

VDAC1 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP6627a**Specification**

VDAC1 Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [P21796](#)**VDAC1 Antibody (N-term) Blocking Peptide - 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

The synthetic peptide sequence used to generate the antibody [AP6627a](/products/AP6627a) was selected from the N-term region of human VDAC1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

VDAC1 Antibody (N-term) Blocking Peptide - 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](http://www.uniprot.org/citations/11845315), PubMed: [18755977](http://www.uniprot.org/citations/18755977), PubMed: [20230784](http://www.uniprot.org/citations/20230784), PubMed: [8420959](http://www.uniprot.org/citations/8420959)).

Binds various signaling molecules, including the sphingolipid ceramide, the phospholipid phosphatidylcholine, and the sterols cholesterol and oxysterol (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 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) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

VDAC1 Antibody (N-term) Blocking Peptide - Images

VDAC1 Antibody (N-term) Blocking Peptide - 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) Blocking Peptide - References

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