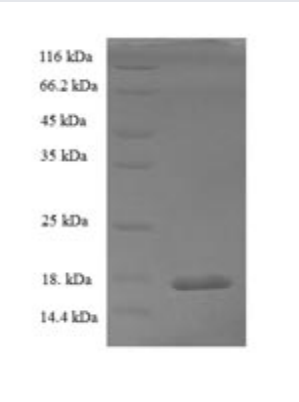
Potassium Voltage-Gated Channel Subfamily E Member 2 (KCNE2) Rat Recombinant Protein

PRODUCT OVERVIEW

Product Name	Potassium voltage-gated channel subfamily E member 2 (Kcne2), Recombinant Protein
Full Product Name	Recombinant Rat Potassium voltage-gated channel subfamily E member 2
Product Gene Name	Kcne2 recombinant protein
Product Synonym Names	MinK-related peptide 1; Minimum potassium ion channel-related peptide 1; Potassium channel subunit beta MiRP1
Sequence	MTTLANLTQT LEDAFKKVFI TYMDSWRRNT TAEQQALQAR VDAENFYYVI LYLMVMIGMF AFIVVAILVS TVKSKRREHS QDPYHQYIVE DWQQKYRSQI LHLEDSKATI HENLGATGFT VSP
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
Preparation and Storage	Store at -20 degree C, for extended storage, conserve at -20 degree C or -80 degree C.
Molecular Weight	18.4 kDa
Sequence Positions	1-123aa; Full Length
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
3D Structure	ModBase 3D Structure for P63161
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for Kcne2 recombinant protein	Ancillary protein that assbles as a beta subunit with a voltage-gated potassium channel complex of pore-forming alpha subunits. Modulates the gating kinetics and enhances stability of the channel complex. Associated with KCNH2/HERG is proposed to form the rapidly activating component of the delayed rectifying potassium current in heart (IKr). May associate with KCNQ2 and/or KCNQ3 and modulate the native M-type current. May associate with KCNQ1/KCLQT1 and elicit a voltage-independent current.
Product References and Citations for Kcne2 recombinant protein	MiRP1 forms IKr potassium channels with HERG and is associated with cardiac arrhythmia.Abbott G.W., Sesti F., Splawski I., Buck M.E., Lehmann M.H., Timothy K.W., Keating M.T., Goldstein S.A.N.Cell 97:175-187(1999) MinK-related peptide 1 a beta subunit for the HCN ion channel subunit family enhances expression and speeds activation.Yu H., Wu J., Potapova I., Wymore R.T., Holmes B., Zuckerman J., Pan Z., Wang H., Shi W., Robinson R.B., El-Maghrabi M.R., Benjamin W., Dixon J.E., McKinnon D., Cohen I.S., Wymore R.Circ. Res. 88:E84-E87(2001)
Other Notes	Small volumes of Kcne2 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for Kcne2 purchase	MBS1253811 is a recombinant protein targeting Kcne2. Also known as Recombinant Rat Potassium voltage-gated channel subfamily E member 2. Host: E Coli or Yeast or Baculovirus or Mammalian Cell.



SDS-PAGE of Kcne2 recombinant protein

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Kcne2. It may not necessarily be applicable to this product.

NCBI GI #	19424314
NCBI GeneID	171138
NCBI Accession #	NP_598287.1
UniProt Primary Accession #	P63161
UniProt Secondary Accession #	Q5FVT9; Q9WTW0
UniProt Related Accession #	P63161
GenBank Nucleotide #	NM_133603.2
NCBI Official Full Name	potassium voltage-gated channel subfamily E member 2
NCBI Official Synonym Full Names	potassium voltage-gated channel subfamily E regulatory subunit 2
NCBI Official Symbol	Kcne2
NCBI Official Synonym Symbols	Mirp1
UniProt Protein Name	Potassium voltage-gated channel subfamily E member 2
UniProt Synonym Protein Names	MinK-related peptide 1; Minimum potassium ion channel-related peptide 1; Potassium channel subunit beta MiRP1
Protein Family	Potassium voltage-gated channel subfamily
UniProt Gene Name	Kcne2
UniProt Entry Name	KCNE2_RAT
NCBI Protein Information	potassium voltage-gated channel subfamily E member 2
NCBI Summary for Kcne2	small integral membrane subunit which binds with HERG, a pore-forming protein, to alter its channel function [RGD, Feb 2006]

UniProt Comments for Kcne2	KCNE2: Ancillary protein that assembles as a beta subunit with a voltage-gated potassium channel complex of pore-forming alpha subunits. Modulates the gating kinetics and enhances stability of the channel complex. Associated with KCNH2/HERG is proposed to form the rapidly activating component of the delayed rectifying potassium current in heart (IKr). May associate with KCNQ2 and/or KCNQ3 and modulate the native M-type current. May associate with KCNQ1/KVLTQ1 and elicit a voltage-independent current. May associate with HCN1 and HCN2 and increase potassium current. Defects in KCNE2 are the cause of long QT syndrome type 6 (LQT6). Long QT syndromes are heart disorders characterized by a prolonged QT interval on the ECG and polymorphic ventricular arrhythmias. They cause syncope and sudden death in response to exercise or emotional stress. KCNE2 mutants form channels that open slowly and close rapidly, thereby diminishing potassium currents. Defects in KCNE2 are the cause of familial atrial fibrillation type 4 (ATFB4). Atrial fibrillation is a common disorder of cardiac rhythm that is hereditary in a small subgroup of patients. It is characterized by disorganized atrial electrical activity and ineffective atrial contraction promoting blood stasis in the atria and reduces ventricular filling. It can result in palpitations, syncope, thromboembolic stroke, and congestive heart failure. Belongs to the potassium channel KCNE family. Protein type: Membrane protein, integral Cellular Component: cell surface; integral to membrane; lysosome; membrane; plasma membrane; voltage-gated potassium channel complex Molecular Function: cation channel activity; delayed rectifier potassium channel activity; inward rectifier potassium channel activity; potassium channel regulator activity; protein binding; protein homodimerization activity; voltage-gated potassium channel activity Biological Process: aging; potassium ion import; tongue development
Research Articles on Kcne2	**1.** Endogenous KCNE2 in cardiomyocytes is important in maintaining cardiac electrical stability mainly by regulating Ito and action potential duration.
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