

Product datasheet for **MR223614**

Slc8b1 (NM_001177595) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Slc8b1 (NM_001177595) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Slc8b1
Synonyms:	AF261233; NCKX6; NCLX; Slc24a6
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin



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ORF Nucleotide Sequence:

>MR223614 representing NM_001177595
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCAAGCAGATGGCTGGCTCTGCTCTGGGCTCCTGTCTTCCTCTGTGTGGCTCTGATACTGGAGACGG
 CGTCTGGGACCGGAGACCCATCCACAAAAGCCCATGGACACATCCAGTTTTTCAGCTGGAAGTGCAACCA
 GACTGCCATGGCGGATTGCCGAGCCGTGTGTGGCTGAACACATCTGATCGCTGTGACTTTGTCAGGAGG
 AATCCGGACTGCCGACGAGCGGGGCTACCTGGACTACCTGAGGGCATCTTCTGCTACTTCCCCCCCCA
 ACCTCCTCCCTCTGGCCATACCCTCTACGTTTTCTGGCTGCTTTACCTCTTTCTGATCTGGGAGTCAC
 CGCGGCCAAGTTCTTCTGCCCTAACCTGTCAGCCATCTCCACTAACCTCAAACCTCCCACAACGTGGCA
 GGTGTCACCTTCTGGCCTTTGAAATGGCGCTCCAGACATCTCAGTGTCTTAGTGGCTTTCTCAGACC
 CACGACTGCCGGCTGGCCATCGGGCTCTGTTTGGTGCAGGGGTGCTGGTACCCTGTGGTGGCTGG
 AGGCATACCCTCTGCATCCCTTCATGGCTGCCTCCAGGCCCTCCTCAGGGACATCGCTTTCTACATG
 GTGGCTGTGTTCCCTAACCTTCACTGCACCTATCTCGGCAGGATCACGCTGACGTGGGCGCTGGGTACC
 TGGGCCTCTACGTGTTCTACGTGGTACGGTCATCATCTGCACTTGGGTCTACCAACGGCAGCGAAGCAG
 GTCTCTGGTCCACTCCATATCGGAGACACCAGATTGCTGTCTGAGTCAAGGAGGACCAGATGTCTTCC
 AACACCAACAGCTATGACTATGGAGATGAATACCGGCCTCTGTTGCTGGGTCGGGAGACCACTGTCCAGA
 TCCTGATCCAAGCCCTGAATCCCTTGGACTACAGGAAGTGGAAGTCACTGATATCCTGGAGGGTCTCT
 GAAGGTAGTCAAGTTGCCTGTGGAGTCTTGTGTGCTCACAGTACCGGTTGTGGACCCCGACAAGGAC
 GATCGGAATTGGAACGGCCACTCAACTGTCTGCAGCTGGTATCAGCCCCCTGGTCTGGTCTGACCC
 TGCAGTCGGGGTCTATGGCATCTAGATCGCGGCTCCTCTCCTGTCTGGGCTGTGGTGTGATCGT
 GGGCACAGCGCTGGCTTCACTGACCTTCTTGGCACGTCTAACAGAGAACCCCTAGACTGCACACTGGCTC
 TTTGCTTTCTGGGTTTCTGACCAGTGCCTGTGGATCAATGCAGCCGCCACAGAGGTGGTGAACATAT
 TACGGTCCCTGGGTGTGATCTTCCGCTGAGCAACACCGTCTAGGGCTGACCCTCTGGCCTGGGGAAA
 CAGCATTGGAGCTGGAGCCAGACGGATTACTGGTGTGGGTGCTGGCCAGTGCCTGGCCTCAGCTTGT
 CTTCTCCCTGGTCTCCGTGCCGCTTCACTGTTTCCAGCTCAGCAAGGCTTACGGCCTCTGCCTCCTCCTC
 TTCTACATCTGTTTCTTGTGTGGTCTGCTCACAGAGTTGGGGTATTACCTGAAGAAGGCGTGAC
 TGAAGTCTGGCCTAGAGGTGTGGGGCGATTCTGCTAGCCTCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR223614 representing NM_001177595
 Red=Cloning site Green=Tags(s)

