

Product datasheet for **MG223614**

Slc8b1 (NM_001177595) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Slc8b1 (NM_001177595) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Slc8b1
Synonyms:	AF261233; NCKX6; NCLX; Slc24a6
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG223614 representing NM_001177595
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCAAGCAGATGGCTGGCTCTGCTCTGGGCTCCTGTCTTCTCTGTGTGGCTCTGATACTGGAGACGG
 CGTCTGGGACCGGAGACCCATCCACAAAAGCCCATGGACACATCCAGTTTTTCAGCTGGAAGTGCAACCA
 GACTGCCATGGCGGATTGCCGAGCCGTGTGTGGCTGAACACATCTGATCGCTGTGACTTTGTCAGGAGG
 AATCCGGACTGCCGACGAGCGGGGCTACCTGGACTACCTTGAGGGCATCTTCTGCTACTTCCCCCCCCA
 ACCTCCTCCCTCTGGCCATCACCTCTACGTTTTCTGGCTGCTTTACCTCTTCTGATCTGGGAGTCAC
 CGCGGCCAAGTTCTTCTGCCCTAACCTGTCAGCCATCTCCACTAACCTCAAACCTCCCACAACGTGGCA
 GGTGTCACCTTCTGGCCTTTGAAATGGCGCTCCAGACATCTCAGTGTCTTAGTGGCTTTCTCAGACC
 CACGACTGCCGGCTGGCCATCGGGCTCTGTTTGGTGCAGGGGTGCTGGTACCCTGTGGTGGCTGG
 AGGCATCACCATCTGCATCCCTTCATGGCTGCCTCCAGGCCCTCCTCAGGGACATCGCTTCTACATG
 GTGGCTGTGTTCCAACTTCACTGCACCTATCTCGGCAGGATCACGCTGACGTGGGCGCTGGGTACC
 TGGGCCTCTACGTGTTCTACGTGGTACGGTCATCATCTGCACCTGGGTCTACCAACGGCAGCGAAGCAG
 GTCTCTGGTCCACTCCATATCGGAGACACCAGATTGCTGTCTGAGTCAAGGAGGACCAGATGTCTTCC
 AACACCAACAGCTATGACTATGGAGATGAATACCGGCCTCTGTTGCTGGGTCGGGAGACCACTGTCCAGA
 TCCTGATCCAAGCCCTGAATCCCTTGGACTACAGGAAGTGGAAGTCACTGATATCCTGGAGGGTCTCT
 GAAGGTAGTCAAGTTGCCTGTGGAGTCTTGTGTGCTCACAGTACCGGTTGTGGACCCCGACAAGGAC
 GATCGGAATTGGAACGGCCACTCAACTGTCTGCAGCTGGTCAACAGCCCTGGTCTGGTCTGACCC
 TGCAGTCGGGGTCTATGGCATCTAGATCGGCGGTCTCCTTCTGTCTGGGCTGTGGTGGTATCGT
 GGGCAGCGCTGGCTTCACTGACCTTCTTGGCACGTCTAACAGAGAACCCCTAGACTGCACTGGCTC
 TTTGCTTCTGGGTTTCTGACCAGTGCCTGTGGATCAATGCAGCCGCCACAGAGGTGGTGAACATAT
 TACGGTCCCTGGGTGTGATCTTCCGCTGAGCAACACCGTCTAGGGCTGACCCTCCTGGCCTGGGGAAA
 CAGCATTGGAGCTGGAGCCAGACGGATTACTGGTGTGGGTGCTGGCCAGTGCCTGGCCTCAGCTTGT
 CTTCTCCCTGGTCTCCGTGCCGCTTCACTGTTTCCAGCTCAGCAAGGCTTACGGCCTCTGCCTCCTCCTC
 TTCTACATCTGTTTCTTGTGTGGTCTGCTCACAGAGTTGGGGTATTACCTGAAGAAGGCGTGAC
 TGAAGCTGCTGGCCTAGAGGTGTGGGGCGATTCTGCTAGCCTCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG223614 representing NM_001177595
 Red=Cloning site Green=Tags(s)

MASRWLALLWAPVFLCVALIETASGTGDPSTKAHGHIQFSAGSVNQTMADCRVCGLNSTRCDFVRR
 NPDCRSEAGYLDYLEGIFCYFPPNLLPLAITLYVFWLLYLFLILGVTAAKFFCPNLSAISTNLKLSHVA
 GVTFLAFNGAPDIFSALVAFSDPRTAGLAIGALFGAGVLVTTVVAGGITILHPFMAASRPFLRDI AFYM
 VAVFLTFTALYLGRITL TWALGYLGLYVFYVVTVIICTWVYQRQSRSLVHSISETPELLSESEEDQMSS
 NNTSYDYGDEYRPLLLGRETTVQILIQALNPLDYRKWRTQSI SWRVLKVVKL PVEFLLLLTVPVVDPKD
 DRNWKRP LNCLQLVISPLVVL TLQSGVYGIYEIGLLPVWAVVIVGTALASVTF FATS NRPPRLHWL
 FAFLGFLTSALWINAAATEVVNILRSLGVIFRLSNTVLGLTLLAWGNSIGAGARRITGVGAGQCPGQLD
 LLPGLRAASVFP AQQLRPLPPLLLHLPCCGPAHRVWGDSP EEGVTEAAWPRGVGAILLAS

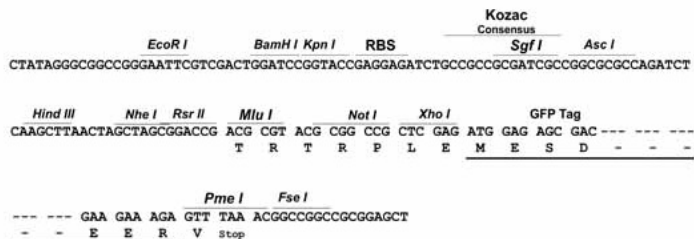
TRTRPLE - GFP Tag - V

Restriction Sites:

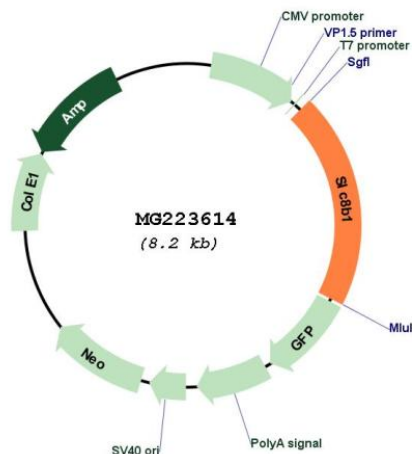
Sgfl-Mlul

Cloning Scheme:

Cloning sites used for ORF Shutting:



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

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]