

Product datasheet for **MC222653**

Slc8a3 (NM_080440) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Slc8a3 (NM_080440) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Slc8a3
Synonyms:	AW742262; Ncx3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >MC222653 representing NM_080440
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCGTGGTTACGGCTGCAGCCTCTCACCTCTGCCTTCTCCATTTTGGGCTGGTTACTTTTGTGCTCT
 TCCTGAATTGTCTTCGAGCAGAGGCTGGTACTCGGGGATGTGCCAGTGCAGGGCAGAACAATGAGTC
 CTGTTCCGGGTATCAGACTGCAAGGAGGGTGTCAATTTTGCCAATCTGGTATCCAGAGAACCCTTCCTT
 GGGACAAGATTGCCAGGGTCATTGTCTATTTTGTGGCCCTGATACATGTTTCTTGGGGTGTCTATCA
 TTGCTGACCGATTATGGCATCTATTGAAGTACTTCCCAAGAGAGGGAAAGTGACCAACAAGAAGCC
 CAATGGAGAGACCAGCACAACTACAATTCGGGTATGGAATGAACTGTCTCCAATCTGACCTGATGGCC
 CTGGGCTCTTCTGCTCCAGAGATTCTCCTGTCTTAATTGAGGTGTGGTACGGGTCATTGCTGGTG
 ATCTGGGACCATCTACCATCGTTGGCAGTGCAGCCTTCAACATGTTTCATCATCTTGGCATCTGTGTCTA
 TGTGATCCAGATGGGGAGACTCGAAAGATCAAGCACCTGCGAGTCTTCTCGTACGGCTGCTGGAGC
 ATCTTCGCTACATTTGGCTCTATATGATCCTGGCAGTCTTCTCCTCGTGTGGTCCAGGTTTGGGAAG
 GCCTCCTTACTCTTCTTCTTTCCCGTGTGTCTGCTGGCTTGGGTGGCAGATAAGCGACTGCTCTT
 CTACAAATACATGCACAAAAAATACCGCACAGATAAACACCGAGGAATTATCATTGAGACAGAGGGTGAC
 CACCCTAAGGGCATTGAGATGGATGGGAAAATGATGAATTCTCACTTTCTAGATGGGAACCTTACACCTT
 TGGAAAGAAAGGAGGTAGATGAATCTCGCAGGGAAATGATCCGGATTCTAAAGGATCTGAAACAAAAACA
 CCCAGAAAAGGACCTAGATCAGCTGGTGGAGATGGCCAATTACTATGCTCTTTCCCATCAACAGAAGAGC
 CGTGCTTTCTACCGCATCAAGCCACCCGGATGATGACTGGTGGGGCAATATACTTAAGAAGCATGCAG
 CCGAGCAAGCCAAGAAGACCTCCAGCATGAGCGAGGTGCATACCGATGAGCCGGAGGACTTTGCCTGTAA
 GGTCTTCTTTGACCCATGTTCTTATCAGTGCCTGGAGAAGTGTGGAGTGTCTCCTGACCGTGGTGAGG
 AAAGGGGGAGATATATCCAAGACCATGTACGTGGACTACAAAACAGAGGACGGCTCCGCCAATGCAGGGG
 CAGACTATGAGTTCACAGAGGGCACTGTGGTCTGAAGCCAGGAGAGACCCAGAAGGAGTCTCTGTGGG
 CATCATTGATGATGACATTTTGGAGGAGTGAACACTTCTTGTGAGGCTGAGCAATGTCGGTGTAGAA
 GAGGAGCAGTGGCGGAGGGGATGCTCCAGCAATACTCAATAGTCTTCTTTCCTCGGGCTGTCTGG
 CCTCCCTTGTGTGGCCACAGTAACCATCTTGGATGATGACCATGCAGGAATTTTCACTTTTGAATGTGA
 TACCATTATGTCAGTAAAAGTATTGGTGTATGGAAGTCAAGGTTTTGAGGACATCAGGTGCCAGGGGC
 ACAGTCATCGTCCCTTTAGGACAGTAGAAGGGACAGCCAAGGGTGGTGGCGAGGACTTTGAAGATGCAT
 ATGGGGAGCTGGAGTTCAAGAATGATGAAACAGTCAAAACAATTCACATCAAGGTAAATGATGATGAGGC
 GTATGAGAAAAACAAGAATTACGTCATTGAGATGATGGGCCCCCGCATGTTGGATATGAGTGTTCAGAAA
 GCGCTCCTGTTATCTCCAGAAGTGACAGACAGGAAGCTGACTGTGGAGGAAGAGGAAGCCAAGAGAATAG
 CAGAGATGGGAAAGCCAGTATTGGGTGAACACCCCAAACCTAGAGGTATCATTGAAGAGTCTATGAGTT
 CAAGAGTACAGTGGATAAGCTGATCAAGAAGACAAACCTGGCATTGGTGTGGGGACCCATTCTGGAGG
 GACCAGTTCATGGAAGCCATCACTGTTAGTGCAGGAGGGGATGAGGATGAAGACGAATCTGGAGAGGAGA
