

Product datasheet for **SC113005**

NCX1 (SLC8A1) (NM_021097) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NCX1 (SLC8A1) (NM_021097) Human Untagged Clone
Tag:	Tag Free
Symbol:	NCX1
Synonyms:	NCX1
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene sequence for NM_021097 edited
 GAAGAATCCATTCACACTCCCCAAACCAGTAGGTTGTGACAGTTGGAAGTGCATGTACA
 ACATGCGGCGATTAAGTCTTTCACCCACCTTTTCAATGGGATTCATCTGTTAGTTACTG
 TGAGTCTTTATTTTCCCATGTGGACCATGTAATTGCTGAGACAGAAATGGAAGGAGAAG
 GAAATGAAACTGGTGAATGACTGGATCATATTACTGTAAGAAAGGGGTGATTTTGCCCA
 TTTGGGAACCCCAAGACCCTTCTTTGGGGACAAAATTGCTAGAGCTACTGTGATTTTG
 TGGCCATGGTCTACATGTTTCTGGAGTCTCTATCATAGCTGATCGGTTTCATGCTCCTCA
 TAGAAGTCATCACATCTCAAGAAAAAGAAATAACCATAAAGAAACCCAATGGAGAGACCA
 CCAAGACAACCTGTGAGGATCTGGAATGAAACAGTTTCTAACCTGACCTTGATGGCCCTGG
 GATCTTCTGCTCCTGAGATTCTCCTTTTCAGTAATTGAAGTGTGTGGCCATAACTTCACTG
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 TCTTCTTTGTGACAGCAGCCTGGAGCATCTTTCCTACACCTGGCTTTACATTATTTTGT
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GCAGGGCCATCTTGCAGCTCAGTCTAGAAGGGCTGCACCTCTCCAGGTTGATAAATCC
TAA
    
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- Restriction Sites:** Please inquire
- ACCN:** NM_021097
- Insert Size:** 3200 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).
- OTI Annotation:** This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
- 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: 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]

Transcript Variant: This variant (A) represents the longest transcript and encodes the longest isoform (A), also known as NaCa1 or NCX1.1. Sequence Note: This RefSeq record was created from transcript and genomic sequence data because no single transcript was available for the full length of the gene. The extent of this transcript is supported by transcript alignments.