

HVCN1 / HV1 Antibody (C-Terminus)
Rabbit Polyclonal Antibody
Catalog # ALS13978**Specification**

HVCN1 / HV1 Antibody (C-Terminus) - Product Information

Application	WB, IHC-P, IF, E
Primary Accession	Q96D96
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	32kDa KDa
Dilution	WB~~1:1000 IHC-P~~N/A IF~~1:50~200 E~~N/A

HVCN1 / HV1 Antibody (C-Terminus) - 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

Human HVCN isoforms 1, 2, and 4 as listed in Q96D96.

Reconstitution & Storage

Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles. Store undiluted.

Precautions

HVCN1 / HV1 Antibody (C-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

HVCN1 / HV1 Antibody (C-Terminus) - 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:<a

[30478045](http://www.uniprot.org/citations/30478045), PubMed: [37669933](http://www.uniprot.org/citations/37669933)). Appears to play a dominant role in regulation of CO₂/HCO₃⁻/H⁺ equilibrium in sperm flagellum. Prevents the acidification resulting from HCO₃⁻ synthesis and thus sustains high HCO₃⁻ levels inside sperm for capacitation (PubMed: [20144758](http://www.uniprot.org/citations/20144758), PubMed: [30478045](http://www.uniprot.org/citations/30478045), PubMed: [37669933](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/20037153), PubMed: [30478045](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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

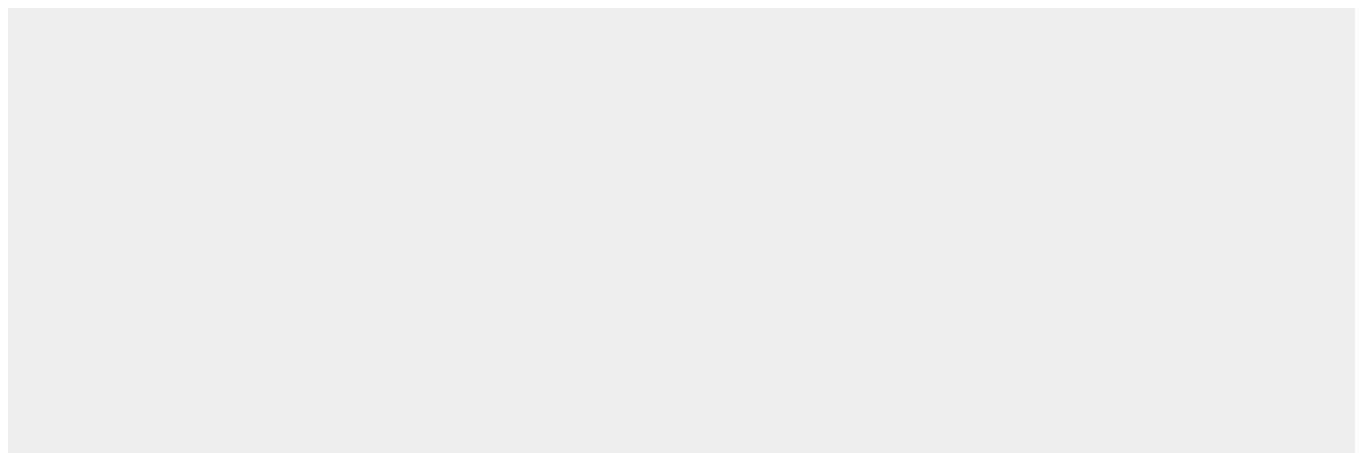
Enriched in immune tissues, such as lymph nodes, B- lymphocytes, monocytes and spleen (PubMed:16554753). Expressed in spermatozoa (PubMed:37669933). Expressed in respiratory epithelial cells (PubMed:20548053).

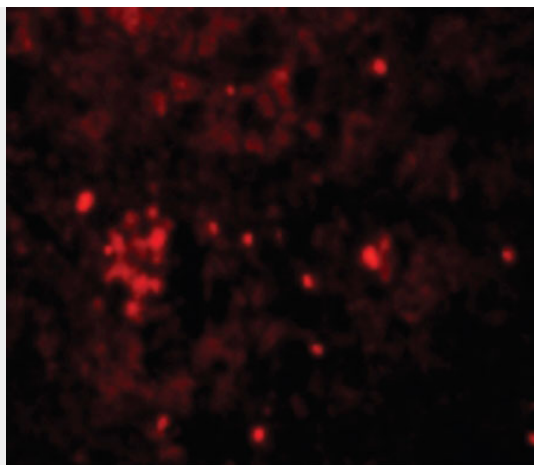
HVCN1 / HV1 Antibody (C-Terminus) - Protocols

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 / HV1 Antibody (C-Terminus) - Images





Immunofluorescence of HVCN1 in Rat Spleen cells with HVCN1 antibody at 20 ug/ml.

HVCN1 / HV1 Antibody (C-Terminus) - Background

Mediates the voltage-dependent proton permeability of excitable membranes. Forms a proton-selective channel through which protons may pass in accordance with their electrochemical gradient. Proton efflux, accompanied by membrane depolarization, facilitates acute production of reactive oxygen species in phagocytosis.

HVCN1 / HV1 Antibody (C-Terminus) - References

Clark H.F.,et al.Genome Res. 13:2265-2270(2003).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Scherer S.E.,et al.Nature 440:346-351(2006).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
Ramsey I.S.,et al.Nature 440:1213-1216(2006).