

Product datasheet for **RC226282**

NCX1 (SLC8A1) (NM_001112800) Human Tagged ORF Clone

Product data:

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|---------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | NCX1 (SLC8A1) (NM_001112800) Human Tagged ORF Clone |
| Tag: | Myc-DDK |
| Symbol: | NCX1 |
| Synonyms: | NCX1 |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |



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ORF Nucleotide
Sequence:

>RC226282 representing NM_001112800
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTACAACATGCGGCGATTAAGCTTTTACCCACCTTTTCAATGGGATTCATCTGTAGTTACTGTGA
 GTCTTTATTTTCCCATGTGGACCATGTAATTGCTGAGACAGAAATGGAAGGAGAAGGAAATGAAACTGG
 TGAATGTACTGGATCATATTACTGTAAGAAAGGGGTGATTTTGCCCATTTGGGAACCCCAAGACCTTCT
 TTTGGGGACAAAATTGCTAGAGCTACTGTGATTTTGTGGCCATGGTCTACATGTTTCTGGAGTCTCTA
 TCATAGCTGATCGGTTTCTGCTCTATAGAAGTCATCACATCTCAAGAAAAAGAAATAACCATAAAGAA
 ACCCAATGGAGAGACCACCAAGACAACCTGTGAGGATCTGGAATGAAACAGTTTCTAACCTGACCTTGATG
 GCCCTGGGATCTTCTGCTCCTGAGATTCTCTTTCAGTAATTGAAGTGTGTGGCCATAAATTCACCTGCAG
 GAGACCTCGGTCCTAGCACCATCGTGGGAAGTGTGCATTCAATATGTTTCATCATTATTGCACTCTGTGT
 TTATGTGGTGCCTGACGGAGAGACAAGGAAGATTAAGCATTTCGCTGTCTTCTTTGTGACAGCAGCTGG
 AGCATCTTTGCCTACACCTGGCTTACATTATTTTGTCTGTCATATCTCCTGGTGTGTGGAGGCTGGG
 AAGGTTTGCTTACTTTCTTCTTCTTCCATCTGTGTTGTGTTCCGCTGGGTAGCGGATAGGAGACTTCT
 GTTTTACAAGTATGTCTACAAGAGGTATCGAGCTGGCAAGCAGAGGGGGATGATTATTGAACATGAAGGA
 GACAGGCCATCTTCTAAGACTGAAATGAAATGGACGGGAAAGTGGTCAATTCTCATGTTGAAAATTTCT
 TAGATGGTGTCTGGTTCTGGAGGTGGATGAGAGGGACCAAGATGATGAAGAAGCTAGGCGAGAAATGGC
 TAGGATTCTGAAGAACTTAAGCAGAAGCATCCAGATAAAGAAAATAGAGCAATTAATAGAATTAGCTAAC
 TACCAAGTCTAAGTCAGCAGCAAAAAAGTAGAGCATTTTATCGCATTCAAGCTACTCGCCTCATGACTG
 GAGCTGGCAACATTTTAAAGAGCATGCAGCTGACCAAGCAAGGAAGGCTGTCAGCATGCACGAGGTCAA
 CACTGAAGTGACTGAAAATGACCCTGTTAGTAAGATCTTCTTTGAACAAGGGACATATCAGTGTCTGGAG
 AACTGTGGTACTGTGGCCCTTACCATTATCCGAGAGGTGGTATTGACTAACACTGTGTTTGTGACT
 TCAGAACAGAGGATGGCACAGCAATGCTGGGTCTGATTATGAATTTACTGAAGGAACTGTGGTGTTTAA
 GCCTGGTATACCCAGAAGGAAATCAGAGTGGGTATCATAGATGATGATATCTTTGAGGAGGATGAAAAT
 TTCCTTGTGCATCTCAGCAATGTCAAAGTATCTTCTGAAGCTTCAAGATGGCATACTGGAAGCCAATC
 ATGTTTCTACACTTGCTTGCTCGGATCTCCCTCCACTGCCACTGTAACATTTTTGATGATGACCACGC
 AGGCATTTTTACTTTGAGGAACCTGTGACTCATGTGAGTGAGAGCATTGGCATCATGGAGGTGAAAGTA
 TTGAGAACATCTGGAGCTCGAGGAAATGTTATCGTTCCATATAAAACCATCGAAGGGACTGCCAGAGGTG
 GAGGGGAGGATTTGAGGACACTTGTGGAGAGCTCGAATTCAGAAATGATGAAATGTCAAACAATATC
 AGTCAAGGTAATTGATGATGAGGAGTATGAGAAAAACAAGACCTTCTTCTTGGATTGGAGAGCCCCGC
 CTGGTGGAGATGAGTGAGAAGAAAGCCCTGTTATTGAATGAGCTTGGTGGCTTCAATAACAGGCCAAC
 CTGTCTTCAGGAAGGTTTCATGCTAGAGAACATCCGATTCTCTACTGTAATCACCATTGCAGACGAATA
 TGATGACAAGCAGCCACTGACCAGCAAAGAGGAAGAGGAGAGGCGCATTGCAGAAATGGGGCGCCCCATC
 CTGGGAGAGCACACCAAGTTGGAAGTGATCATTGAAGAATCCTATGAATCAAGAGTACTGTGGACAAAC
 TCATTAAGAAGACAAACCTGGCCCTTGTGGTGGGACTAACAGCTGGAGAGAAGCTGCCCTCCTGTTTCGAT
 CACTGTCAGTGTGGGAAGATGATGACGACGATGAATGTGGGAAGAGAAGCTGCCCTCCTGTTTCGAT
 TACGTGATGCACTTTCTGACTGTGTTCTGGAAGTCTGTTTGCCTTCGTCCTCCCTACTGAATACTGGA
 ATGGCTGGGCGTGTTCATTGTCTCCATCCTCATGATTGGCCTACTGACAGCTTTCATTGGAGACCTGGC
 TTCCCACTTTGGCTGCACCATTGGCCTGAAAGATTCTGTGACTGCAGTCGTGTTTCGTCGACTTGGAAAC
 TCAGTGCCAGACACATTTGCCAGCAAAGTGGCAGCCACCCAGGACCAGTATGCAGACGCCTCCATAGGTA
 ACGTACGCGGCAGCAACGCGGTGAATGTCTTCTGGGAATCGGTGTGGCCTGGTCCATCGCTGCCATCTA
 CCACGCAGCCAAATGGGGAACAGTCAAAGTGTCCCTGGCACACTAGCTTCTCTGTCACTCTCTCACC
 ATTTTTGCTTTCATCAATGTGGGGTGTGCTGTATCGGCGGAGGCCAGAAATCGGAGGTGAGCTGGGTG
 GGCCCCGACTGCCAAGCTCCTCACATCCTGCCTTTTGTCTCCTATGGCTCTTGTACATTTTCTTCTC
 CTCCTGGAGGCCTACTGCCACATAAAAGGCTTC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC226282 representing NM_001112800
 Red=Cloning site Green=Tags(s)

