# HVCN1 Protein, Mouse (Cell-Free, His)

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| **Cat. No.:** | HY-P702329 |
| **Synonyms:** | Voltage-gated hydrogen channel 1; Hydrogen voltage-gated channel 1; HV1; Voltage sensor domain-only protein; mVSOP |
| **Species:** | Mouse |
| **Source:** | E. coli Cell-free |
| **Accession:** | Q3U2S8 (M1-N269) |
| **Gene ID:** | 74096 |
| **Molecular Weight:** | 36.7 kDa |

## PROPERTIES

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| **AA Sequence** | M T S H D P K A V T R R T K V A P T K R M S R F L K H F T V V G D D Y H T W N V<br>N Y K K W E N E E E E E E P A P T S A E G E G N A E G P D A E A G S A S T P R Q<br>S L D F R S R L R K L F S S H R F Q V I I I C L V V L D A L L V L A E L L L D L<br>K I I E P D E Q D Y A V T A F H Y M S F A I L V F F M L E I F F K I F V F R L E<br>F F H H K F E I L D A F V V V V S F V L D L V L L F K S H H F E A L G L L I L L<br>R L W R V A R I I N G I I I S V K T R S E R Q I L R L K Q I N I Q L A T K I Q H<br>L E F S C S E K E Q E I E R L N K L L K Q N G L L G D V N |
| **Appearance** | Lyophilized powder. |
| **Formulation** | Lyophilized from a 0.22 μm filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0. |
| **Endotoxin Level** | <1 EU/μg, determined by LAL method. |
| **Reconsititution** | It is not recommended to reconstitute to a concentration less than 100 μg/mL in $ddH_2O$. For long term storage it is recommended to add 5-50% of glycerol (final concentration). Our default final concentration of glycerol is 50%. Customers could use it as reference. |
| **Storage & Stability** | Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage. |
| **Shipping** | Room temperature in continental US; may vary elsewhere. |

## DESCRIPTION

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| **Background** | HVCN1 Protein assumes a crucial role in cellular function by mediating the voltage-dependent proton permeability of excitable membranes, forming a proton-selective channel that allows the passage of protons according to their electrochemical gradient. This channel facilitates proton efflux, coupled with membrane depolarization, contributing to the acute production of reactive oxygen species during phagocytosis. Notably, the protein forms dimers that exhibit |

cooperative channel gating, emphasizing the intricacy of its regulatory mechanisms. Furthermore, the channel activity is subject to inhibition by zinc ions, adding an additional layer of modulation to its functionality. HVCN1's ability to govern proton permeability and its responsiveness to membrane potential changes underscore its significance in cellular processes, particularly those associated with phagocytosis and reactive oxygen species generation.



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