

Product datasheet for **MR229076**

Kcnab1 (NM_001289450) Mouse Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Kcnab1 (NM_001289450) Mouse Tagged ORF Clone
Tag: Myc-DDK
Symbol: Kcnab1
Synonyms: Akr8a8; Kvbeta1.1; mKv(beta)1
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
Cell Selection: Neomycin
ORF Nucleotide Sequence: >MR229076 representing NM_001289450
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGCC**

ATGACAATTGCCTACGAAAGTGGAGTTAATCTCTTCGACACAGCTGAGGTCTATGCTGCTGGGAAGGCTG
AGGTGATTCTGGGAAGCATCATCAAGAAGAAAGGCTGGAGGAGTCCAGCTTGGTCATCACAAACAACT
CTACTGGGGTGGAAAAGCTGAGACAGAAAGGGACTGTCAAGAAAGCACATCATTGAAGGACTGAAAGGC
TCCCTCCAGAGGCTGCAACTGGAATACGTGGATGTGGTCTTTGCAAATCGCCAGACAGCAACACTCCCA
TGGAGAAATCGTTCGAGCCATGACGCACGTGATCAACCAAGGCATGGCCATGACTGGGGCACCTCGAG
GTGGAGCGCATGGAGATCATGGAAGCCTACTCTGTGCGACGGCAGTTCAACATGATCCCGCCTGTCTGT
GAGCAAGCTGAGTACCATCTTTCCAGAGAGAGAAGGTGGAGGTCCAGCTGCCGGAGCTCTACCATAAAA
TAGGAGTTGGTGCAATGACATGGTCTCCACTTGCTTGGAATTATTTTCAGGAAAATATGGAAATGGGGT
GCCAGAAAGTTCTAGAGCTTCACTGAAGTGCTACCAAGTGGTTGAAGGAAAGAATCGTAAGTGAAGAAGGG
AGAAAACAGCAAAACAAGCTGAAAGACCTCTCTCAATCGCTGAGCGCCTGGGGTGCACGCTACCTCAGC
TGGCTGTGGCGTGGTGCCTGAGAAATGAGGGTGTGAGTTCTGTGCTCCTGGGATCATCCACTCCGGAACA
ACTCATTGAAAACCTTGGTGCCATTGAGTCCCTCCTAAGATGACATCTCACGTGGTGAACGAGATTGAT
AACATACTGCGCAACAAGCCCTACAGCAAAAAGGACTATAGATCA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >MR229076 representing NM_001289450
 Red=Cloning site Green=Tags(s)

MTIAYESGVNLFDTAEVYAAGKAEVILGSIKKKGWRRSSLVITTKLYWGGKAETERGLSRKHIIIEGLKG
 SLQRLQLEYVDVVFANRPDSNTPMEEIVRAMTHVINQGMAMYWGTSRWSAMEIMEAYSVARQFNMI PPVC
 EQAEYHLFQREKVEVQLPELYHKIGVGAMTWSPLACGIISGKYGVNPESRASLKYQWLKERIVSEEG
 RKQQNKLDLSPIAERLGCTLPQLAVAWCLRNEGVSSVLLGSSTPEQLIENLGAIQVLPKMTSHVVNEID
 NILRNKPYSKDYRS

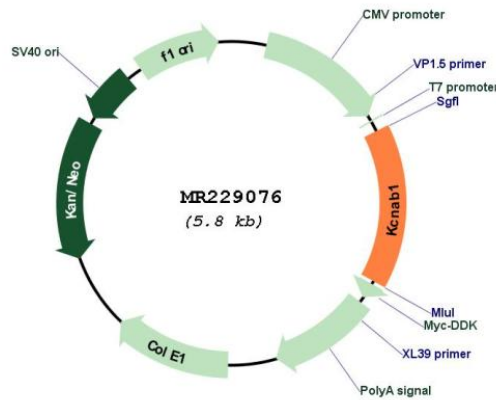
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001289450

ORF Size: 885 bp

OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none">1. Centrifuge at 5,000xg for 5min.2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.3. Close the tube and incubate for 10 minutes at room temperature.4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	NM_001289450.1 , NP_001276379.1
RefSeq Size:	2851 bp
RefSeq ORF:	888 bp
Locus ID:	16497
Cytogenetics:	3 30.15 cM
MW:	33.6 kDa
Gene Summary:	Cytoplasmic potassium channel subunit that modulates the characteristics of the channel-forming alpha-subunits (PubMed:10454353). Modulates action potentials via its effect on the pore-forming alpha subunits (PubMed:10454353). Promotes expression of the pore-forming alpha subunits at the cell membrane, and thereby increases channel activity (PubMed:8824288). Mediates closure of delayed rectifier potassium channels by physically obstructing the pore via its N-terminal domain and increases the speed of channel closure for other family members (By similarity). Promotes the closure of KCNA1, KCNA2 and KCNA5 channels (By similarity). Accelerates KCNA4 channel closure (By similarity). Accelerates the closure of heteromeric channels formed by KCNA1 and KCNA4 (By similarity). Accelerates the closure of heteromeric channels formed by KCNA2, KCNA5 and KCNA6 (By similarity). Enhances KCNB1 and KCNB2 channel activity (PubMed:8824288). Binds NADPH; this is required for efficient down-regulation of potassium channel activity (By similarity). Has NADPH-dependent aldoketoreductase activity (By similarity). Oxidation of the bound NADPH strongly decreases N-type inactivation of potassium channel activity (By similarity). [UniProtKB/Swiss-Prot Function]