

## Product datasheet for **RC228904**

### NDUFV1 (NM\_001166102) Human Tagged ORF Clone

#### Product data:

|                           |  |
|---------------------------|--|
| Product Type:             | Expression Plasmids                          |
| Product Name:             | NDUFV1 (NM_001166102) Human Tagged ORF Clone |
| Tag:                      | Myc-DDK                                      |
| Symbol:                   | NDUFV1                                       |
| Synonyms:                 | CI-51K; CI51KD; MC1DN4; UQOR1                |
| Mammalian Cell Selection: | Neomycin                                     |
| Vector:                   | pCMV6-Entry (PS100001)                       |
| E. coli Selection:        | Kanamycin (25 ug/mL)                         |



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**ORF Nucleotide Sequence:**

>RC228904 representing NM\_001166102  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGCTGGCAACACGGCGGCTGCTCGGCTGGTTCGCTTCCCGCGGGACAGCACCCAAGAAAACCTCATTG  
 GCTCGCTGAAGGATGAAGACCGATTTTACCAACCTGTACGGCCGCATGACTGGAGGCTGAAAGGTTCC  
 CCTGAGTCGAGGTGACTGGTACAAGACAAGGAGATCCTGCTGAAGGGGCCCGACTGGATCCTGGGCGAG  
 ATCAAGACATCGGGTTTGAAGGGCCGTGGAGGCGCTGGCTTCCCACTGGCCTCAAGTGGAGCTTATGA  
 ATAAGCCCTCAGATGGCAGGCCAAGTATCTGGTGGTGAACGACAGACGAGGGGGAGCCGGGCACCTGCAA  
 GGACCGGGAGATCTTACGCCATGATCCTACAAGCTGCTGGAAGGCTGCCTGGTGGGGGGCCGGCCATG  
 GGGCCCGCGTGCCTATATCTACATCCGAGGGGAATTCTACAATGAGGCCTCCAATCTGCAGGTGGCCA  
 TCCGAGAGGCCTATGAGGAGGTCTGATTGGCAAGAATGCTTGTGGCTCTGGCTATGATTTTGACGTGT  
 TGTGGTGGCGGGGCTGGGGCTACATCTGTGGAGAGGACAGCGCTCATCGAGTCCATTGAGGGCAAG  
 CAGGGCAAGCCCGCCTGAAGCCCCCTTCCCGCAGACGTGGGAGTGTGGCTGCCCCACAACCTGTGG  
 CCAACGTGGAGACAGTGGCAGTGTCCCCACAATCTGCCGCCGTGGAGGTACCTGGTTTGTGGCTTTGG  
 CAGAGAACGCAACTCAGGCACAAAATATTCAACATCTCTGGCCATGTCAACCACCTTGCCTGTGGAG  
 GAGGAGATGTCTGTGCCCTTGAAGAAGTATTGAGAAGCATGCTGGGGGTGTACGGGGCGGCTGGGACA  
 ACCTCCTTGTGTGATCCTGGCGGCTCGTCTACCCACTGATCCCAAGTCTGTGTGTGAGACGGTGTCT  
 GATGGACTTCGATGCGCTGGTGCAGGCACAGACAGGCTGGGCACAGTCCGGTGTGATGATGGACCGC  
 TCGACGGACATCGTGAAGCCATCGCCCGCCTCATTGAGTTCTATAAGCACGAGAGCTGTGGCCAGTGT  
 CCCCATGCCGTGAGGGTGTGGACTGGATGAACAAGGTGATGGCAGGTTTCTGTGAGGGGGGATGCCGGCC  
 GGCCGAGATCGACTCCCTGTGGGAGATCAGCAAGCAGATAGAAGGCCATACGATTTGTGCTCTGGGTGAC  
 GGGCCCGCTGGCTGTGCAGGGTCTGATCCGCCACTTTCGCCCGGAGCTCGAGGAGCGGATGCAGCGGT  
 TTGCCAGCAGCATCAGGCCCGGACAGGCTGCCTCT

**ACGCGT**ACGCGGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC228904 representing NM\_001166102  
 Red=Cloning site Green=Tags(s)

MLATRRLGLWSPARTAPKKTSGSLKDEDRIFTNLYGRHDWRLKGLSRGDWYKTEILLKGPDWILGE  
 IKTSGLRGRGGAGFPTGLKWSFMNKPSPDRPKYLVVNADEGEPTCKDREILRHDPHKLLEGCLVGRAM  
 GARAAYIYIRGEFYNEASNLQVAIREAYEAGLIGKNACGSGYDFDFVVRGAGAYICGEETALIESIEGK  
 QGKPRLPKPPFADVGVFGPPTVANVETVAVSPTICRRGGTWFAGFGRERNSTGLFNISGHVNHPTVE  
 EEMSVPLKELIEKHAGGVTGGWDLAVIPGGSTPLIPKSVCTVLMDFDALVQAQTGLGTAAVIVMDR  
 STDIVKAIARLIEFYKHESCGQCTPCREGVDWMNKVMARFVRGDARPAEIDSLWEISKQIEGHTICALGD  
 GAAWPVQGLIRHFRPELEERMQRFAQQHQARQAAS

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_001166102

**ORF Size:** 1365 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\\_001166102.2](#)

**RefSeq ORF:** 1368 bp

**Locus ID:** 4723

**UniProt ID:** [P49821](#)

**Cytogenetics:** 11q13.2

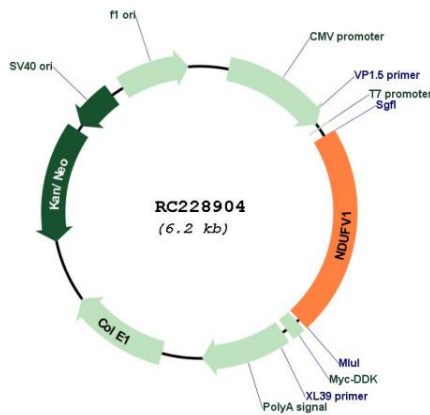
**Protein Families:** Druggable Genome

**Protein Pathways:** Alzheimer's disease, Huntington's disease, Metabolic pathways, Oxidative phosphorylation, Parkinson's disease

**MW:** 49 kDa

**Gene Summary:** The mitochondrial respiratory chain provides energy to cells via oxidative phosphorylation and consists of four membrane-bound electron-transporting protein complexes (I-IV) and an ATP synthase (complex V). This gene encodes a 51 kDa subunit of the NADH:ubiquinone oxidoreductase complex I; a large complex with at least 45 nuclear and mitochondrial encoded subunits that liberates electrons from NADH and channels them to ubiquinone. This subunit carries the NADH-binding site as well as flavin mononucleotide (FMN)- and Fe-S-binding sites. Defects in complex I are a common cause of mitochondrial dysfunction; a syndrome that occurs in approximately 1 in 10,000 live births. Mitochondrial complex I deficiency is linked to myopathies, encephalomyopathies, and neurodegenerative disorders such as Parkinson's disease and Leigh syndrome. Alternative splicing results in multiple transcript variants encoding distinct isoforms.[provided by RefSeq, Oct 2009]

**Product images:**



Circular map for RC228904