

# VDAC1 (N-18): sc-8828



The Power to Question

## BACKGROUND

Adenine nucleotide translocator (ANT) 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 ANT to induce the dissipation of mitochondrial inner membrane potential.

## REFERENCES

- Li, K., et al. 1989. A human muscle adenine nucleotide translocator gene has four exons, is located on chromosome 4, and is differentially expressed. *J. Biol. Chem.* 264: 13998-14004.
- Cozens, A.L., et al. 1989. DNA sequences of two expressed nuclear genes for human mitochondrial ADP/ATP translocase. *J. Mol. Biol.* 206: 261-280.

## SOURCE

VDAC1 (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of VDAC1 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-8828 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

VDAC1 (N-18) is recommended for detection of VDAC1 and, to a lesser extent, VDAC2 and VDAC3 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

VDAC1 (N-18) is also recommended for detection of VDAC1 and, to a lesser extent, VDAC2 and VDAC3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for VDAC1 siRNA (h): sc-42355, VDAC1 siRNA (m): sc-42356, VDAC1 shRNA Plasmid (h): sc-42355-SH, VDAC1 shRNA Plasmid (m): sc-42356-SH, VDAC1 shRNA (h) Lentiviral Particles: sc-42355-V and VDAC1 shRNA (m) Lentiviral Particles: sc-42356-V.

Molecular Weight of VDAC1: 30-35 kDa.

Positive Controls: rat heart extract: sc-2393, HL-60 whole cell lysate: sc-2209 or human heart extract: sc-363763.

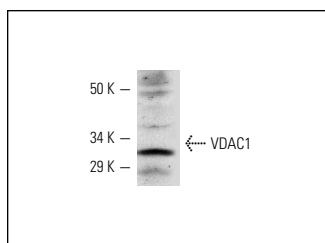
## STORAGE

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

## RESEARCH USE

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

## DATA



VDAC1 (N-18): sc-8828. Western blot analysis of VDAC1 expression in rat heart extract.

## SELECT PRODUCT CITATIONS

- Fischer, R., et al. 2001. Expression of the peripheral-type benzodiazepine receptor and apoptosis induction in hepatic stellate cells. *Gastroenterology* 120: 1212-1226.
- Tokarska-Schlattner, M., et al. 2007. Reduced creatine-stimulated respiration in doxorubicin challenged mitochondria: particular sensitivity of the heart. *Biochim. Biophys. Acta* 1767: 1276-1284.
- Marabese, M., et al. 2008. HtrA2 enhances the apoptotic functions of p73 on bax. *Cell Death Differ.* 15: 849-858.
- Monick, M.M., et al. 2008. Constitutive ERK MAPK activity regulates macrophage ATP production and mitochondrial integrity. *J. Immunol.* 180: 7485-7496.
- Shoshan-Barmatz, V., et al. 2008. Uncovering the role of VDAC in the regulation of cell life and death. *J. Bioenerg. Biomembr.* 40: 183-191.
- Feng, J., et al. 2008. Phosphoproteome analysis of isoflurane-protected heart mitochondria: phosphorylation of adenine nucleotide translocator-1 on Tyr194 regulates mitochondrial function. *Cardiovasc. Res.* 80: 20-29.
- Lalone, C.A., et al. 2010. Enrichment of *Echinacea angustifolia* with Bauer alkylamide 11 and Bauer ketone 23 increased anti-inflammatory potential through interference with cox-2 enzyme activity. *J. Agric. Food Chem.* 58: 8573-8584.
- Edison, N., et al. 2012. The IAP-antagonist ARTS initiates caspase activation upstream of cytochrome C and SMAC/diablo. *Cell Death Differ.* 19: 356-368.
- Sun, J., et al. 2012. Disruption of caveolae blocks ischemic preconditioning-mediated S-nitrosylation of mitochondrial proteins. *Antioxid. Redox Signal.* 16: 45-56.



Try **VDAC1 (B-6): sc-390996**, our highly recommended monoclonal alternative to VDAC1 (N-18). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **VDAC1 (B-6): sc-390996**.