

ANT1/2/3 (Q-18): sc-9300

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. ANT3 contains three solcar repeats and is encoded by a gene located on pseudoautosomal region 1 (PAR1) of X and Y chromosomes.

SOURCE

ANT1/2/3 (Q-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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-9300 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-9300 PE, 100 tests.

APPLICATIONS

ANT1/2/3 (Q-18) is recommended for detection of ANT1 and ANT2 of mouse, rat and human origin, and ANT3 of 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 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ANT1/2/3 (Q-18) is also recommended for detection of ANT1/2/3 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of ANT1/2/3: 33 kDa.

Positive Controls: mouse heart extract: sc-2254 or rat skeletal muscle extract: sc-364810.

STORAGE

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

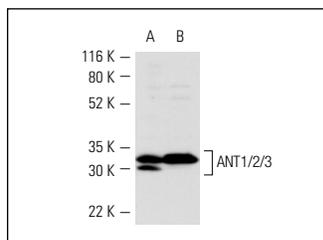
PROTOCOLS

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

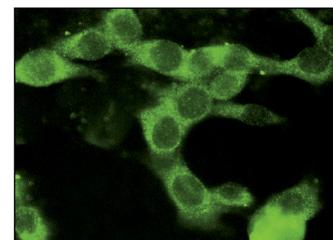
RESEARCH USE

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

DATA



ANT1/2/3 (Q-18): sc-9300. Western blot analysis of ANT1/2/3 expression in mouse heart (A) and rat skeletal muscle (B) tissue extracts.



ANT1/2/3 (Q-18): sc-9300. Immunofluorescence staining of methanol-fixed Sol8 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Milon, L., et al. 2000. The human nm23-H4 gene product is a mitochondrial nucleoside diphosphate kinase. *J. Biol. Chem.* 275: 14264-14272.
- Sahlin, K., et al. 2010. Ultraendurance exercise increases the production of reactive oxygen species in isolated mitochondria from human skeletal muscle. *J. Appl. Physiol.* 108: 780-787.
- Azzu, V., et al. 2010. Rapid turnover of mitochondrial uncoupling protein 3. *Biochem. J.* 426: 13-17.
- Azzu, V., et al. 2010. Degradation of an intramitochondrial protein by the cytosolic proteasome. *J. Cell Sci.* 123: 578-585.
- 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.
- Larsen, F.J., et al. 2011. Mitochondrial oxygen affinity predicts basal metabolic rate in humans. *FASEB J.* 25: 2843-2852.
- Lumini-Oliveira, J., et al. 2011. Endurance training reverts heart mitochondrial dysfunction, permeability transition and apoptotic signaling in long-term severe hyperglycemia. *Mitochondrion* 11: 54-63.
- Ascensão, A., et al. 2011. Acute exercise protects against calcium-induced cardiac mitochondrial permeability transition pore opening in doxorubicin-treated rats. *Clin. Sci.* 120: 37-49.
- Loers, G., et al. 2012. The interaction between cell adhesion molecule L1, matrix metalloproteinase 14, and adenine nucleotide translocator at the plasma membrane regulates L1-mediated neurite outgrowth of murine cerebellar neurons. *J. Neurosci.* 32: 3917-3930.

MONOS
Satisfaction
Guaranteed

Try **ANT3 (2A9): sc-293434**, our highly recommended monoclonal alternative to ANT1/2/3 (Q-18).