

## Product datasheet for **SC320461**

### NDUFV1 (NM\_007103) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	NDUFV1 (NM_007103) Human Untagged Clone
Tag:	Tag Free
Symbol:	NDUFV1
Synonyms:	CI-51K; CI51KD; MC1DN4; UQOR1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)

**Fully Sequenced ORF:** >OriGene sequence for NM\_007103.2  
GACAGCGTGAGGTGACCCATCTGGCCCGCCGATGCTGGCAACACGGCGCTGCTCGGG  
TGGTCGCTTCCCGCGGGTATCTGTGCGTTTCAGCGGCACACGACAGCACCAGAAA  
ACCTCATTGGCTCGCTGAAGGATGAAGACCGGATTTTCACCAACCTGTACGGCCGCAT  
GACTGGAGGCTGAAAGGTTCCCTGAGTCGAGGTACTGGTACAAGACAAAGGAGATCCTG  
CTGAAGGGGCCGACTGGATCCTGGGCGAGATCAAGACATCGGGTTTGAGGGGCCGTGGA  
GGCGCTGGCTTCCCACTGGCCTCAAGTGGAGCTTCATGAATAAGCCCTCAGATGGCAGG  
CCCAAGTATCTGGTGGTGAACGCAGACGAGGGGGAGCCGGGCACCTGCAAGGACCGGGAG  
ATCTTACGCCATGATCCTCACAAGCTGCTGGAAGGCTGCCTGGTGGGGGCCGGCCATG  
GGCGCCCGCTGCTATATCTACATCCGAGGGGAATTCTACAATGAGGCCTCCAATCTG  
CAGGTGGCCATCCGAGAGGCCTATGAGGCAGGTCTGATTGGCAAGAATGCTTGTGGCTCT  
GGCTATGATTTTGACGTGTTGTGGTGC CGGGCTGGGGCTACATCTGTGGAGAGGAG  
ACAGCGCTCATCGAGTCCATTGAGGGCAAGCAGGGCAAGCCCCGCTGAAGCCCCCTTC  
CCCGCAGACGTGGGAGTGTGGCTGCCCCACAACCTGTGGCCAACGTGGAGACAGTGGCA  
GTGTCCCCCAACTCTGCCCGCTGGAGGTACCTGGTTTGTGGCTTTGGCAGAGAACGC  
AACTCAGGCACCAAACTATTCAACATCTCTGGCCATGTCAACCACCCTTGCACTGTGGAG  
GAGGAGATGTCTGTGCCCTTGAAGAAGTATTGAGAAGCATGCTGGGGTGTACCGGGC  
GGCTGGGACAACCTCCTTGTGTGATCCCTGGCGGCTCGTCTACCCCACTGATCCCCAAG  
TCTGTGTGTGAGACGGTGTGATGGACTTCGATGCGCTGGTGCAGGCACAGACAGGCCTG  
GGCACAGCTGCGGTGATCGTCATGGACCGCTCGACGGACATCGTGAAAGCCATCGCCCGC  
CTCATTGAGTTCTATAAGCACGAGAGCTGTGGCCAGTGTACCCCATGCCGTGAGGGTGTG  
GACTGGATGAACAAGGTGATGGCACGTTTCGTGAGGGGGATGCCCGCCGGCCGAGATC  
GACTCCCTGTGGGAGATCAGCAAGCAGATAGAAGGCCATACGATTTGTGCTCTGGGTGAC  
GGGGCCGCTGGCTGTGAGGGTCTGATCCGCCACTTTCGGCCGGAGCTCGAGGAGCGG  
ATGCAGCGGTTTCCCAGCAGCATCAGGCCCGGAGGCTGCCTCTTAGCCACCACCCTG  
GCCTGCTGCTCCTGCTATCCATGTGAATGCTGGACAATAAAGCGAGTGTGCCACC  
CTCCAAAAAAAAAAAAAAAAAAAAAAAAA



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<b>Restriction Sites:</b>	Please inquire
<b>ACCN:</b>	NM_007103
<b>OTI Disclaimer:</b>	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).
<b>OTI Annotation:</b>	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.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<u><a href="#">NM_007103.2</a></u> , <u><a href="#">NP_009034.2</a></u>
<b>RefSeq Size:</b>	1566 bp
<b>RefSeq ORF:</b>	1395 bp
<b>Locus ID:</b>	4723
<b>UniProt ID:</b>	<u><a href="#">P49821</a></u>
<b>Cytogenetics:</b>	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

**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]

Transcript Variant: This variant (1) represents the longer transcript and encodes the longer protein (isoform 1).