Datasheet for ABIN967618

anti-CD247 antibody (pTyr142)

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Overview

Quantity:	0.1 mg
Target:	CD247
Binding Specificity:	pTyr142
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This CD247 antibody is un-conjugated
Application:	Western Blotting (WB)

Product Details

Brand:	BD Pharmingen™
Immunogen:	Phosphorylated Human CD3zeta Peptide
Clone:	K25-407-69
Isotype:	IgG2a kappa
Characteristics:	1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. Please refer to us for technical protocols. 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

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Target Details

Target:	CD247
Alternative Name:	CD247 (CD3z) (CD247 Products)
Background:	The T cell receptor (TCR), expressed by thymocytes and T lymphocytes, is a multi-component cell-surface complex responsible for recognizing antigen in the context of MHC molecules. The antigen-specific binding component of the TCR, Ti, is a heterodimer of the variable Ig-like subunits a and b or g and d. Ti is non-covalently associated with an invariant set of molecules referred to as the CD3 polypeptides, g, d, e, and zeta. The CD3 z polypeptide (CD3z) was named CD247 at the 7th Human Leukocyte Differentiation Antigens Workshop. CD3 appears early in thymocyte differentiation and remains expressed on all mature T lymphocytes. After antigen recognition by the TCR, CD3z is the primary intracellular signal transducing subunit. It contains three ITAMs (Immunoreceptor Tyrosine-based Activation Motifs), each of which contains a pair of tyrosine residues that are phosphorylated by Lck and Fyn and are required for signal propagation. The molecular weight of CD3z is 16 kDa, and it is also observed as 32-kDa homodimers or as heterodimers with the g chain of Fc receptors. Upon phosphorylation, the CD3z monomer undergoes an apparent shift in electrophoretic mobility up to 21 kDa. The K25-407.69 monoclonal antibody recognizes the phosphorylated tyrosine 142 (pY142) in the third ITAM domain of human CD3z (CD247). Synonyms: CD3zeta
Molecular Weight:	21 kDa
Pathways:	TCR Signaling, CXCR4-mediated Signaling Events, Ubiquitin Proteasome Pathway

Application Details

Comment:	Related Products: ABIN967389
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	0.5 mg/mL
Buffer:	Aqueous buffered solution containing ≤0.09 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Handling

Storage:	4 °C
Storage Comment:	Store undiluted at 4°C.

Publications

Product cited in:

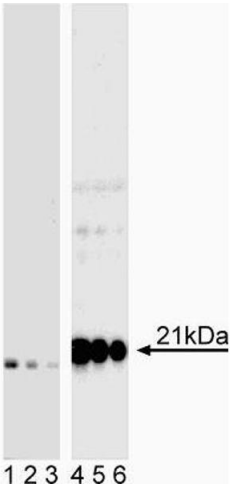
Salomon, Ficarro, Brill, Brinker, Phung, Ericson, Sauer, Brock, Horn, Schultz, Peters: "Profiling of tyrosine phosphorylation pathways in human cells using mass spectrometry." in: **Proceedings of the National Academy of Sciences of the United States of America**, Vol. 100, Issue 2, pp. 443-8, (2003) (PubMed).

Ernst, Shih: "CD3 complex." in: **Journal of biological regulators and homeostatic agents**, Vol. 14, Issue 3, pp. 226-9, (2001) (PubMed).

Kersh, Shaw, Allen: "Fidelity of T cell activation through multistep T cell receptor zeta phosphorylation." in: **Science (New York, N.Y.)**, Vol. 281, Issue 5376, pp. 572-5, (1998) (PubMed).

Alberola-Ila, Takaki, Kerner, Perlmutter: "Differential signaling by lymphocyte antigen receptors." in: **Annual review of immunology**, Vol. 15, pp. 125-54, (1997) (PubMed).

Images



Western Blotting

Image 1. Western blot analysis of CD3z (CD247) (pY142) in human T lymphocytes. Lysates from control (lanes 1-3) and anti-CD3- plus anti-CD28-activated (lanes 4-6) Jurkat cells were probed with purified mouse anti-CD3z (CD247) (pY142) at concentrations of 0.5 (anes 1 and 4), 0.25 (lanes 2 and 5), and 0.125 µg/ml (lanes 3 and 6). CD3z (CD247) (pY142) is identified as a band of 21 kDa in the treated cells.