MASRWLALLWAPVFLCVALILETASGTGDPSTKAHGHIQFSAGSVNQTAMADCRVCLNTSDRCDFVRR
 NPDCRSEAGYLDYLEGIFCYFPPNLLPLAITLYVFWLLYLFLILGVTAAKFFCPNLSAISTNLKLSHVA
 GVTFLAFNGAPDIFSALVAFSDPRTAGLAIGALFGAGVLVTTVVAGGITILHPFMAASRPFLRDIAFYM
 VAVFLFTALYLGRITLWALGYLGLYVFVVTVIICTWVYQRQSRSLVHSISETPELLSESEEDQMSS
 NTNSYDYGDEYRPLLLGRETTVQILIQALNPLDYRKWRTQSI SWRVLKVVKLPVEFLLLLTPVVDPKD
 DRNWKRP LNCLQLVISPLVVLTLQSGVYGIYEIGLLPVWVVIVGTALASVTF FATS NREPRLHWL
 FAFLGFLT SALWINAAATEVVNILRSLGVIFRLSNTVLGLTLLAWGNSIGAGARRITGVGAGQCPGPQLD
 LLPGLRAASVFP AQGLRPLPPPLLHLPCCGPAHRVWGDSP EEGVTEAAWPRGVGAILLAS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

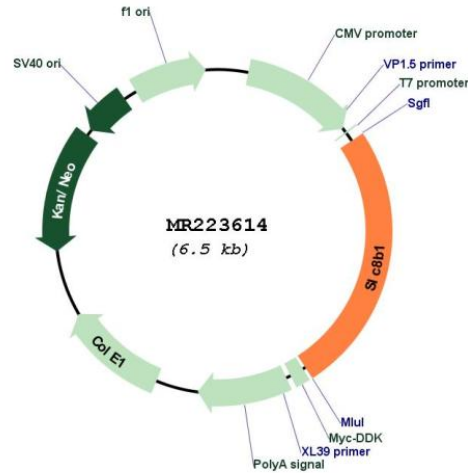
Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

Plasmid Map:



ACCN:	NM_001177595
ORF Size:	1656 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_001177595.1 , NP_001171066.1
RefSeq Size:	2725 bp
RefSeq ORF:	1659 bp
Locus ID:	170756
UniProt ID:	Q925Q3
Cytogenetics:	5 F
MW:	60.6 kDa

Gene Summary:

Mitochondrial sodium/calcium antiporter that mediates sodium-dependent calcium efflux from mitochondrion, by mediating the exchange of 3 sodium ions per 1 calcium ion (PubMed:20018762, PubMed:28445457). Plays a central role in mitochondrial calcium homeostasis by mediating mitochondrial calcium extrusion: calcium efflux is essential for mitochondrial function and cell survival, notably in cardiomyocytes (PubMed:24067497, PubMed:28445457). Regulates rates of glucose-dependent insulin secretion in pancreatic beta-cells during the first phase of insulin secretion: acts by mediating efflux of calcium from mitochondrion, thereby affecting cytoplasmic calcium responses (By similarity). Required for store-operated Ca(2+) entry (SOCE) and Ca(2+) release-activated Ca(2+) (CRAC) channel regulation: sodium transport by SLC8B1 leads to promote calcium-shuttling that modulates mitochondrial redox status, thereby regulating SOCE activity (By similarity). Involved in B-lymphocyte chemotaxis (PubMed:27328625). Able to transport Ca(2+) in exchange of either Li(+) or Na(+), explaining how Li(+) catalyzes Ca(2+) exchange (By similarity). In contrast to other members of the family its function is independent of K(+) (By similarity). [UniProtKB/Swiss-Prot Function]