

## Product datasheet for **RC204954**

### **NDUFV1 (NM\_007103) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	NDUFV1 (NM_007103) 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)



[View online »](#)

**ORF Nucleotide Sequence:**

>RC204954 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGCTGGCAACACGGCGGCTGCTCGGCTGGTGCCTTCCCGCGGGTATCTGTGCGTTTCAGCGGCGACA  
 CGACAGCACCCAAGAAAACCTCATTGGCTCGCTGAAGGATGAAGACCGATTTTACCAACCTGTACGG  
 CCGCCATGACTGGAGGCTGAAAGTTCCCTGAGTCGAGGTGACTGGTACAAGACAAGGAGATCCTGCTG  
 AAGGGGCCGACTGGATCCTGGGCGAGATCAAGACATCGGGTTTGAGGGCCGTGGAGGCGCTGGCTTCC  
 CCACTGGCCTCAAGTGGAGCTTCATGAATAAGCCCTCAGATGGCAGGCCCAAGTATCTGGTGGTGAACGC  
 AGACGAGGGGAGCCGGGCACCTGCAAGGACCGGGAGATCTTACGCCATGATCCTACAAGCTGTGGAA  
 GGCTGCCTGGTGGGGGCGGGCCATGGGCGCCCGCTGCCTATATCTACATCCGAGGGGAATTCTACA  
 ATGAGGCCCTCAAATCTGCAGGTGGCCATCCGAGAGGCCTATGAGGCAGGTCTGATTGGCAAGAATGCTTG  
 TGCTCTGGCTATGATTTTGACGTGTTTGGTGCAGGGGCTGGGCCTACATCTGTGGAGAGGAGACA  
 GCGCTCATCGAGTCCATTGAGGGCAAGCAGGGCAAGCCCCGCTGAAGCCCCCTCCCCCGAGAGCTGG  
 GAGTGTGGCTGCCCAACTGTGGCAACGTGGAGACAGTGGCAGTGTCCCCACAATCTGCCGCCG  
 TGGAGGTACCTGGTTTGGCTGGCTTTGGCAGAGAACGCAACTCAGGCACCAAACTATTCAACATCTTGGC  
 CATGTCAACCACCTTGCCTGTGGAGGAGGAGATGTCTGTGCCCTTGAAGAAGTATTGAGAAGCATG  
 CTGGGGGTGTACGGGCGGCTGGGACAACCTCCTTGTGTGATCCCTGGCGGCTCGTCTACCCACTGAT  
 CCCAAGTCTGTGTGTGAGACGGTGTGATGGACTTCGATGCGCTGGTGCAGGCACAGACAGGCCTGGGC  
 ACAGTGCCTGATCGTATGGACCGCTCGACGGACATCGTGAAGCCATCGCCCGCCTCATTGAGTTCT  
 ATAAGCACGAGAGCTGTGGCCAGTGTACCCATGCCGTGAGGGTGTGGACTGGATGAACAAGGTGATGGC  
 AGTTTTCGTGAGGGGGATGCCCGCCGGCCGAGATCGACTCCCTGTGGGAGATCAGCAAGCAGATAGAA  
 GGCCATACGATTTGTGCTCTGGGTGACGGGCGCCCTGGCCTGTGCAAGGTCTGATCCGCCACTTTCGGC  
 CGGAGCTCGAGGAGCGGATGCAGCGTTTGCCAGCAGCATCAGGCCCGCAGGCTGCCTCT

**ACGCGT**ACGCGGCGGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC204954 protein sequence  
 Red=Cloning site Green=Tags(s)

MLATRRLGLWVSLPARVSVRFSGDITAPKTSFGLSKDEDRIFTNLYGRHDWRLKGLSRGDWYKTEILL  
 KGPDWILGEIKTSGLRGRGGAGFPTGLKWSFMNKPSDGRPKYL VVNADEGEPGTCKDREILRHDPKLL  
 GCLVGGGRAMGARAAYIYIRGEFYNEASNLQVAIREAYEAGLIGKNACGSGYDFDFVVRGAGAYICGEET  
 ALIESIEGKQKPRPKPPFPADVGVFGCPTTVANVETVAVSPTICRRGGTWFAGFGRERNSGKLFNISG  
 HVNHPCTVEEEMSVPLKELIEKHAGGVTTGGWDLNLLAVIPGSSSTPLIPKSVCEVLMDFDALVQAQTGLG  
 TAAVIVMDRSTDIVKAIARLIEFYKHESCGQCTPCREGVDWMNKVMARFVRGDARPAEIDSLWEISKQIE  
 GHTICALGDGAAPVQGLIRHFRPELEERMQRFAQQHQRQAAS

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

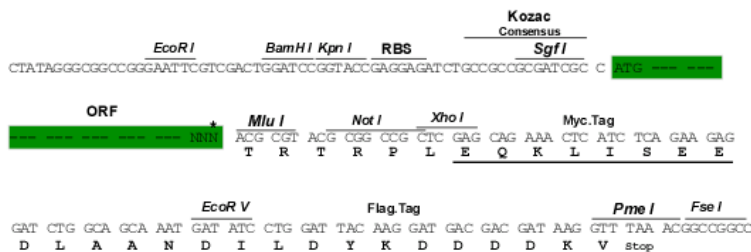
[https://cdn.origene.com/chromatograms/mk6277\\_e01.zip](https://cdn.origene.com/chromatograms/mk6277_e01.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**

Cloning sites used for ORF Shutting:


**ACCN:** NM\_007103

**ORF Size:** 1392 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\\_007103.4](#)
**RefSeq Size:** 1631 bp

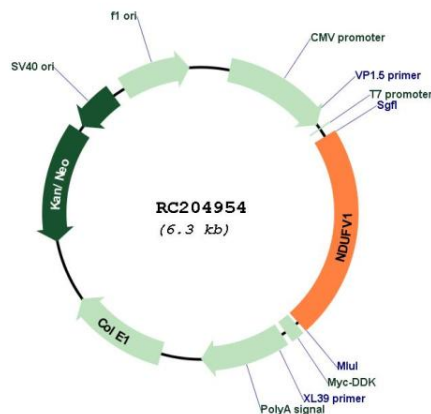
**RefSeq ORF:** 1395 bp

**Locus ID:** 4723

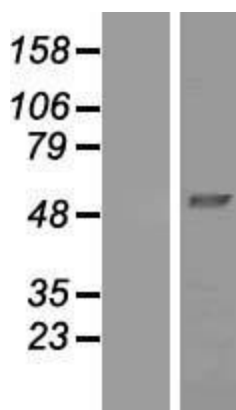
**UniProt ID:** [P49821](#)
**Cytogenetics:** 11q13.2

<b>Domains:</b>	Complex1_51K
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Alzheimer's disease, Huntington's disease, Metabolic pathways, Oxidative phosphorylation, Parkinson's disease
<b>MW:</b>	50.8 kDa
<b>Gene Summary:</b>	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]

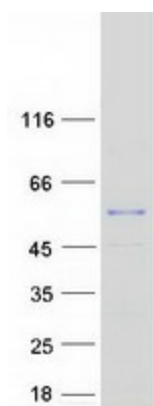
### Product images:



Circular map for RC204954



Western blot validation of overexpression lysate (Cat# [LY416198]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204954 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified NDUFV1 protein (Cat# [TP304954]). The protein was produced from HEK293T cells transfected with NDUFV1 cDNA clone (Cat# RC204954) using MegaTran 2.0 (Cat# [TT210002]).