 GGCTGCCATCTGCTTTGACTACGTATGCACTTCTGACGGTCTTCTGGAAGGTGCTCTTTGCCTGTGT
 GCCCCCCACAGAGTACTGCCACGGCTGGCCCTGCTTCTGTTGCTCCATCCTCATTATTGGCATGCTCACC
 GCCATCATCGGGACCTGGCCTCTCACTTCGGCTGCACCATCGGGCTCAAGGATTCGGTACAGCTGTTG
 TTTTGTGGCATTCCGGCACCTCTGTGCCAGATACATTTGCCAGCAAGGCCGCTGCCCTGCAGGACGTGTA
 TGCAGATGCTTCCATTGGCAACGTACAGGCAGTAATGCCGTCAATGTCTTCTGGGATTTGGTTTGGCC
 TGGTCCGTGGCCGCCATCTACTGGGCCATGCAGGGACAGGAGTTCATGTGTCCGCTGGCACTCTGGCCT
 TCTCGGTCACTCTTTTACCATCTTTGCATTTGTCTGCCTCAGTGTCTTGTATCGTCCGGCGGCCCA
 TCTGGGCGGGGAGCTCGGAGTCTCTGGTGCAGCTTGCACGACATGGCTCTTTGTGAGCCTATGG
 CTCCTCTACATACTATTTGCCACGCTGGAGGCCTACTGCTACATCAAGGGTTCTGA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN:	NM_080440
Insert Size:	2787 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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_080440.3 , NP_536688.2
RefSeq Size:	4964 bp
RefSeq ORF:	2787 bp
Locus ID:	110893
UniProt ID:	S4R2P9
Cytogenetics:	12 37.44 cM
Gene Summary:	<p>Mediates the electrogenic exchange of Ca(2+) against Na(+) ions across the cell membrane, and thereby contributes to the regulation of cytoplasmic Ca(2+) levels and Ca(2+)-dependent cellular processes. Contributes to cellular Ca(2+) homeostasis in excitable cells, both in muscle and in brain (PubMed:14722618, PubMed:21593315). In a first phase, voltage-gated channels mediate the rapid increase of cytoplasmic Ca(2+) levels due to release of Ca(2+) stores from the endoplasmic reticulum. SLC8A3 mediates the export of Ca(2+) from the cell during the next phase, so that cytoplasmic Ca(2+) levels rapidly return to baseline (PubMed:14722618, PubMed:21593315). Contributes to Ca(2+) transport during excitation-contraction coupling in muscle (PubMed:14722618). In neurons, contributes to the rapid decrease of cytoplasmic Ca(2+) levels back to baseline after neuronal activation, and thereby contributes to modulate synaptic plasticity, learning and memory (PubMed:21593315). Required for normal oligodendrocyte differentiation and for normal myelination (PubMed:21959935). Mediates Ca(2+) efflux from mitochondria and contributes to mitochondrial Ca(2+) ion homeostasis (PubMed:24616101). Isoform 1 displays higher calcium exchanger activity than isoform 2, probably because isoform 1 has a lower threshold for activation by cytoplasmic Ca(2+) (PubMed:24616101).[UniProtKB/Swiss-Prot Function]</p> <p>Transcript Variant: This variant (2) contains 2 alternate in-frame coding exons compared to variant 1. This results in a slightly longer isoform (2) containing two protein segments not found in isoform 1.</p>

