W/V) sodium azide. |
| **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** | CD3 Antibody (Ascites) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

| | |
|---|---|
| **Name** | CD3E |
| **Synonyms** | T3E |
| **Function** | Part of the TCR-CD3 complex present on T-lymphocyte cell surface that plays an essential role in adaptive immune response (PubMed:15294938, PubMed:15546002, PubMed:2470098, PubMed:40592325, PubMed:8490660). When antigen presenting cells (APCs) activate T-cell receptor (TCR), |

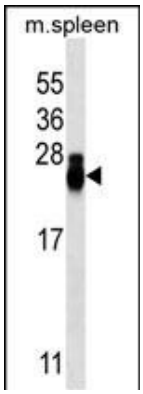
TCR-mediated signals are transmitted across the cell membrane by the CD3 chains CD3D, CD3E, CD3G and CD247/CD3Z (PubMed:2470098, PubMed:40592325). All CD3 chains contain immunoreceptor tyrosine-based activation motifs (ITAMs) in their cytoplasmic domain (PubMed:2470098, PubMed:40592325). Upon TCR engagement, these motifs become phosphorylated by Src family protein tyrosine kinases LCK and FYN, resulting in the activation of downstream signaling pathways (PubMed:2470098, PubMed:40592325). CD3E ITAM phosphorylation creates docking sites for the protein kinase ZAP70 leading to ZAP70 phosphorylation and its conversion into a catalytically active enzyme (By similarity). In addition of this role of signal transduction in T-cell activation, CD3E plays an essential role in correct T-cell development (By similarity). Also participates in internalization and cell surface down-regulation of TCR-CD3 complexes via endocytosis sequences present in CD3E cytosolic region (PubMed:10384095, PubMed:26507128). In addition to its role as a TCR coreceptor, it serves as a receptor for ITPRIPL1 (PubMed:38614099). Ligand recognition inhibits T-cell activation by promoting interaction with NCK1, which prevents CD3E-ZAP70 interaction and blocks the ERK- NFkB signaling cascade and calcium influx (PubMed:12110186, PubMed:38614099).

**Cellular Location** Cell membrane; Single-pass type I membrane protein

## Background

The CD3 complex mediates signal transduction.

## Images




CD3 Antibody (Ascites)(Cat. #AM2153a) western blot analysis in mouse spleen tissue lysates (35 µg/lane).This demonstrates the CD3 antibody detected the CD3 protein (arrow).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.