Potassium Voltage-Gated Channel Subfamily KQT Member 3 (KCNQ3) Human Recombinant Protein

PRODUCT OVERVIEW

Product Name	Potassium voltage-gated channel subfamily KQT member 3 (KCNQ3), Recombinant Protein
Full Product Name	Recombinant Human Potassium voltage-gated channel subfamily KQT member 3 (KCNQ3) , partial
Product Gene Name	KCNQ3 recombinant protein
Sequence	MGLKARRAAG AAGGGGDGGG GGGGAANPAG GDAAAAGDEE RKVGLAPGDV EQVTLALGAG ADKDGTLLLE GGGRDEGQRR TPQGIGLLAK TPLSRPVKRN NAKYRRIQTL IYDALERPRG WALLYHALVF LIVLGCLILA VLTTFKEYET VSGDWLLLLE TFAIFIFGAE FALRIWAAGC CCRYKGWRGR LKFARKPLCM LDIFVLIASV PVVAVGNQGN VLATSLRSLR FLQILRMLRM DRRGGTWKLL GSAICAHSKE LITAWYIGFL TLILSSFLVY LVEKDVPEVD AQGEEMKEEF ETYADALWWG LITLATIGYG DKTPKTWEGR LIAATFSLIG VSFFALPAGI LGSGLALKVQ EQHRQKHFEK RRKPAAELIQ AAWRYYATNP NRIDLVATWR FYESVVSFPF FRKEQLEAAS SQKLGLLDRV RLSNPRGSNT KGKLFTPLNV DAIEESPSKE PKPVGLNNKE RFRTAFRMKA YAFWQSSEDA GTGDPMAEDR GYGNDFPIED MIPTLKAAIR AVRILQFRLY KKKFKETLRP YDVKDVIEQY SAGHLDMLSR IKYLQTRIDM IFTPGPPSTP KHKKSQKGSA FTFPSQQSPR NEPYVARPST SEIEDQSMMG KFVKVERQVQ DMGKKLDFLV DMHMQHMERL QVQVTEYYPT KGTSSPAEAE KKEDNRYSDL KTIICNYSET GPPEPPYSFH QVTIDKVSPY GFFAHDPVNL PRGGPSSGKV QATPPSSATT YVERPTVLPI LTLLDSRVSC HSQADLQGPY SDRISPRQRR SITRDSDTPL SLMSVNHEEL ERSPSGFSIS QDRDDYVFGP NGGSSWMREK RYLAEGETDT DTDPFTPSGS MPLSSTGDGI SDSVWTPSNK PI
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 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended.
Molecular Weight	84,804 Da
Sequence Positions	1-872
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.
OMIM	121201
3D Structure	ModBase 3D Structure for O43525
Species	Homo sapiens (Human)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for KCNQ3 recombinant protein	MBS1122315 is a recombinant protein targeting KCNQ3. Also known as Recombinant Human Potassium voltage-gated channel subfamily KQT member 3 (KCNQ3) , partial. Host: E Coli or Yeast or Baculovirus or Mammalian Cell.
Other Notes	Small volumes of KCNQ3 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.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for KCNQ3. It may not necessarily be applicable to this product.

NCBI GI #	325651930
NCBI GeneID	3786
NCBI Accession #	NP_001191753.1
UniProt Primary Accession #	O43525
UniProt Secondary Accession #	A2VCT8; B4DJY4; E7EQ89
UniProt Related Accession #	O43525
GenBank Nucleotide #	NM_001204824.1
NCBI Official Full Name	potassium voltage-gated channel subfamily KQT member 3 isoform 2
NCBI Official Synonym Full Names	potassium voltage-gated channel subfamily Q member 3
NCBI Official Symbol	KCNQ3
NCBI Official Synonym Symbols	EBN2; BFNC2; KV7.3
UniProt Protein Name	Potassium voltage-gated channel subfamily KQT member 3
UniProt Synonym Protein Names	KQT-like 3; Potassium channel subunit alpha KvLQT3; Voltage-gated potassium channel subunit Kv7.3
Protein Family	Potassium voltage-gated channel subfamily
UniProt Gene Name	KCNQ3
NCBI Protein Information	potassium voltage-gated channel subfamily KQT member 3
NCBI Summary for KCNQ3	This gene encodes a protein that functions in the regulation of neuronal excitability. The encoded protein forms an M-channel by associating with the products of the related KCNQ2 or KCNQ5 genes, which both encode integral membrane proteins. M-channel currents are inhibited by M1 muscarinic acetylcholine receptors and are activated by retigabine, a novel anti-convulsant drug. Defects in this gene are a cause of benign familial neonatal convulsions type 2 (BFNC2), also known as epilepsy, benign neonatal type 2 (EBN2). Alternative splicing of this gene results in multiple transcript variants. [provided by RefSeq, May 2014]
UniProt Comments for KCNQ3	Associates with KCNQ2 or KCNQ5 to form a potassium channel with essentially identical properties to the channel underlying the native M-current, a slowly activating and deactivating potassium conductance which plays a critical role in determining the subthreshold electrical excitability of neurons as well as the responsiveness to synaptic inputs. Therefore, it is important in the regulation of neuronal excitability.
Research Articles on KCNQ3	**1.** In the present work, a pharmacophore-based 3D-QSAR model was generated for a series of N-pyridyl and pyrimidine benzamides possessing KCNQ2/Q3 opening activity. The pharmacophore model generated contains one hydrogen bond donor (D), one hydrophobic (H), and two aromatic rings (R). They are the crucial molecular write-up detailing predicted binding efficacy of high affinity and low affinity ligands for KCNQ2/Q3 opening a
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