SANTA CRUZ BIOTECHNOLOGY, INC.

VDAC2 (S-17): sc-32057

SANTA CRUZ BIOTECHNOLOGY

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

1. 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.
2. 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.
3. Blachly-Dyson, E., et al. 1993. Cloning and functional expression in yeast of two human isoforms of the outer mitochondrial membrane channel, the voltage-dependent anion channel. J. Biol. Chem. 268: 1835-1841.
4. Zamzami, N., et al. 1996. Mitochondrial control of nuclear apoptosis. J. Exp. Med. 183: 1533-1544.
5. Green, D.R., et al. 1998. Mitochondria and apoptosis. Science 281: 1309-1312.
6. Marzo, I., et al. 1998. Bax and adenine nucleotide translocator cooperate in the mitochondrial control of apoptosis. Science 281: 2027-2031.

CHROMOSOMAL LOCATION

Genetic locus: VDAC2 (human) mapping to 10q22.2, VDAC3 (human) mapping to 8p11.21; Vdac3 (mouse) mapping to 8 A2.

SOURCE

VDAC2 (S-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of VDAC2 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-32057 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

VDAC2 (S-17) is recommended for detection of VDAC2 and, to a lesser extent, VDAC3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

VDAC2 (S-17) is also recommended for detection of VDAC2 and to a lesser extent VDAC3 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of VDAC2: 30-32 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Redel, A., et al. 2008. Activation of mitochondrial large-conductance calcium-activated K^+ channels via protein kinase A mediates desflurane-induced preconditioning. Anesth. Analg. 106: 384-391.

RESEARCH USE

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