

VDAC1 (D-16): sc-32063

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.

CHROMOSOMAL LOCATION

Genetic locus: VDAC1 (human) mapping to 5q31.1, VDAC2 (human) mapping to 10q22.2; Vdac1 (mouse) mapping to 11 B1.3, Vdac2 (mouse) mapping to 14 A3.

SOURCE

VDAC1 (D-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of VDAC1 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-32063 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

VDAC1 (D-16) is recommended for detection of VDAC1 and, to a lesser extent, VDAC2 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

VDAC1 (D-16) is also recommended for detection of VDAC1 and, to a lesser extent, VDAC2 in additional species, including equine, canine, bovine, porcine and avian.

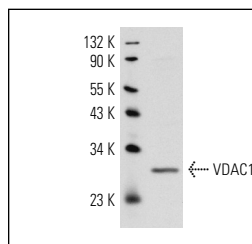
Molecular Weight of VDAC1: 30-35 kDa.

Positive Controls: human prostate extract: sc-363774, rat heart extract: sc-2393 or HL-60 whole cell lysate: sc-2209.

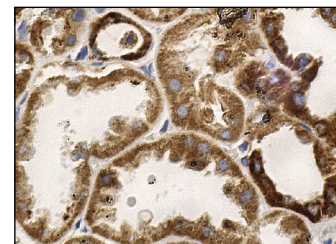
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



VDAC1 (D-16): sc-32063. Western blot analysis of VDAC1 expression in HL-60 whole cell lysate.



VDAC1 (D-16): sc-32063. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules.

SELECT PRODUCT CITATIONS

1. Foster, D.B., et al. 2008. Is Kir6.1 a subunit of mitoK(ATP)? *Biochem. Biophys. Res. Commun.* 366: 649-656.
2. Guerra, F., et al. 2011. Placing mitochondrial DNA mutations within the progression model of type I endometrial carcinoma. *Hum. Mol. Genet.* 20: 2394-2405.
3. Bae, N., et al. 2013. Network of brain protein level changes in glutaminase deficient fetal mice. *J. Proteomics* 80: 236-249.

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.

MONOS
Satisfaction
Guaranteed

Try **VDAC1 (B-6): sc-390996**, our highly recommended monoclonal alternative to VDAC1 (D-16). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **VDAC1 (B-6): sc-390996**.