

Product datasheet for **MR224843**

Slc8b1 (NM_001177594) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Slc8b1 (NM_001177594) 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:

>MR224843 representing NM_001177594
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCAAGCAGATGGCTGGCTGCTCTGGGCTCCTGTCTTCCTCTGTGTGGCTCTGATACTGGAGACGG
 CGTCTGGGACCGGAGACCCATCCACAAAAGCCCATGGACACATCCAGTTTTTCAGCTGGAAGTGCAACCA
 GACTGCCATGGCGGATTGCCGAGCCGTGTGTGGCTGAACACATCTGATCGCTGTGACTTTGTCAGGAGG
 AATCCGGACTGCCGACGAGGCGGGCTACCTGGACTACCTGAGGGCATCTTCTGCTACTTCCCCCCA
 ACCTCCTCCCTCTGGCCATCACCTCTACGTTTTCTGGCTGCTTACCTCTTCTGATCTGGGAGTCAC
 CGCGGCCAAGTCCCCATGGTGTACCTTCTGGCCTTTGAAATGGCGCTCCAGACATCTTCAGTGCT
 TTAGTGGCTTCTCAGACCCACGTAAGTCCGGCTGGCCATCGGGGCTCTGTTTGGTGCAGGGGTGCTGG
 TCACCACTGTGGTGGCTGGAGGCATCACCATCCTGCATCCCTTCATGGCTGCCTCCAGGCCCTTCTCAG
 GGACATCGCTTCTACATGGTGGCTGTGTCTAACCTTCACTGCACTCTATCTCGGCAGGATCACGCTG
 ACGTGGGCGCTGGTTACCTGGGCTCTACGTGTTCTACGTGGTACGGTCACTATCTGCACTTGGGTCT
 ACCAACGGCAGCGAAGCAGGTCTCTGGTCCACTCCATATCGGAGACACCAGAGTTGCTGTCTGAGTCAGA
 GGAGGACCAGATGCTTCCAACACCAACAGCTATGACTATGGAGATGAATACCGGCTCTGTTGCTGGGT
 CGGGAGACCAGTGTCCAGATCCTGATCCAAGCCCTGAATCCCTTGGACTACAGGAAGTGGAGAAGTCACT
 CGATATCCTGGAGGGTCTGAAGGTAGTCAAGTTGCCTGTGGAGTTCTTGTGCTGCTCACAGTACCGGT
 TGTGGACCCGACAAGGACGATCGGAATTGAAACGGCCACTCACTGTCTGCAGCTGGTGCATCAGCCCC
 CTGGTCTGGTCTGACCCTGCAGTCCGGGGTCTATGGCATCTATGAGATCGGCGGTCTCCTTCTGTCT
 GGGCTGTGGTGGTGCATCGTGGGACAGCGCTGGCTTCACTGACCTCTTTGCCACGTCTAACAGAGAAC
 CCTAGACTGCACTGGCTTTTGTCTTCTGGGTTTCTGACCAGTGCCTGTGGATCAATGCAGCCGCC
 ACAGAGGTGGTGAACATATTACGGTCCCTGGGTGTGATCTCCGCCTGAGCAACACCGTCTAGGGCTGA
 CCCTCCTGGCCTGGGAAACAGCATTGGAGATGCCTTCTCAGATTTACGCTGGCCCGCCAAAGGATACCC
 TCGGATGGCCTTCTCCGCCTGTTTCCGGGGCATCATCTCAACATCCTGGTTGGTGTGGGCTGGGCTGC
 TTGCTGCAGATCATCAGGAACCAGTGTGGAGGTGAAGCTGGAGCCAGACGGATTACTGGTGTGGGTGC
 TGGCCAGTCCCTGGGCTCAGCTTGTCTTCTCCCTGGTCTCCGTGCCGCTTCACTGTTCCAGCTCAG
 CAAGGCTTACGGCTCTGCCTCCTCTCTACATCTGTTTCTTGTGTGGTCTGCTCACAGAGTTT
 GGGGTGATTCACCTGAAGAAGGCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR224843 representing NM_001177594
 Red=Cloning site Green=Tags(s)

MASRWLALLWAPVFLCVALIETASGTGDPSTKAHGHIQFSAGSVNQAMADCRVCGLNLSDRCDFVRR
 NPDCRSEAGYLDYLEGIFCYFPPNLLPLAITLYVFWLLYLFLILGVTAAKFPHGVTFLAFNGAPDIFSA
 LVAFSDPRTAGLAIGALFGAGVLVTTVVAGGITILHPFMAASRPFRLDIAFYMVAVFLTFTALYLGRITL
 TWALGYLGLYVYVVTVIICTWVYQQRSRSLVHSISETPELLSESEEDQMSNTNSYDGYRPLLLG
 RETTVQILIQALNPLDYRKWRTQSIWRVLKVVKLPEVFLLLLTVPVVDPDKDDRNWKRPLNCLQLVISP
 LVLVLTQSGVYGIYEIGLLPVWAVVIVGTALASVTFATSNREPPRLHWF AFLGFLTSALWINAAA
 TEVVNILRSLGVIFRLSNTVLGLTLLAWGNSIGDAFSDFTLARQGYPRMAFSACFGGIIFNILVGVGLGC
 LLQIIRNHVVEVKLEPDGLLVWLASALGLSLIFSLVSVPLQCFQLSKAYGLCLLLFYICFLVVLLTEF
 GVIHLKKA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-Mlul

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_001177594.1 , NP_001171065.1
RefSeq Size:	2823 bp
RefSeq ORF:	1707 bp
Locus ID:	170756
UniProt ID:	Q925Q3
Cytogenetics:	5 F
MW:	63 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]