10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

VDAC2 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21559a

Product Information

Application	IHC-P, WB, E
Primary Accession	P45880
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB49629
Calculated MW	31567

Additional Information

Gene ID	7417
Other Names	Voltage-dependent anion-selective channel protein 2, VDAC-2, hVDAC2, Outer mitochondrial membrane protein porin 2, VDAC2
Target/Specificity	This VDAC2 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 51-85 amino acids from the N-terminal region of human VDAC2.
Dilution	IHC-P~~1:100 WB~~1:2000 E~~Use at an assay dependent concentration.
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	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	VDAC2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	VDAC2 (HGNC:12672)
Function	Non-selective voltage-gated ion channel that mediates the transport of anions and cations through the mitochondrion outer membrane and plasma membrane (PubMed:8420959). The channel adopts an open conformation at zero mV and a closed conformation at both positive and negative potentials

	(PubMed:8420959). There are two populations of channels; the main that functions in a lower open-state conductance with lower ion selectivity, that switch, in a voltage-dependent manner, from the open to a low-conducting 'closed' state and the other that has a normal ion selectivity in the typical high conductance, 'open' state (PubMed:8420959). Binds various lipids, including the sphingolipid ceramide, the phospholipid phosphatidylcholine, and the sterols cholesterol and oxysterol (PubMed:31015432). Binding of ceramide promotes the mitochondrial outer membrane permeabilization (MOMP) apoptotic pathway (PubMed:31015432). Associates with the translocase of the outer mitochondrial membrane (TOM) complex and PINK1 kinase at depolarized mitochondria, this interaction stabilizes PINK1 at the outer mitochondrial membrane and triggers downstream mitophagy by the recruitment of the E3 ubiquitin ligase PRKN (PubMed:40080546).
Cellular Location	Mitochondrion outer membrane; Multi-pass membrane protein. Membrane. Note=May localize to non-mitochondrial membranes.
Tissue Location	Expressed in erythrocytes (at protein level) (PubMed:27641616). Expressed in all tissues examined (PubMed:8420959)

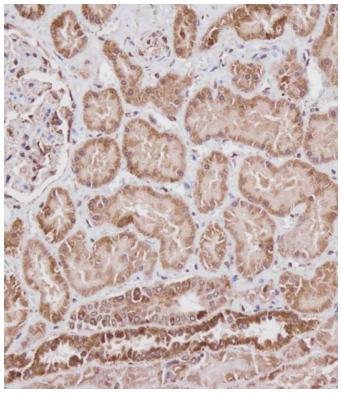
Background

Forms a channel through the mitochondrial outer membrane that allows diffusion of small hydrophilic molecules. The channel 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.

References

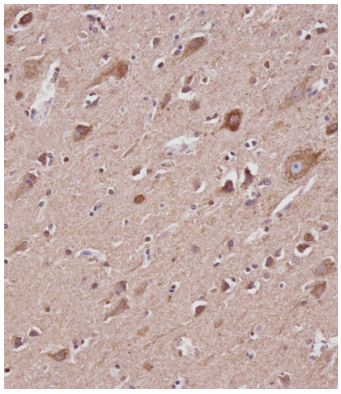
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Decker W.K.,et al.Mamm. Genome 10:1041-1042(1999).
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Deloukas P.,et al.Nature 429:375-381(2004).

Images

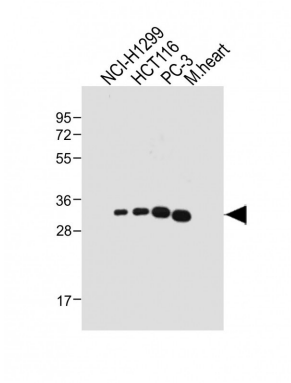


Immunohistochemical analysis of AP21559a on paraffin-embedded Human kidney tissue. Tissue was fixed with formaldehyde at room temperature. Heat induced epitope retrieval was performed by EDTA buffer (pH9. 0). Samples were incubated with primary antibody(1:100) for 1 hour at room temperature. Undiluted CRF Anti-Polyvalent HRP Polymer antibody was used as the secondary antibody.

Immunohistochemical analysis of AP21559a on paraffin-embedded Human brain tissue. Tissue was fixed with formaldehyde at room temperature. Heat induced epitope retrieval was performed by EDTA buffer (pH9. 0). Samples were incubated with primary antibody(1:100) for



1 hour at room temperature. Undiluted CRF Anti-Polyvalent HRP Polymer antibody was used as the secondary antibody.



All lanes : Anti-VDAC2 Antibody (N-term) at 1:4000 dilution Lane 1: NCI-H1299 whole cell lysate Lane 2: HCT116 whole cell lysate Lane 3: PC-3 whole cell lysate Lane 4: Mouse heart tissue lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 32 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.