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

TPCN1 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP56586

Product Information

Application	IHC-P, IHC-F, IF, ICC, E
Primary Accession	Q9ULQ1
Reactivity	Rat, Pig, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	94147
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human TPCN1
Epitope Specificity	701-800/816
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Lysosome membrane. Endosome membrane.
SIMILARITY	Belongs to the calcium channel alpha-1 subunit (TC 1.A.1.11) family. Two pore calcium channel subfamily.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Voltage-gated Ca(2+) and Na+ channels have 4 homologous domains, each containing 6 transmembrane segments, S1 to S6. TPCN1 is similar to these channels, but it has only 2 domains containing S1 to S6 (Ishibashi et al., 2000 [PubMed 10753632]).[supplied by OMIM, Mar 2008]

Additional Information

Gene ID	53373
Other Names	Two pore calcium channel protein 1, Voltage-dependent calcium channel protein TPC1, TPCN1, KIAA1169, TPC1
Target/Specificity	Highest expression found in the heart and kidney, and lowest expression found in the spleen.
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	TPCN1 (HGNC:18182)
Function	Intracellular channel initially characterized as a non- selective Ca(2+)-permeable channel activated by NAADP (nicotinic acid adenine dinucleotide phosphate), it is also a voltage-gated highly- selective Na(+) channel activated directly by PI(3,5)P2 (phosphatidylinositol 3,5-bisphosphate) that senses pH changes and confers electrical excitability to organelles (PubMed:19620632, PubMed:23063126, PubMed:23394946, PubMed:24776928). Localizes to the early and recycling endosomes membranes where it plays a role in the uptake and processing of proteins and regulates organellar membrane excitability, membrane trafficking and pH homeostasis (Probable) (PubMed:23394946). Ion selectivity is not fixed but rather agonist- dependent and under defined ionic conditions, can be readily activated by both NAADP and PI(3,5)P2 (Probable). Required for mTOR-dependent nutrient sensing (Probable) (PubMed:23394946).
Cellular Location	Lysosome membrane; Multi-pass membrane protein. Endosome membrane; Multi-pass membrane protein. Early endosome membrane {ECO:0000250|UniProtKB:Q9EQJ0}; Multi-pass membrane protein {ECO:0000250|UniProtKB:Q9EQJ0}. Recycling endosome membrane {ECO:0000250|UniProtKB:Q9EQJ0}; Multi-pass membrane protein {ECO:0000250|UniProtKB:Q9EQJ0}
Tissue Location	Highest expression found in the heart and kidney, and lowest expression found in the spleen