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

Product Information

Application	WB, IHC, FC, ICC, E
Primary Accession	P20963
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	4B10
Isotype	IgG1
Calculated MW	18696
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.

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	WB~~1/500 - 1/2000 IHC~~1/500 - 1/2000 FC~~1/200 - 1/400 ICC~~N/A E~~N/A
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.

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)

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.

Images

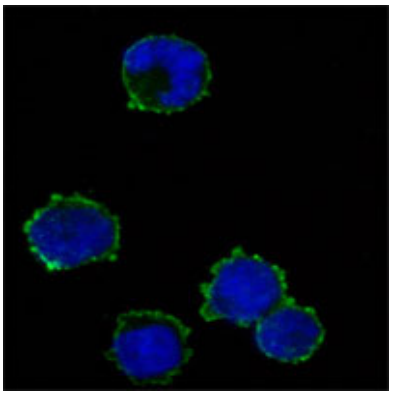

Figure3: Immunofluorescence analysis of K562 cells using anti-CD247 mAb (green). Blue: DRAQ5 fluorescent DNA dye.

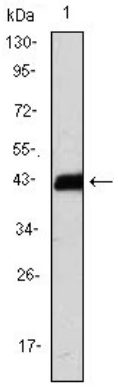

Figure 1: Western blot analysis using CD247 mAb against CD247(AA: 52-164)-hIgGFc transfected HEK293 cell lysate.

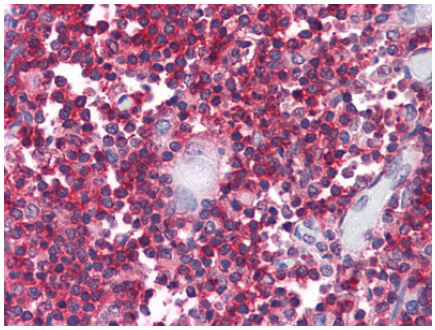

Figure 2: Immunohistochemical analysis of paraffin-embedded human Thymus tissues using anti-CD247 mouse mAb

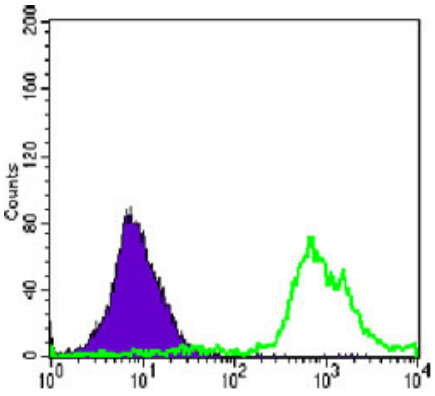

Figure 4: Flow cytometric analysis of Jurkat cells using anti-CD247 mAb (green) and negative control (purple).

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