Datasheet for ABIN967510

anti-CAN antibody (AA 349-505)

3 Images | 3 Publications

Go to Product page

Overview

Quantity:	0.1 mg
Target:	CAN
Binding Specificity:	AA 349-505
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This CAN antibody is un-conjugated
Application:	Western Blotting (WB), Immunoprecipitation (IP)

Product Details

Brand:	BD Pharmingen™
Immunogen:	Human beta1 isoform of calcineurin A Subunit aa. 349-505
Clone:	G182-1847
Isotype:	IgG1
Cross-Reactivity:	Human
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.

Product Details

Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Target Details

Target:	CAN
Alternative Name:	Calcineurin (CAN Products)
Background:	Calcineurin is a Ca2+- and calmodulin-dependent serine/threonine phosphatase which consists of two subunits. The A subunit (~61 kDa) is catalytic and has calmodulinbinding activity, the B subunit (~19 kDa), which is myristylated at its N-terminus, has Ca[2+]-binding activity. Calcineurin is expressed ubiquitously in eukaryotic cells, including yeast. The protein is highly expressed in mammalian brain, and has been implicated in a number of calcium-dependent pathways in the nervous system, including regulation of neurotransmitter release. Calcineurin also plays a key role in T cell receptor-mediated signal transduction pathways. Calcineurin dephosphorylates components of NF-AT (Nuclear Factor of Activated T cells), allowing NF-AT to translocate to the nucleus where it participates with AP-1 in activation of multiple cytokine and surface receptor genes. Inhibition of calcineurin by immunosuppressive agents such as cyclosporin A and FK506 correlates with the suppression of early T cell activation events. These immunosuppressive agents bind to specific intracellular proteins, called immunophilins, to form complexes that inhibit calcineurin's phosphatase activity. In the presence of these complexes, NF-AT remains phosphorylated and thus cannot translocate to the nucleus. A novel protein, Cain (calcineurin inhibitor), has been described which displays a similar pattern of neuronal and brain expression and has been shown to bind and inhibit calcineurin activity in vivo. G182-1847 recognizes the alpha and beta isoforms of the A subunit of calcineurin (~61 kDa). It reacts with an epitope in the autoinhibitory domain. It does not recognize the B subunit of calcineurin. A recombinant tag-fusion protein containing amino acids 349-505 of the human beta1 isoform of calcineurin A subunit was used as immunogen.
Molecular Weight:	61 kDa

Application Details

Application Notes:	Applications include immunoprecipitation (1-2 µg/ml) and western blot analysis (1-2 µg/ml). Jurkat human T cells (ATCC TIB-152)2, HeLa human carcinoma cells (ATCC CCL-2), and A-431 human epidermal carcinoma cells (ATCC CRL-1555) are suggested as positive controls. A431 cell lysate (ABIN968533) and HeLa cell lysate (ABIN968535) are also available as ready-to-use

Application Details

	positive western blot control.
Comment:	Related Products: ABIN967389, ABIN968533, ABIN968535
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.
Storage:	4 °C
Storage Comment:	Store undiluted at 4°C.

Publications

Product cited in:	Lai, Burnett, Wolosker, Blackshaw, Snyder: "Cain, a novel physiologic protein inhibitor of calcineurin." in: **The Journal of biological chemistry**, Vol. 273, Issue 29, pp. 18325-31, (1998) (PubMed). Husi, Luyten, Zurini: "Mapping of the immunophilin-immunosuppressant site of interaction on calcineurin." in: **The Journal of biological chemistry**, Vol. 269, Issue 19, pp. 14199-204, (1994) (PubMed). Fruman, Klee, Bierer, Burakoff: "Calcineurin phosphatase activity in T lymphocytes is inhibited by FK 506 and cyclosporin A." in: **Proceedings of the National Academy of Sciences of the United States of America**, Vol. 89, Issue 9, pp. 3686-90, (1992) (PubMed).

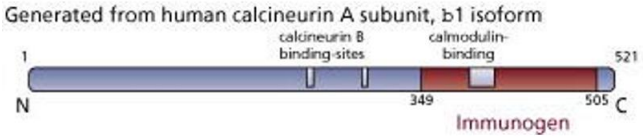
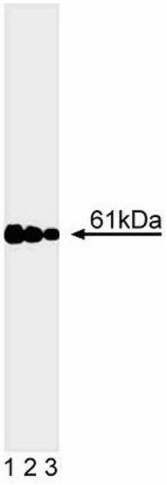


Image 1.



Western Blotting

Image 2. Western blot analysis of calcineurin. Lysate from A-431 cells was probed with anti-calcineurin (clone G182-1847) at concentrations of 1.0 (lane 1), 0.2 (lane 2), and 0.04 µg/ml (lane 3). The 61 kDa A subunit of calcineurin is identified.

Western Blotting

Image 3.