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Tel: 858.875.1900 Fax: 858.622.0609

VDAC1 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP6627A

Specification

VDAC1 Antibody (N-term) - Product Information

Application	**WB, IHC-P, FC,E**
Primary Accession	P21796
Other Accession	Q9Z2L0, Q9TT15, Q9MZ16, Q60932, P45879
Reactivity	**Human, Mouse**
Predicted	**Bovine, Pig, Rabbit, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit Ig**
Antigen Region	**1-30**

VDAC1 Antibody (N-term) - Additional Information

Gene ID 7416

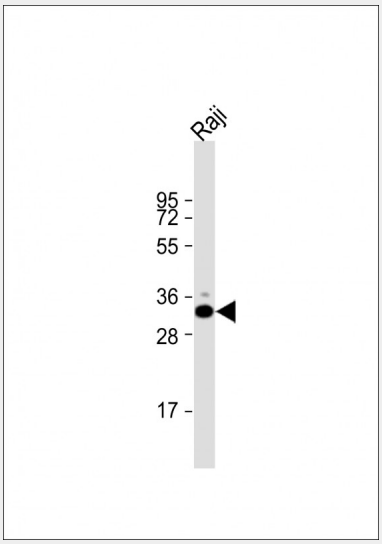
Other Names
Voltage-dependent anion-selective channel protein 1, VDAC-1, hVDAC1, Outer mitochondrial membrane protein porin 1, Plasmalemmal porin, Porin 31HL, Porin 31HM, VDAC1, VDAC

Target/Specificity
This VDAC1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human VDAC1.

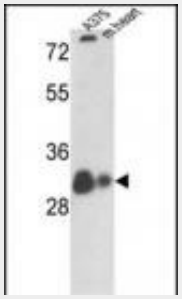
Dilution
WB~~1:1000
IHC-P~~1:50~100
FC~~1:10~50

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage



Anti-VDAC1 Antibody (N-term) at 1:8000 dilution + Raji whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 31 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot analysis of VDAC1 Antibody (N-term) (Cat. #AP6627a) in A375 cell line and mouse heart tissue lysates (35ug/lane). VDAC1 (arrow) was detected using the purified Pab.

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Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

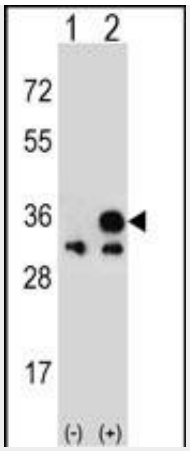
Precautions
VDAC1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

VDAC1 Antibody (N-term) - Protein Information

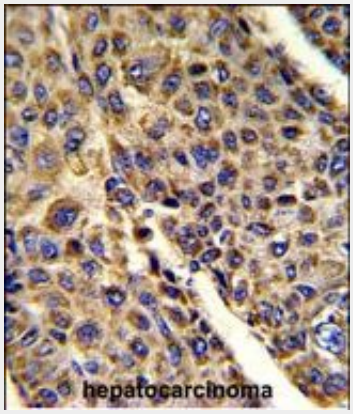
Name VDAC1

Synonyms VDAC

Function
Forms a channel through the mitochondrial outer membrane and also the plasma membrane. The channel at the outer mitochondrial membrane allows diffusion of small hydrophilic molecules; in the plasma membrane it is involved in cell volume regulation and apoptosis. It adopts an open conformation at low or zero membrane potential and a closed conformation at potentials above 30-40 mV. The open state has a weak anion selectivity whereas the closed state is cation-selective (PubMed:11845315, PubMed:18755977, PubMed:20230784, PubMed:8420959). Binds various signaling molecules, including the sphingolipid ceramide, the phospholipid phosphatidylcholine, and the sterol cholesterol (PubMed:31015432). In depolarized mitochondria, acts downstream of PRKN and PINK1 to promote mitophagy or prevent apoptosis; polyubiquitination by PRKN promotes mitophagy, while monoubiquitination by PRKN decreases mitochondrial calcium influx which ultimately inhibits apoptosis (PubMed:32047033). May participate in the formation of the



Western blot analysis of VDAC1 (arrow) using rabbit polyclonal VDAC1 Antibody (N-term) (Cat. #AP6627a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the VDAC1 gene.

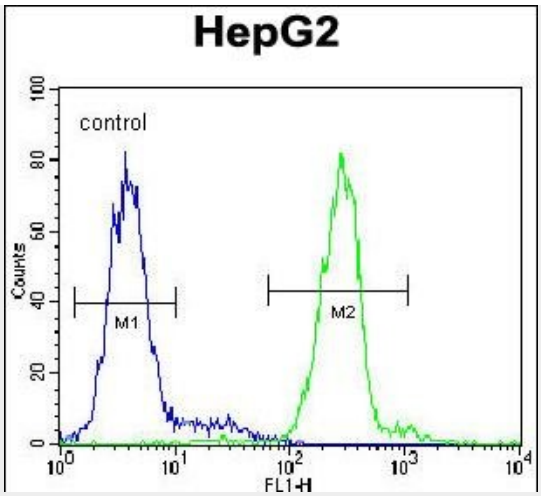


Formalin-fixed and paraffin-embedded human hepatocarcinoma reacted with VDAC1 Antibody (N-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

permeability transition pore complex (PTPC) responsible for the release of mitochondrial products that triggers apoptosis (PubMed:15033708, PubMed:25296756). May mediate ATP export from cells (PubMed:30061676).

Cellular Location
Mitochondrion outer membrane; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein. Membrane raft; Multi-pass membrane protein

Tissue Location
Expressed in erythrocytes (at protein level) (PubMed:27641616). Expressed in heart, liver and skeletal muscle (PubMed:8420959).



VDAC1 Antibody (N-term) (Cat. #AP6627a) flow cytometric analysis of HepG2 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

VDAC1 Antibody (N-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

VDAC1 Antibody (N-term) - Background

VDAC1 forms a channel through the mitochondrial outer membrane and also the plasma membrane. The channel at the outer mitochondrial membrane allows diffusion of small hydrophilic molecules; in the plasma membrane it is involved in cell volume regulation and apoptosis. It adopts an open conformation at low or zero membrane potential and a closed conformation at potentials above 30-40 mV. The open state has a weak anion selectivity whereas the closed state is cation-selective. The protein may participate in the formation of the permeability transition pore complex (PTPC) responsible for the release of mitochondrial products that triggers apoptosis.

VDAC1 Antibody (N-term) - References

Shoshan-Barmatz,V., Biochim. Biophys. Acta 1787 (5), 421-430 (2009)
Hiller,S., Science 321 (5893), 1206-1210 (2008)

VDAC1 Antibody (N-term) - Citations

- Abnormal alpha-synuclein reduces nigral voltage-dependent anion channel 1 in sporadic and experimental Parkinson\'s disease.