

Product datasheet for **MR204992L4V**

Kcnk1 (NM_008430) Mouse Tagged ORF Clone Lentiviral Particle

Product data:

Product Type:	Lentiviral Particles
Product Name:	Kcnk1 (NM_008430) Mouse Tagged ORF Clone Lentiviral Particle
Symbol:	Kcnk1
Synonyms:	AI788889; TWIK-1
Mammalian Cell Selection:	Puromycin
Vector:	pLenti-C-mGFP-P2A-Puro (PS100093)
Tag:	mGFP
ACCN:	NM_008430
ORF Size:	1008 bp
ORF Nucleotide Sequence:	The ORF insert of this clone is exactly the same as(MR204992).
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.
RefSeq:	NM_008430.2 , NP_032456.2
RefSeq Size:	2306 bp
RefSeq ORF:	1011 bp
Locus ID:	16525
UniProt ID:	O08581
Cytogenetics:	8 E2



[View online »](#)

Gene Summary:

Ion channel that contributes to passive transmembrane potassium transport and to the regulation of the resting membrane potential in brain astrocytes, but also in kidney and in other tissues (PubMed:16847696, PubMed:22431633, PubMed:24368895). Forms dimeric channels through which potassium ions pass in accordance with their electrochemical gradient. The channel is selective for K(+) ions at physiological potassium concentrations and at neutral pH, but becomes permeable to Na(+) at subphysiological K(+) levels and upon acidification of the extracellular medium. The homodimer has very low potassium channel activity, when expressed in heterologous systems, and can function as weakly inward rectifying potassium channel (PubMed:9013852, PubMed:24496152). Channel activity is modulated by activation of serotonin receptors (PubMed:24368895). Heterodimeric channels containing KCNK1 and KCNK2 have much higher activity, and may represent the predominant form in astrocytes (PubMed:24496152). Heterodimeric channels containing KCNK1 and KCNK3 or KCNK9 have much higher activity. Heterodimeric channels formed by KCNK1 and KCNK9 may contribute to halothane-sensitive currents (By similarity). Mediates outward rectifying potassium currents in dentate gyrus granule cells and contributes to the regulation of their resting membrane potential (PubMed:25406588). Contributes to the regulation of action potential firing in dentate gyrus granule cells and down-regulates their intrinsic excitability (PubMed:25406588). In astrocytes, the heterodimer formed by KCNK1 and KCNK2 is required for rapid glutamate release in response to activation of G-protein coupled receptors, such as F2R and CNR1 (PubMed:24496152). Required for normal ion and water transport in the kidney (PubMed:16025300). Contributes to the regulation of the resting membrane potential of pancreatic beta cells (PubMed:22431633). The low channel activity of homodimeric KCNK1 may be due to sumoylation. The low channel activity may be due to rapid internalization from the cell membrane and retention in recycling endosomes (PubMed:15540117).[UniProtKB/Swiss-Prot Function]