

Product datasheet for **MR223948**

Slc8b1 (NM_133221) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Slc8b1 (NM_133221) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Slc8b1
Synonyms:	AF261233; NCKX6; NCLX; Slc24a6
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>MR223948 representing NM_133221
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCAAGCAGATGGCTGGCTGCTCTGGGCTCCTGTCTTCTGTGTGGCTCTGATACTGGAGACGG
 CGTCTGGGACCGGAGACCCATCCACAAAAGCCCATGGACACATCCAGTTTTTCAGCTGGAAGTGCAACCA
 GACTGCCATGGCGGATTGCCGAGCCGTGTGTGGCTGAACACATCTGATCGCTGTGACTTTGTCAGGAGG
 AATCCGGACTGCCGACGAGGCGGGCTACCTGGACTACCTTGAGGGCATCTTCTGCTACTTCCCCCCCA
 ACCTCCTCCCTCTGGCCATCACCTCTACGTTTTCTGGCTGCTTTACCTCTTTCTGATCTGGGAGTCAC
 CGCGGCCAAGTTCTTCTGCCCTAACCTGTCAGCCATCTCCACTAACCTCAAACCTCCCACAACGTGGCA
 GGTGTCACCTTCTGCCCTTTGAAATGGCGCTCCAGACATCTCAGTGTCTTAGTGGCTTTCTCAGACC
 CACGTAAGTCCCGCTGGCCATCGGGCTCTGTTTGGTGCAGGGTGTGGTACCAGTGTGGTGGCTGG
 AGGCATCACCATCTGCATCCCTTCATGGCTGCCTCCAGGCCCTCCTCAGGGACATCGCTTTCTACATG
 GTGGCTGTGTTCCCTAACCTTCACTGCACCTATCTCGGCAGGATCACGCTGACGTGGGCGCTGGGTTACC
 TGGGCCTCTACGTGTTCTACGTGGTACCGTCATCATCTGCACCTGGGTCTACCAACGGCAGCGAAGCAG
 GTCTCTGGTCCACTCCATATCGGAGACACCAGAGTTGCTGTCTGAGTCAAGGAGGACCAGATGTCTTCC
 AACACCAACAGCTATGACTATGGAGATGAATACCGGCCTCTGTTGCTGGGTCGGGAGACCACTGTCCAGA
 TCCTGATCCAAGCCCTGAATCCCTTGGACTACAGGAAGTGGAGAAGTCAAGTCAATCCTGGAGGGTCTCT
 GAAGGTAGTCAAGTTGCCTGTGGAGTCTTGTGTGCTCACAGTACCGGTTGTGGACCCCGACAAGGAC
 GATCGGAATTGAAACGGCCACTCAACTGTCTGCAGCTGGTCAACAGCCCTGGTCTGGTCTGACCC
 TGCAGTCGGGGTCTATGGCATCTATGAGATCGCGGCTCCTTCTGCTGGGCTGTGGTGGTATCGT
 GGGCACAGCGCTGGCTTCAAGTACCTTCTTGGCACGCTAACAGAGAACCCCTAGACTGCACACTGGCTC
 TTTGCTTCTGGGTTTCTGACCAAGTGCCTGTGGATCAATGCAGCCGCCACAGAGGTGGTGAACATAT
 TACGGTCCCTGGGTGTGATCTTCCGCTGAGCAACACCGTCTAGGGCTGACCCTCCTGGCCTGGGGAAA
 CAGCATTGGAGATGCCTTCTCAGATTTACGCTGGCCCGCAAGGATACCCTCGGATGGCCTTCTCCGCC
 TGTTTCGGGGGCATCATCTTCAACATCCTGGTGGTGTGGGGCTGGGCTGCTGTCAGATCATCAGGA
 ACCACGTTGTGGAGGTGAAGCTGGAGCCAGACGGATTACTGGTGTGGGTGCTGGCCAGTGCCTGGGCT
 CAGCTTGATCTTCTCCCTGGTCTCCGTGCCGCTCAGTGTTCAGCTCAGCAAGGCTTACGGCCTCTGC
 CTCTCTCTTCTACATCTGTTTCTTGTGTGGTCTGCTCACAGATTTGGGGTGATTACCTGAAGA
 AGGCG

ACGCGTACGCGGCGGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR223948 representing NM_133221
 Red=Cloning site Green=Tags(s)

MASRWLALLWAPVFLCVALIETASGTGDPSTKAHGHIQFSAGSVNQAMADCRAVCGLNTSDRCDFVRR
 NPDCRSEAGYLDYLEGIFCYFPPNLLPLAITLYVFWLLYLFLILGVTAAKFFCPNLSAISTNLKLSHNVA
 GVTFLAFNGAPDIFSALVAFSDPRTAGLAIGALFGAGVLVTTVVAGGITILHPFMAASRPFLRDIAFYM
 VAVFLTFTALYLGRITL TWALGYLGLYVYVVTVICTWVYQRQSRSLVHSISETPELLSESEEDQMSS
 NTNSYDYGDEYRPLLLGRETTVQILIQALNPLDYRKWRTQSI SWRVLKVVKLPVEFLLLL TVPVVDPDKD
 DRNWKRP LNCLQLVISPLV LVLTLQSGVYGIYEIGLLPVWAVVIVGTALASVTFATSNREPPRLHWL
 FAFLGFLTSALWINAAATEVVNILRSLGVIFRLSNTVLGLTLLAWGNSIGDAFSDFTLARQGYPRMAFSA
 CFGGIIIFNILVGVLGCLLQIIRNHVVEVKLEPDGLLVWVWLASALGLSLIFSLVSVPLQCFQLSKAYGLC
 LLLFYICFLVVVLLTEFGVIHLKKA

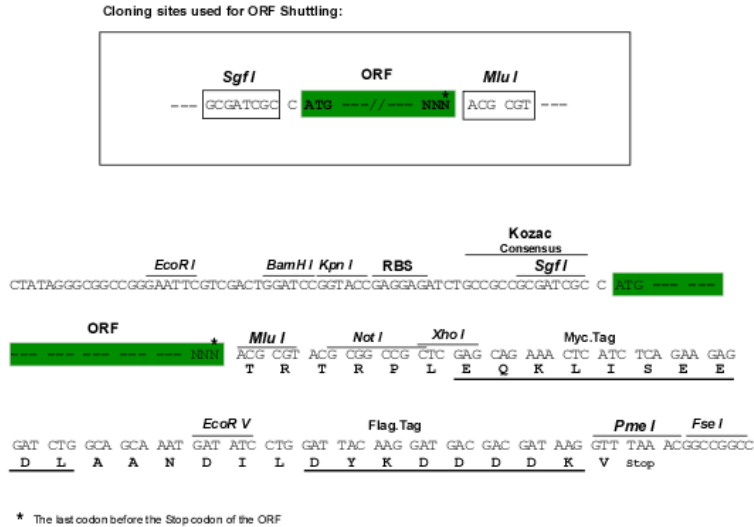
TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/ja1385_e02.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_133221

ORF Size: 1755 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:**
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_133221.2](#), [NP_573484.2](#)

RefSeq Size: 2893 bp

RefSeq ORF: 1758 bp

Locus ID: 170756

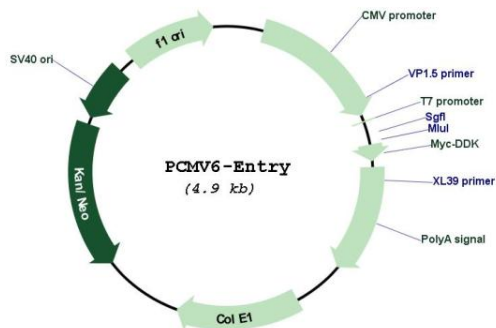
UniProt ID: [Q925Q3](#)

Cytogenetics: 5 F

MW: 64.8 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]

Product images:



Circular map for MR223948