SANTA CRUZ BIOTECHNOLOGY, INC.

ANT1/2 (N-19): sc-9299

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Adenine nucleotide translocator 1 (ANT1) and the voltage-dependent anion-selective channel proteins 1 and 2 (VDAC1 and VDAC2) are components of the permeability transition pore complex (PTPC) of the mitochondrial inner and outer membranes, respectively. Formation of PTPCs, the subsequent dissipation of mitochondrial inner membrane potential and release of cytochrome c through the outer mitochondrial membrane are critical events in the early stages of apoptosis. Bax, a proapoptotic protein, has been shown to act upon ANT1 to induce the dissipation of mitochondrial inner membrane potential. ANT1 has a role in the maintenance of mitochondrial DNA by catalyzing the exchange of ADP and ATP across the mitochondrial inner membrane. ANT2 exists as a homodimer and has been implicated in carcinogenesis. The gene encoding ANT2 maps to human chromosome Xq24.

CHROMOSOMAL LOCATION

Genetic locus: SLC25A4 (human) mapping to 4q35.1, SLC25A5 (human) mapping to Xq24; Slc25a4 (mouse) mapping to 8 B1.1, Slc25a5 (mouse) mapping to X A3.3.

SOURCE

ANT1/2 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ANT1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9299 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as PE conjugate for flow cytometry, sc-9299 PE, 100 tests.

APPLICATIONS

ANT1/2 (N-19) is recommended for detection of ANT1 and ANT2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ANT1/2 (N-19) is also recommended for detection ANT1 and ANT2 in additional species, including bovine, porcine and avian.

Molecular Weight of ANT1/2: 33 kDa.

Positive Controls: ANT1 (m): 293T Lysate: sc-118438, mouse heart extract: sc-2254 or rat skeletal muscle extract.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

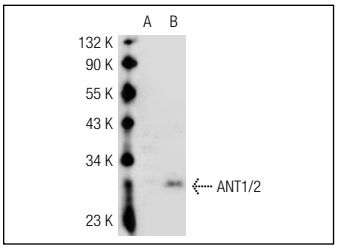
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

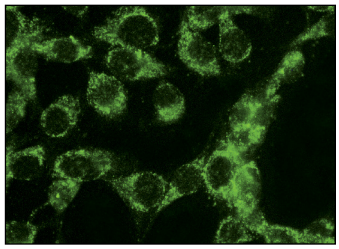
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



ANT1/2 (N-19): sc-9299. Western blot analysis of ANT1/2 expression in non-transfected: sc-117752 (**A**) and mouse ANT1 transfected: sc-118438 (**B**) 293T whole cell lysates.



ANT1/2 (N-19): sc-9299. Immunofluorescence staining of methanol-fixed Sol8 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

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3. Feng, J., et al. 2010. Tyrosine phosphorylation by Src within the cavity of the adenine nucleotide translocase 1 regulates ADP/ATP exchange in mitochondria. Am. J. Physiol., Cell Physiol. 298: C740-C748.
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5. Franklin, S., et al. 2011. Specialized compartments of cardiac nuclei exhibit distinct proteomic anatomy. Mol. Cell. Proteomics 10: M110.000703.
6. Bouyer, G., et al. 2011. Erythrocyte peripheral type benzodiazepine receptor/voltage-dependent anion channels are upregulated by *Plasmodium falciparum*. Blood 118: 2305-2312.
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