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

CD247 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1370a

Specification

CD247 Antibody - Product Information

Application	**IF, WB, IHC, FC**
Primary Accession	P20963
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**
Calculated MW	**18kDa KDa**

Description
The protein encoded by this gene is T-cell receptor zeta, which 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. Two alternatively spliced transcript variants encoding distinct isoforms have been found for this gene.

Immunogen
Purified recombinant fragment of human CD247 expressed in E. Coli.

Formulation
Ascitic fluid containing 0.03% sodium azide.

CD247 Antibody - 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

Dilution
IF~~1/200 - 1/1000
WB~~1/500 - 1/2000
IHC~~1/500 - 1/2000
FC~~1/200 - 1/400

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
CD247 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

CD247 Antibody - 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: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 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 Antibody - 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 Antibody - Images

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

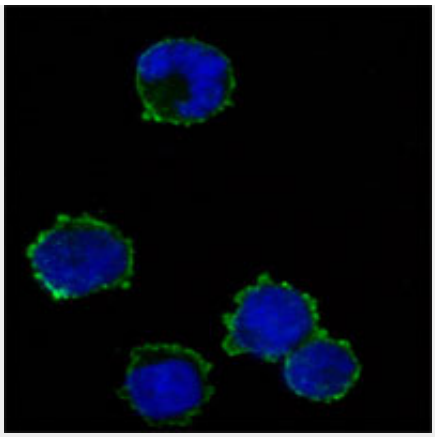

Figure3: Immunofluorescence analysis of K562 cells using anti-CD247 mAb (green). Blue: DRAQ5 fluorescent DNA dye.

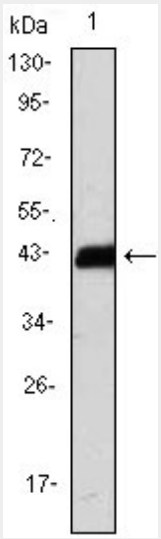

Figure 1: Western blot analysis using CD247 mAb against CD247(AA: 52-164)-hIgGFc transfected HEK293 cell lysate.

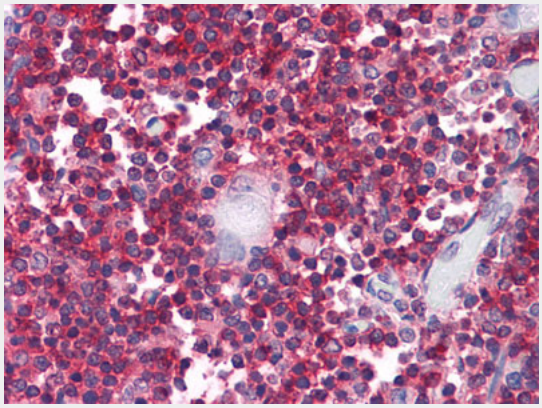

Figure 2: Immunohistochemical analysis of paraffin-embedded human Thymus tissues using anti-CD247 mouse mAb

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

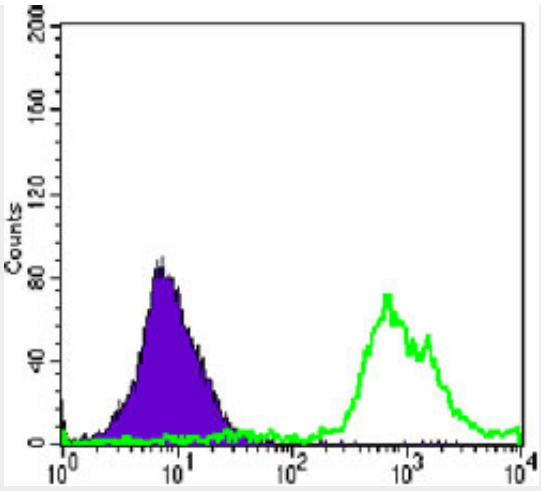

Figure 4: Flow cytometric analysis of Jurkat cells using anti-CD247 mAb (green) and negative control (purple).

CD247 Antibody - References

1. J Immunol. 2002 Aug 15;169(4):1705-12. 2. Arthritis Rheum. 2003 Jul;48(7):1948-55. 3. Nat Methods. 2005 Aug;2(8):591-8.