

### Certificate of Analysis

**Product:** Affinity Purified Anti-VDAC/Porin [Rabbit]

**Code:** 600-401-882

**Lot #:** 20866

**Size:** 200 µg

**Physical State:** Liquid (sterile filtered)

**Antibody Concentration:** 0.4 mg/ml (by UV absorbance at 280 nm)

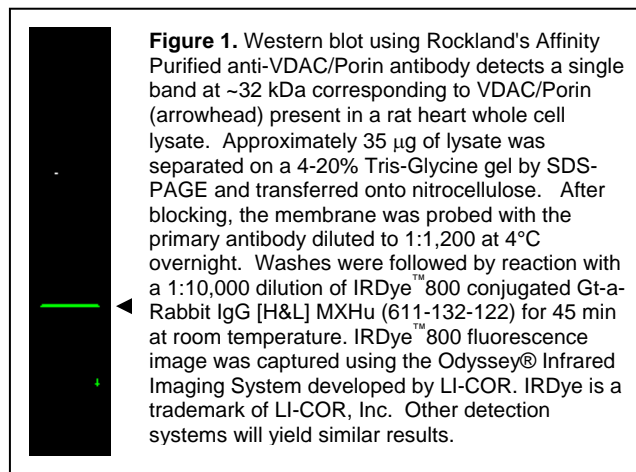
**Buffer:** 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2

**Stabilizer:** None

**Preservative:** 0.01% (w/v) Sodium Azide

**Storage Conditions:** Store vial at -20° C prior to opening. Dilute only prior to immediate use. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Expiration date is one (1) year from date of opening.

**Background:** VDAC (also known as Voltage-dependent anion-selective channel protein 1, Outer mitochondrial membrane protein porin 1, Plasmalemmal porin, Porin 31HL) is an outer membrane mitochondrial protein. The VDAC proteins are ~30-33 kDa (some isoforms are larger - see below). The VDAC proteins are thought to form aqueous channels, or pores, through which adenine nucleotides cross the outer mitochondrial membrane. VDACs have been implicated in the formation of the mitochondrial permeability transition pore complex in apoptotic cells. This complex, formed by VDAC, adenine nucleotide translocator (ANT), and cyclophilin D (CypD), is thought to allow the mitochondria to undergo metabolic uncoupling and irreversible morphologic changes that ultimately destroy the mitochondria during apoptosis. VDACs are highly expressed in heart, liver and skeletal muscle, where concentrations of mitochondria are at their highest. This antibody can be used as a loading control with whole cell lysates and total mitochondrial preparations.



**Application Note(s):** This affinity purified antibody has been tested for use in ELISA and western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band at ~30-33 kDa in size corresponding to VDAC/Porin by western blotting in the appropriate cell lysate or extract.

**Relevant Link(s):**

NCBI Link [P21796](#)

Swis-Prot [P21796](#) VDAC1

Swis-Prot [P45880](#) VDAC2 (isoform 1)

Swis-Prot [Q9Y277](#) VDAC3 (isoform 1)

**Recommended Dilutions:**

**ELISA**

1:10,000 - 1:40,000

**WESTERN BLOT**

1:500 - 1:2,000

**IF MICROSCOPY**

User Optimized

**OTHER APPLICATIONS**

User Optimized

**Purity and Specificity:** This affinity purified antibody is directed against human VDAC1/Porin1 protein. The product was affinity purified from monospecific antiserum by immunoaffinity purification. A BLAST analysis was used to suggest that this antibody would react with VDAC1/Porin1 from a wide range of organisms, including avian, mammalian, aquatic and reptilian sources based on 100% homology for the immunogen sequence. Cross reactivity will occur with all forms of VDACs including VDAC1, VDAC2 (4 isoforms) and VDAC3 (2 isoforms). Such broad reactivity makes this antibody useful as an excellent loading control (mitochondrial).

**Protein Sequence:** Human VDAC1/Porin1, 283 aa, predicted MW 30.8 kDa

1	mavpptyadl	gksardvftk	gygfglikld	lktksengle	ftssgsante	ttkvtgslet
61	kyrwteygl	ftekwntdnt	lgteitvedq	larglklfd	ssfsptgkk	nakiktgykr
121	ehinlgcdmd	fdiagpsirg	alvlgyegwl	agyqmnfeta	ksrvtqsnfa	vgyktdefql
181	htnvndgtf	<b>ggsiyqk</b> vnk	kletavnlaw	tagnsntrfg	iaakyqidpd	acfsakvnns
241	sliglygtq	lkpgiklts	alldgknvna	gghklglgle	fqa	

**Immunogen:** This affinity-purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids 185-197 of Human VDAC1/Porin1.

#### General References:

Liu T *et al.* Rapid induction of mitochondrial events and caspase-independent apoptosis in Survivin-targeted melanoma cells. *Oncogene* **23**:39-48 (2004).

Suarez J *et al.* In vivo adenoviral transfer of sorcin reverses cardiac contractile abnormalities of diabetic cardiomyopathy. *Am J Physiol Heart Circ Physiol* **286**:H68-75 (2004).

Leary SC *et al.* Human SCO1 and SCO2 have independent, cooperative functions in copper delivery to cytochrome c oxidase. *Hum Mol Genet* **13**:1839-48 (2004).

Jonas EA *et al.* Proapoptotic N-truncated BCL-xL protein activates endogenous mitochondrial channels in living synaptic terminals. *Proc Natl Acad Sci U S A* **101**:13590-5 (2004).

Liu J *et al.* Phospholipid scramblase 3 is the mitochondrial target of protein kinase C delta-induced apoptosis. *Cancer Res* **63**:1153-6 (2003).

Gustafsson AB *et al.* TAT protein transduction into isolated perfused hearts: TAT-apoptosis repressor with caspase recruitment domain is cardioprotective. *Circulation* **106**:735-9 (2002).

Le Mellay V *et al.* Negative regulation of mitochondrial VDAC channels by C-Raf kinase. *BMC Cell Biol* **3**:14 (2002).

#### Related Products:

[#600-401-880](#) Affinity Purified Anti- $\alpha$ -Tubulin [Rabbit]  
[#600-401-882](#) Affinity Purified Anti-VDAC/Porin [Rabbit]  
[#600-401-886](#) Affinity Purified Anti- $\beta$ -Actin [Rabbit]  
[#611-703-127](#) Peroxidase Conjugated Affinity Purified Anti-RABBIT IgG (H&L) (DONKEY) MX10  
[#611-132-122](#) IRDye800 Conjugated Affinity Purified Anti-RABBIT IgG (H&L) (GOAT) MX10  
[#MB-070](#) Blocking Buffer for Fluorescent Western Blotting  
[#KIA-003](#) **MaxTag**<sup>TM</sup> Anti-RABBIT IgG Kit for Immunoblotting

**USDA Certification:** All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation.

**Note:** This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information.