

Product datasheet for **RG228904**

NDUFV1 (NM_001166102) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NDUFV1 (NM_001166102) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	NDUFV1
Synonyms:	CI-51K; CI51KD; MC1DN4; UQOR1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG228904 representing NM_001166102
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGCTGGCAACACGGCGGCTGCTCGGCTGGTTCGCTTCCCGCGGGACAGCACCCAAGAAAACCTCATTG
 GCTCGCTGAAGGATGAAGACCGATTTTACCAACCTGTACGGCCGCATGACTGGAGGCTGAAAGGTTT
 CCTGAGTCGAGGTGACTGGTACAAGACAAGGAGATCCTGCTGAAGGGGCCGACTGGATCCTGGGCGAG
 ATCAAGACATCGGGTTTGAAGGGCCGTGGAGGCGCTGGCTTCCCACTGGCCTCAAGTGGAGCTTCATGA
 ATAAGCCCTCAGATGGCAGGCCAAGTATCTGGTGGTGAACGACAGACGAGGGGGAGCCGGGCACCTGCAA
 GGACCGGGAGATCTACGCCATGATCCTACAAGCTGCTGGAAGGCTGCCTGGTGGGGGGCCGGCCATG
 GGGCCCGCGTGCCTATATCTACATCCGAGGGGAATTCTACAATGAGGCCTCCAATCTGCAGGTGGCCA
 TCCGAGAGGCCTATGAGGAGGTCTGATTGGCAAGAATGCTTGTGGCTCTGGCTATGATTTTGACGTGT
 TGTGGTGGCGGGGCTGGGGCTACATCTGTGGAGAGGACAGCGCTCATCGAGTCCATTGAGGGCAAG
 CAGGGCAAGCCCGCCTGAAGCCCCCTTCCCGCAGACGTGGGAGTGTGGTGGCTGCCCAACTGTGG
 CCAACGTGGAGACAGTGGCAGTGTCCCCACAATCTGCCCGCTGGAGGTACCTGGTTTGTGGCTTTGG
 CAGAGAACGCAACTCAGGCACAAAATATTCAACATCTCTGGCCATGTCAACCACCTTGCCTGTGGAG
 GAGGAGATGTCTGTGCCCTTGAAGAAGTATTGAGAAGCATGCTGGGGGTGTCACGGGCGGCTGGGACA
 ACCTCCTTGTGTGATCCTGGCGGCTCGTCTACCCACTGATCCCAAGTCTGTGTGTGAGACGGTGT
 GATGGACTTCGATGCGCTGGTGCAGGCACAGACAGGCTGGGCACAGTCCGGTGTGTCATGGACCGC
 TCGACGGACATCGTGAAGCCATCGCCCGCCTCATTGAGTTCTATAAGCACGAGAGCTGTGGCCAGTGT
 CCCCATGCCGTGAGGGTGTGGACTGGATGAACAAGGTGATGGCAGGTTTCTGTGAGGGGGGATGCCCGCC
 GGCCGAGATCGACTCCCTGTGGGAGATCAGCAAGCAGATAGAAGGCCATACGATTTGTGCTCTGGGTGAC
 GGGCCCGCTGGCTGTGCAGGGTCTGATCCGCCACTTTCGCGCCGAGCTCGAGGAGCGGATGCAGCGGT
 TTGCCAGCAGCATCAGGCCCGGACAGGCTGCCTCT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG228904 representing NM_001166102
 Red=Cloning site Green=Tags(s)

MLATRRLLGWSLPARTAPKKTSTFGSLKDEDRIFTNLYGRHDWRLKGSLSRGDWYKTKIILLKGPDWILGE
 IKTSGLRGRGGAGFPTGLKWSFMNKPSPDGRPKYLVVNADEGEPTCKDREILRHDPHKLLEGCLVGRAM
 GARAAYIYIRGEFYNEASNLQVAIREAYEAGLIGKNACGSYDFDFVVRGAGAYICGEETALIESIEGK
 QGKPRLKPPFPADVGVFGCPTTVANVETVAVSPTICRRGGTWFAGFGRERNSTKLFNISGHVNHPTVE
 EEMSVPLKELIEKHAGGVTGGWDLNLLAVIPGGSSTPLIPKSVCTVLMDFDALVQAQTGLGTAIVMDR
 STDIVKAIARLIEFYKHESCGQCTPCREGVDMNKMVMARFVRGDARPAEIDSLWEISKQIEGHTICALGD
 GAAWPVQGLIRHFRPELEERMQRFAQQHQARQAAS

TRTRPLE - GFP Tag - V

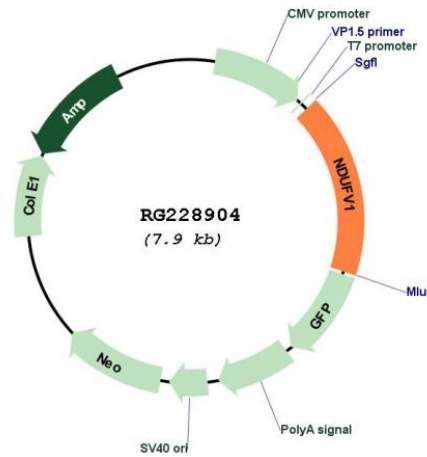
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



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:	<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_001166102.2
RefSeq Size:	1604 bp
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
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]