

Product datasheet for **RG211873**

NCX1 (SLC8A1) (NM_021097) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NCX1 (SLC8A1) (NM_021097) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	SLC8A1
Synonyms:	NCX1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG211873 representing NM_021097
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTACAACATGCGGCGATTAAGTCTTTACCCACCTTTCAATGGGATTCATCTGTAGTTACTGTGA
 GTCTTTATTTCCCATGTGGACCATGTAATTGCTGAGACAGAAATGGAAGGAGAAGGAAATGAAACTGG
 TGAATGTACTGGATCATATTACTGTAAGAAAGGGGTGATTTTGCCCATTTGGGAACCCCAAGACCTTCT
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 CTGGTGGAGATGAGTGAGAAGAAAGCCCTGTTATTGAATGAGCTTGGTGGCTTCAATAACAGGCCAAC
 CTGTCTTCAGGAAGGTTTCTGCTAGAGAACATCCGATTCTCTACTGTAATCACCATTGCAGACGAATA
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 GGCCCCGACTGCCAAGCTCCTCACATCCTGCCTTTTGTGCTCCTATGGCTCTTGTACATTTTCTTCTC
 CTCCTGGAGGCCTACTGCCACATAAAAGGCTTC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG211873 representing NM_021097
 Red=Cloning site Green=Tags(s)

MYNMRRLSLSPTFSMGFHLLVTVSLLFVSHVDHVAETEMEGEGNETGECTGSYYCKKGVILPIWEPQDPS
 FGDKIARATVYFVAMVYVFLGVSIIADRFMSSIEVITSQEKEITIKKPNGETTKTTVRIWNETVSNLTLM
 ALGSSAPEILLSVIEVCGHNFTAGDLGPSTIVGSAAFNMFIIIALCVYVVPDGETRRIKHLRVFFVTAAM
 SIFAYTWLYIILSVISPGVVEVWEGLLTFFFPICVVFVAVADRRLLFYKYVYKRYRAGKQRGMIEHEG
 DRPSSKTEIEMDGKVVNSHVENFLDGALVLEVDERDQDDEEARREMARILKELKQKHPDKEIEQLIELAN
 YQVLSQQQKSRAFYRIQATRLMTGAGNILKRHAADQARKAVSMHEVNTVENDPVSKIFFEQGTQYQCLE
 NCGTVALTIIRGGDLTNTVFVDFRTEDGTANAGSDYEFTEGTVVFKPGDTQKEIRVGIIDDDIFEEDEN
 FLVHLSNVKVSSEASEDGILEANHVSTLACLGPSTATVTIFDDDHAGIFTFEEPVTHVSESIGIMEVKV
 LRTSGARGNVIVPYKTIIEGTARGGGEDFEDTCGELEFQNDIVKTI SVKVIDDEEYEKNTFFLEIGEP
 LVEMSEKKALLNELGGFTITGQPVFRKVHAREHPILSTVITIADEYDDKQPLTSKEEEEERRIAEMGRPI
 LGEHTKLEVIIEESYEFKSTVDKLIKTNLALVGTNSWREQFIEAITVSAGEDDDDDDECGEELKPSCFD
 YVMHFLT VFWKVLFAFVPPTEYWNGWACFIVSILMIGLLTAFIGDLASHFGCTIGLKDSVTAVVVALGT
 SVPDTFASKVAATQDQYADASIGNVTGSNAVNVFLGIGVAWSIAAIYHAANGEQFKVSPGTLAFSVTLFT
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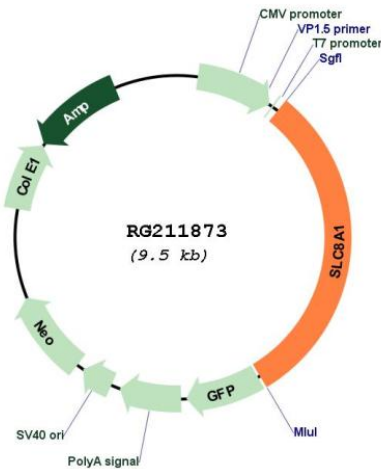
TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:


ACCN: NM_021097

ORF Size: 2919 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_021097.1](#), [NP_066920.1](#)

RefSeq Size: 3250 bp

RefSeq ORF: 2922 bp

Locus ID: 6546

UniProt ID: [P32418](#)

Cytogenetics:	2p22.1
Domains:	Calx-beta, Na_Ca_Ex
Protein Families:	Transmembrane
Protein Pathways:	Arrhythmogenic right ventricular cardiomyopathy (ARVC), Calcium signaling pathway, Cardiac muscle contraction, Dilated cardiomyopathy, Hypertrophic cardiomyopathy (HCM)
Gene Summary:	<p>In cardiac myocytes, Ca(2+) concentrations alternate between high levels during contraction and low levels during relaxation. The increase in Ca(2+) concentration during contraction is primarily due to release of Ca(2+) from intracellular stores. However, some Ca(2+) also enters the cell through the sarcolemma (plasma membrane). During relaxation, Ca(2+) is sequestered within the intracellular stores. To prevent overloading of intracellular stores, the Ca(2+) that entered across the sarcolemma must be extruded from the cell. The Na(+)-Ca(2+) exchanger is the primary mechanism by which the Ca(2+) is extruded from the cell during relaxation. In the heart, the exchanger may play a key role in digitalis action. The exchanger is the dominant mechanism in returning the cardiac myocyte to its resting state following excitation.[supplied by OMIM, Apr 2004]</p>