

**HVCN1 Antibody (N-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP5042A****Specification**

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**HVCN1 Antibody (N-term) - Product Information**

Application	WB, FC,E
Primary Accession	<a href="#">Q96D96</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	31683
Antigen Region	1-30

**HVCN1 Antibody (N-term) - Additional Information****Gene ID** 84329**Other Names**

Voltage-gated hydrogen channel 1, Hydrogen voltage-gated channel 1, HV1, Voltage sensor domain-only protein, HVCN1, VSOP

**Target/Specificity**

This HVCN1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human HVCN1.

**Dilution**

WB~~1:1000

FC~~1:10~50

**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**

HVCN1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**HVCN1 Antibody (N-term) - Protein Information****Name** HVCN1 {ECO:0000303|PubMed:20037153, ECO:0000312|HGNC:HGNC:28240}**Function** Voltage-gated proton-selective channel that conducts outward proton currents in

response to intracellular acidification. Lacks a canonical ion-channel pore domain and mediates proton permeability via its voltage sensor domain (PubMed:[16554753](#), PubMed:[20037153](#), PubMed:[20548053](#), PubMed:[22020278](#), PubMed:[27859356](#), PubMed:[30478045](#), PubMed:[37669933](#)). Appears to play a dominant role in regulation of CO<sub>2</sub>/HCO<sub>3</sub><sup>-</sup>/H<sup>+</sup> equilibrium in sperm flagellum. Prevents the acidification resulting from HCO<sub>3</sub><sup>-</sup> synthesis and thus sustains high HCO<sub>3</sub><sup>-</sup> levels inside sperm for capacitation (PubMed:[20144758](#), PubMed:[30478045](#), PubMed:[37669933](#)). Provides for proton efflux that compensates for electron charge generated by NADPH oxidase activity either in the extracellular or phagosomal compartments, thus enabling the production of high levels of bactericidal reactive oxygen species during the respiratory burst (PubMed:[20037153](#), PubMed:[30478045](#)). Opens when the pH of airway surface liquid exceeds 7 and contributes to respiratory epithelial acid secretion to maintain pH in the mucosa (PubMed:[20548053](#)).

#### **Cellular Location**

Cell membrane; Multi-pass membrane protein. Apical cell membrane; Multi-pass membrane protein. Cytoplasmic vesicle, phagosome membrane; Multi-pass membrane protein. Cell projection, cilium, flagellum membrane; Multi-pass membrane protein. Note=Detected within the principal piece of the sperm flagellum (PubMed:20144758). Detected mainly at intracellular membranes upon overexpression in HeLa cells (PubMed:20147290)

#### **Tissue Location**

Enriched in immune tissues, such as lymph nodes, B- lymphocytes, monocytes and spleen (PubMed:16554753). Expressed in spermatozoa (PubMed:37669933). Expressed in respiratory epithelial cells (PubMed:20548053).

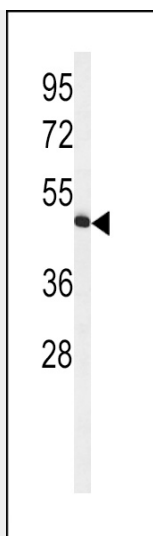
#### **HVCN1 Antibody (N-term) - Protocols**

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

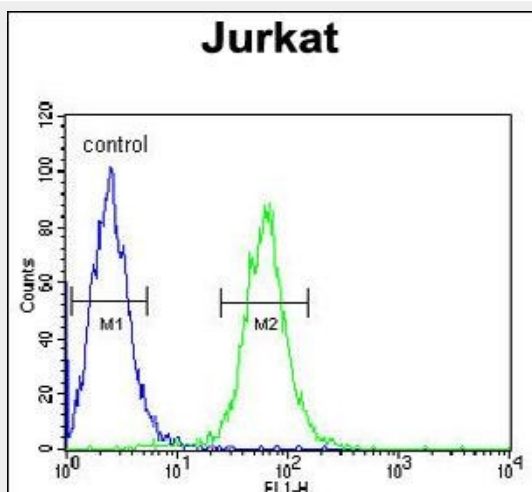
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### **HVCN1 Antibody (N-term) - Images**





Western blot analysis of HVCN1 Antibody (N-term)(Cat. #AP5042a) in Jurkat cell line lysates (35ug/lane).HVCN1 (arrow) was detected using the purified Pab.



HVCN1 Antibody (N-term) (Cat. #AP5042a) flow cytometric analysis of Jurkat cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

#### **HVCN1 Antibody (N-term) - Background**

HVCN1 is a voltage-gated proton channel highly expressed in immune tissues. Channels like HVCN1 mediate the proton conductances required by phagocytic leukocytes for the oxidative burst that underlies microbial killing.

#### **HVCN1 Antibody (N-term) - References**

- Musset, B., et al. J. Biol. Chem. 285(8):5117-5121(2010)
- Lishko, P.V., et al. Cell 140(3):327-337(2010)
- Sakata, S., et al. Proc. Natl. Acad. Sci. U.S.A. 107(5):2313-2318(2010)