

## Product datasheet for **RG226282**

### **NCX1 (SLC8A1) (NM\_001112800) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	NCX1 (SLC8A1) (NM_001112800) 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:**

>RG226282 representing NM\_001112800  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGTACAACATGCGGCGATTAAGTCTTTACCCACCTTTCAATGGGATTCATCTGTAGTTACTGTGA  
 GTCTTTATTTTCCCATGTGGACCATGTAATTGCTGAGACAGAAATGGAAGGAGAAGGAAATGAAACTGG  
 TGAATGTACTGGATCATATTACTGTAAGAAAGGGGTGATTTTGCCCATTTGGGAACCCCAAGACCTTCT  
 TTTGGGGACAAAATTGCTAGAGCTACTGTGATTTTGTGGCCATGGTCTACATGTTTCTGGAGTCTCTA  
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 GGCCCCGACTGCCAAGCTCCTCACATCCTGCCTTTTGTGCTCCTATGGCTCTTGTACATTTTCTTCTC  
 CTCCTGGAGGCCTACTGCCACATAAAAGGCTTC

**ACGCGT**ACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence: >RG226282 representing NM\_001112800  
 Red=Cloning site Green=Tags(s)

MYNMRRLSLSPTFSMGFHLLVTVSLLFVSHVDHVAETEMEGEGNETGECTGSYYCKKGVILPIWEPQDPS  
 FGDKIARATVYFVAMVYVFLGVSIIADRFMSSIEVITSQEKEITIKKPNGETTKTTVRIWNETVSNLTLM  
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 LVMSEKKALLNELGGFTITGQPVFRKVHAREHPILSTVITIADEYDDKQPLTSKEEEERRIAEMGRPI  
 LGEHTKLEVIIEESYEFKSTVDKLIKTNLALVGTNSWREQFIEAITVSAGEDDDDDDECGEELKPSCFD  
 YVMHFLTVFWKVLFAFVPPTEYWNGWACFIVSILMIGLLTAFIGDLASHFGCTIGLKDSVTAVVVALGT  
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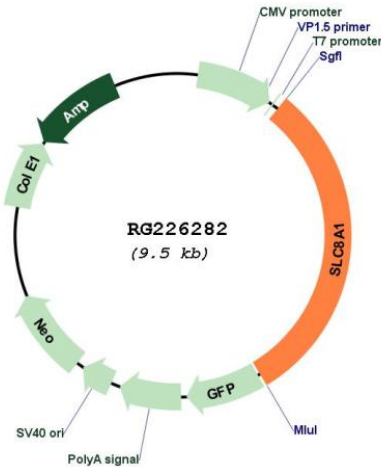
TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:



**Plasmid Map:**


**ACCN:** NM\_001112800

**ORF Size:** 2904 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\\_001112800.2](#)

**RefSeq Size:** 6038 bp

**RefSeq ORF:** 2907 bp

**Locus ID:** 6546

**UniProt ID:** [P32418](#)

<b>Cytogenetics:</b>	2p22.1
<b>Protein Families:</b>	Transmembrane
<b>Protein Pathways:</b>	Arrhythmogenic right ventricular cardiomyopathy (ARVC), Calcium signaling pathway, Cardiac muscle contraction, Dilated cardiomyopathy, Hypertrophic cardiomyopathy (HCM)
<b>Gene Summary:</b>	<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>