



# VDAC1 Antibody (Center) Blocking Peptide

Synthetic peptide Catalog # BP6627c

### **Specification**

VDAC1 Antibody (Center) Blocking Peptide - Product Information

Primary Accession P21796

VDAC1 Antibody (Center) 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 <a href=/products/AP6627c>AP6627c</a> was selected from the Center 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 (Center) Blocking Peptide - Protein Information

# VDAC1 Antibody (Center) 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 (Center) Blocking Peptide - References

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



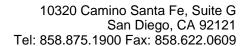
#### Name VDAC1

### 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:<a href="http://www.uniprot.org/citations/1184 5315" target=" blank">11845315</a>, PubMed:<a href="http://www.uniprot.org/ci tations/18755977" target=" blank">18755977</a>, PubMed:<a href="http://www.uniprot.org/ci tations/20230784" target="\_blank">20230784</a>, PubMed:<a href="http://www.uniprot.org/ci tations/8420959" target=" blank">8420959</a>). Binds various signaling molecules, including the sphingolipid ceramide, the phospholipid phosphatidylcholine, and the sterol cholesterol (PubMed: <a href="http://www.u niprot.org/citations/31015432" target=" blank">31015432</a>). 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: <a hr ef="http://www.uniprot.org/citations/32047 033" target=" blank">32047033</a>). May participate in the formation of the permeability transition pore complex (PTPC) responsible for the release of mitochondrial products that triggers apoptosis (PubMed:<a href="http://www.uniprot.org/c itations/15033708" target=" blank">15033708</a>, PubMed:<a href="http://www.uniprot.org/ci tations/25296756" target=" blank">25296756</a>). May mediate ATP export from cells (PubMed: <a href="http://www.uniprot.org/citations/3006"

1676" target=" blank">30061676</a>).





# **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 (Center) Blocking Peptide - Protocols

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

• Blocking Peptides