

HVCN1 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP5042a**Specification**

HVCN1 Antibody (N-term) Blocking Peptide - Product InformationPrimary Accession [Q96D96](#)**HVCN1 Antibody (N-term) Blocking Peptide - 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

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

HVCN1 Antibody (N-term) Blocking Peptide - 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 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:30478045, PubMed:37669933, PubMed:20144758). 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) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

HVCN1 Antibody (N-term) Blocking Peptide - Images

HVCN1 Antibody (N-term) Blocking Peptide - 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) Blocking Peptide - 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)