KCNE2 Protein, Human (Cell-Free, His)

Cat. No.:	HY-P702340
Synonyms:	Potassium voltage-gated channel subfamily E member 2; MinK-related peptide 1; Minimum potassium ion channel-related peptide 1; Potassium channel subunit beta MiRP1
Species:	Human
Source:	E. coli Cell-free
Accession:	Q9Y6J6 (M1-P123)
Gene ID:	9992
Molecular Weight:	17.3 kDa

PROPERTIES

AA Sequence	M S T L S N F T Q T L E D V F R R I F I T Y M D N W R Q N T T A E Q E A L Q A K V D A E N F Y Y V I L Y L M V M I G M F S F I I V A I L V S T V K S K R R E H S N D P Y H Q Y I V E D W Q E K Y K S Q I L N L E E S K A T I H E N I G A A G F K M S P
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

Background	The KCNE2 protein serves as an ancillary subunit that forms a beta subunit within voltage-gated potassium channel complexes alongside pore-forming alpha subunits. By doing so, it plays a pivotal role in modulating the gating kinetics and enhancing the stability of the channel complex. When assembled with KCNB1, it influences the gating characteristics of the delayed rectifier voltage-dependent potassium channel KCNB1. In conjunction with KCNH2/HERG, KCNE2 is implicated in the formation of the rapidly activating component of the delayed rectifying potassium current in the heart (IKr). Furthermore, it may associate with KCNQ2 and/or KCNQ3, modulating the native M-type current, and interact with HCN1 and HCN2 to increase potassium current. KCNE2 is known to form heterooligomer complexes with various potassium

channels, including KCNQ1 and KCNC2, leading to diverse functional outcomes. Additionally, it associates with Na(+)-coupled myo-inositol symporter in the apical membrane of choroid plexus epithelium, regulating the myo-inositol gradient between blood and cerebrospinal fluid with implications for neuron excitability. These intricate interactions underscore the versatile regulatory role of KCNE2 in modulating potassium currents and channel behavior.

Caution: Product has not been fully validated for medical applications. For research use only.

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