Product datasheet

Anti-VDAC1 Antibody

Catalog Number: *PB9455*

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Basic Information

Product Name	Anti-VDAC1 Antibody
Gene Name	VDAC1
Source	Rabbit
Isotype	IgG
Species Reactivity	human,mouse,rat
Tested Application	WB, IHC
Contents	500 ug/ml antibody with PBS ， 0.02% NaN3 , 1 mg BSA and 50% glycerol.
Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human VDAC/Porin (154-181aa QMNFETAKSRVTQSNFAVGYKTDEFQLH), different from the related mouse and rat sequences by one amino acid.
Purification	Immunogen affinity purified.
Observed MW	31KD
Dilution Ratios	Western blot (WB): 1:500-2000 Immunohistochemistry in paraffin section (IHC): 1:50-400 (Boiling the paraffin sections in 10mM citrate buffer,pH6.0,or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user.

Storage

12 months from date of receipt，-20℃ as supplied. 6 months 2 to 8℃ after reconstitution. Avoid repeated freezing and thawing.

Background Information

The voltage-dependent anion channel (VDAC) of the outer mitochondrial membrane is a small, abundant outer membrane pore-forming protein found in the outer membranes of all eukaryotic mitochondria. The VDAC protein is thought to form the major pathway for movement of adenine nucleotides through the outer membrane and to be the mitochondrial binding site for hexokinase and glycerol kinase. At low transmembrane voltage, VDAC is open for anions such as phosphate, chloride, and adenine nucleotides. At higher transmembrane voltage, VDAC functions as a selective channel for cations and uncharged molecules. These features make VDAC likely to play a role in mitochondrial energy metabolism. Huizing et al. studied by Northern and Western blot analyses the human tissue distribution of mitochondrial transmembrane metabolite carriers. They found that VDAC1 mRNA has a ubiquitous distribution, with most pronounced expression in heart, liver, and skeletal muscle, whereas the VDAC2 isoform appears to be expressed only in the heart.

Selected Validation Data

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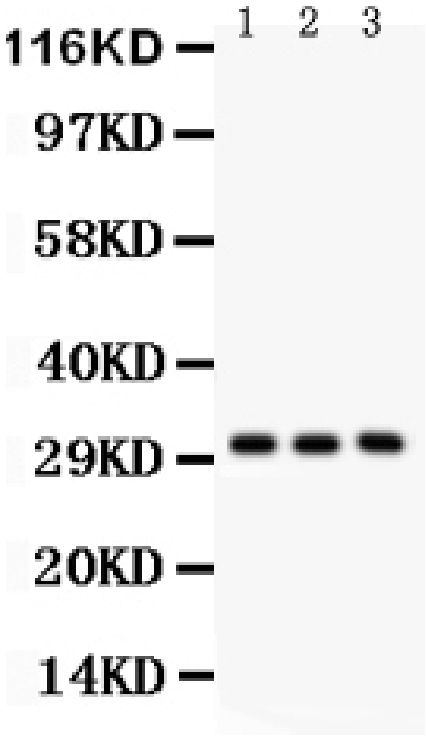

Figure 1. Western blot analysis of VDAC using anti-VDAC antibody (PB9455). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: Rat Liver Tissue LysateLane 2: Mouse Liver Tissue LysateLane 3: SMMC Whole Cell Lysate After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-VDAC antigen affinity purified polyclonal antibody (Catalog # PB9455) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for VDAC at approximately 31KD. The expected band size for VDAC is at 31KD.

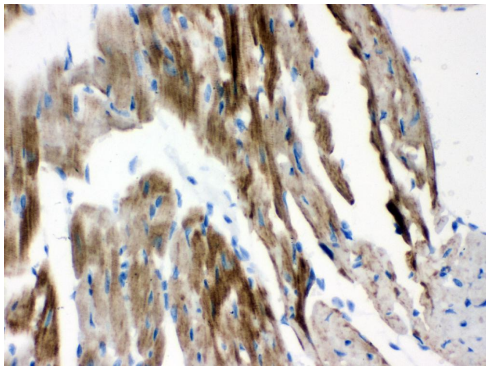

Figure 2. IHC analysis of VDA using anti-VDA antibody (PB9455).VDA was detected in paraffin-embedded section of mouse cardiac muscle tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1µg/ml rabbit anti-VDA Antibody (PB9455) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.