

Anti-VDAC1 / 2 / 3 Antibody [PSH14-90]

HA723692



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB
Molecular Wt:	Predicted band size: 31 kDa
Clone number:	PSH14-90

Description: Voltage-dependent anion channels, or mitochondrial porins, are a class of porin ion channel located on the outer mitochondrial membrane. Humans, like most higher eukaryotes, encode three different VDACS; VDAC1, VDAC2, and VDAC3. Together with TOMM40 and TOMM40L they represent a family of evolutionarily related β -barrels. VDAC has also been shown to play a role in apoptosis. During apoptosis, VDAC modifies the mitochondrial permeability transition pore to release of apoptogenic factors such as cytochrome c. However, VDAC are not essential components of the mitochondrial permeability transition pore. Although cytochrome c plays an essential role in oxidative phosphorylation within the mitochondrion. In the cytosol it activates proteolytic enzymes called caspases, which play a major role in cell death. Although the mechanism for VDAC-facilitated cytochrome c release has not yet been fully elucidated, some research suggests that oligomerization between individual subunits may create a large flexible pore through which cytochrome c can pass. A more important factor is that release of cytochrome c is also regulated by the Bcl-2 protein family: Bax interacts directly with VDAC to increase pore size and promote cytochrome c release, while anti-apoptotic Bcl-xL produces the exact opposite effect. In fact, it has been shown that antibodies that inhibit VDAC also interfere with Bax-mediated cytochrome c release in both isolated mitochondria and whole cells. This key role in apoptosis suggests VDAC as a potential target for chemotherapeutic drugs.

Immunogen: Recombinant protein within human VDAC2 aa 1-294.

Positive control: MCF7 cell lysate, HEK-293 cell lysate, Jurkat cell lysate, Mouse brain tissue lysate, Mouse heart tissue lysate, Rat brain tissue lysate, Rat heart tissue lysate.

Subcellular location: Mitochondrion outer membrane, Membrane.

Database links: SwissProt: P21796 Human | P45880 Human | Q9Y277 Human | Q60932 Mouse | Q60930 Mouse | Q60931 Mouse | Q9Z2L0 Rat | P81155 Rat | Q9R1Z0 Rat

Recommended Dilutions:

WB 1:5,000

Storage Buffer: 1*PBS (pH7.4), 0.1% BSA, 40% Glycerol, 0.2% Proclean 950.

Storage Instruction: Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C long term.

Purity: Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

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Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

Images

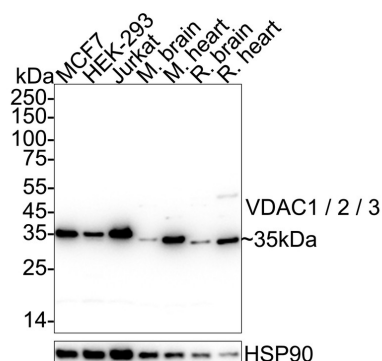


Fig1: Western blot analysis of VDAC1 / 2 / 3 on different lysates with Rabbit anti-VDAC1 / 2 / 3 antibody (HA723692) at 1/5,000 dilution.

Lane 1: MCF7 cell lysate
 Lane 2: HEK-293 cell lysate
 Lane 3: Jurkat cell lysate
 Lane 4: Mouse brain tissue lysate
 Lane 5: Mouse heart tissue lysate
 Lane 6: Rat brain tissue lysate
 Lane 7: Rat heart tissue lysate

Lysates/proteins at 20 µg/Lane.

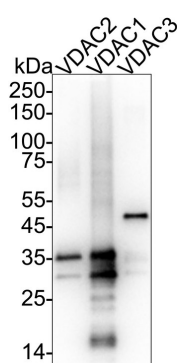
Predicted band size: 31 kDa
 Observed band size: 35 kDa

Exposure time: 4 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA723692) at 1/5,000 dilution was used in primary antibody dilution (K1803) at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

Fig2: Western blot analysis of VDAC1 / 2 / 3 on different lysates with Rabbit anti-VDAC1 / 2 / 3 antibody (HA723692) at 1/5,000 dilution.



Lane 1: Human VDAC2 recombinant protein
 Lane 2: Human VDAC1 recombinant protein
 Lane 3: Human VDAC3 recombinant protein

Lysates/proteins at 30 ng/Lane.

Exposure time: 2 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA723692) at 1/5,000 dilution was used in primary antibody dilution (K1803) at 4°C overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

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Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Shoshan-Barmatz V et al. VDAC1 at the Intersection of Cell Metabolism, Apoptosis, and Diseases. *Biomolecules*. 2020 Oct
2. Yuan S et al. VDAC2 loss elicits tumour destruction and inflammation for cancer therapy. *Nature*. 2025 Apr
3. Huang G et al. The lncRNA BDNF-AS/WDR5/FBXW7 axis mediates ferroptosis in gastric cancer peritoneal metastasis by regulating VDAC3 ubiquitination. *Int J Biol Sci*. 2022 Jan

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