MYNMRRLSLSPTFSMGFHLLVTVSLLFVSHVDHVAETEMEGEGNETGECTGSYYCKKGVILPIWEPQDPS
 FGDKIARATVYFVAMVYMFVGLVSIADRFMSSIEVITSQEKEITIKKPNGETTKTVRIWNETVSNLTLM
 ALGSSAPEILLSVIEVCGHNFTAGDLGPSTIVGSAAFNMFIIALCVYVVPDGETRKRKHLRVFFVTAAW
 SIFAYTWLYIILSVISPGVVEVWEGLLTFFFFPICVVFVAVADRRLLFYKYVYKRYRAGKQRGMIEHEG
 DRPSSKTEIEMDGKVVNSHVENFLDGLVLEVDERDQDDEEARREMARILKELKQKHPDKEIEQLIELAN
 YQVLSQQQKSRFYRIQATRLMTGAGNILKRHAADQARKAVSMHEVNTVENDPVSKIFFEQGTQYQCLE
 NCGTVALTIIRGGDLTNTVFVDFRTEDGTANAGSDYEFTEGTVVFKPGDTQKEIRVGIIDDDIFEEDEN
 FLVHLSNVKVSSEASEDGILEANHVSTLACLGPSTATVTIFDDDHAGIFTFEEPVTHVSESIGIMEVKV
 LRTSGARGNVIVPYKTIIEGTARGGGEDFEDTCGELEFQNDIVKTI SVKVIDDEEYEKNTFFLEIGEP
 LVEMSEKALLLNELGGFTITGQPVFRKVVHAREHPILSTVITIADEYDDKQPLTSKEEEERRIAEMGRPI
 LGEHTKLEVIIEESYEFKSTVDKLIKTNLALVGTNSWREQFIEAITVSAGEDDDDDDECGEELKPSCFD
 YVMHFLT VFWKVLFAFVPPTEYWNGWACFIVSILMIGLLTAFIGDLASHFGCTIGLKDSVTAVVVALGT
 SVPDTFASKVAATQDQYADASIGNVTGSNAVNVFLGIGVAWSIAAIYHAANGEQFKVSPGLAFSVTLFT
 IFAFINVGVLRYRRRPEIGGELGGPRTAKLLT SCLFVLLWLLYIFFSSLEAYCHIKGF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6596_a12.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



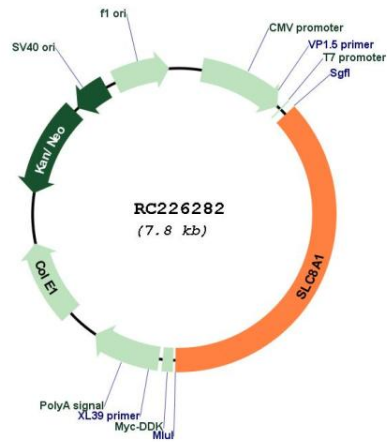
* The last codon before the Stop codon of the ORF

ACCN: NM_001112800

ORF Size: 2904 bp

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| 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_001112800.2 |
| RefSeq Size: | 6038 bp |
| RefSeq ORF: | 2907 bp |
| Locus ID: | 6546 |
| UniProt ID: | P32418 |
| Cytogenetics: | 2p22.1 |
| Protein Families: | Transmembrane |
| Protein Pathways: | Arrhythmogenic right ventricular cardiomyopathy (ARVC), Calcium signaling pathway, Cardiac muscle contraction, Dilated cardiomyopathy, Hypertrophic cardiomyopathy (HCM) |
| MW: | 107.9 kDa |
| 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] |

Product images:



Circular map for RC226282