

Product datasheet for **RG233068**

NDUFS1 (NM_001199983) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NDUFS1 (NM_001199983) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	NDUFS1
Synonyms:	CI-75k; CI-75Kd; MC1DN5; PRO1304
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide
Sequence:

>RG233068 representing NM_001199983
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGCATCGCC**

ATGCAGATCCCTCGATTCTGTTATCATGAAAGGTTGTCTGTTGCTGGAACTGCAGGATGTGCCTTGTTG
AAATTGAGAAAGCCCCTAAGGTTGTAGCTGCTTGTGCCATGCCAGTAATGAAGGGTTGGAATATCCTAAC
AAACTCAGAAAAATCCAAAAAGCCAGGGAAGGTGTGATGGAGTCTTATTAGCAAATCACCCATTGGAC
TGTCTATTTGTGACCAGGGAGGTGAATGTGATCTGCAGGACCAGTCCATGATGTTTGGAAATGATAGGA
GCCGATTTTTAGAGGGGAAGCGTCTGTGGAAGACAAGAACATTGGGCCATTGGTAAAGACCATCATGAC
AAGATGTATACAGTGTACTCGTGCATCAGGTTTGAAGTGAAGTGCAGGAGTAGATGATTTGGGAACA
ACAGGCAGAGGAAATGATATGCAAGTTGGCACATACATTGAAAAGATGTTTATGCTGACTGTCTGGGA
ATATCATTGATATCTGCCCTGTAGGTGCCCTAACCTCTAAGCCCTATGCCTTTACTGCCCGCCTGGGA
AACAGAAAGACAGAATCCATTGATGTAATGGATGCGGTTGGAAGTAATATTGTGGTTAGCACAGAAGT
GGAGAAGTATGAGGATTTTGCACGTATGCATGAGGACATCAATGAAGAGTGGATCTCTGATAAAACCA
GATTTGCCTATGATGGGCTAAAACGTCAAAGACTTACCGAGCCAATGGTCAGAAATGAAAAGGGCTTTT
AACCTATACTTCTTGGGAGGATGCGCTCTCTCGCGTAGCTGGAATGTTGCAGAGTTTTCAAGGCAAAGAT
GTGGCAGCAATTGCAGGTGGCTTGGTGGATGCTGAAGCCCTGGTAGCTCTCAAAGATTTGCTTAATAGAG
TGGACTCTGACACCTTATGCACTGAAGAGGTCTTCCCCACTGCAGGAGCTGGCACAGATTTGCGTTCCAA
TTATCTTCTTAATACTACAATTGCTGGTGTGGAAGAGGCAGATGTTGTTCTTCTGGTTGGTACAAACCA
CGTTTTGAGGCACCACTGTTAATGCTAGAATTCGAAAGAGCTGGCTGCATAATGACTTAAAAGTGGCCC
TTATAGGCAGTCCAGTGGACCTCACTTACACATATGACCACCTGGGAGACTCCCCAAAATCTTCAAGA
CATTGCTTCGGGAAGCCATCCATTTAGCCAGGTCCTAAAGGAAGCTAAAAACCAATGGTGGTTTTAGGC
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CTGGGAGCAGATGGAGGTTGTATCACACGACAGGATTTGCCAAAGGATTGTTTCTTATTTATCAAGGAC
ATCATGGTATGTTGGGCTCCCATAGCTGATGTTATTCTCCAGGAGCTGCTTACACAGAGAAGTCTGC
TACATATGTCAACACTGAGGGTAGAGCTCAGCAGACTAAGGTAGCAGTGACACCTCCTGGCTTGGCAAGA
GAAGACTGAAAAATTATAAGAGCACTCTCTGAGATTGCTGGAATGACTCTCCATATGACTCTGGATC
AAGTAAGGAACAGATTGGAAGAAGTCTCTCCTAATCTTGTTCGATATGATGATATTGAAGGGGCTAATTA
CTTCCAGCAAGCAAATGAGCTCTCAAAGCTAGTGAACCAGCAGCTTCTTGTGACCCACTTGTCCACCT
CAGCTAACTATAAAAGACTTCTACATGACAGATTCAATTAGCAGAGCCTCACAGACAATGGCCAAATGTG
TCAAAGCTGTCACAGAGGGTGCCAGGCAGTAGAGGAACCATCCATATGC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG233068 representing NM_001199983
 Red=Cloning site Green=Tags(s)

MQIPRFCYHERLSVAGNCRMCLVEIEKAPKVVAACAMPVMKGWNILTNSEKSKKAREGVMFLLANHPLD
 CPICDQGGECDLQDQSMFNGNDRSRFLEKRAVEDKNIGPLVKTIMTRCIQCTRCIRFASEIAGVDDLGT
 TGRGNDMQVGTYIEKMFMSSELSGNIIDICPVGALTSKPYAFTARPWETRKTESIDVMDAVGSNIVVSTRT
 GEVMRILPRMHEDINEEWISDKTRFAYDGLKRQRLTEPMVRNEKGLLTYT SWEDALSRVAGMLQSFQGKD
 VAAIAGGLVDAEALVALKDLLNRVSDTLCTEEVFPTAGAGTDLRSNYLLNTTIAGVEEADVLLVGTNP
 RFEAPLFNARIRKSWLHNDLKVALIGSPVDLTYTDHLDGSPKILQDIAASGSHPFQVLEAKKPMVVLG
 SSALQRNDGAAILAAVSSIAQKIRMTSGVTGDWKVMNHLHRIASQVAALDLGYKPGVEAIRKNPPKVLFL
 LGADGGCITRQDLPKDCFIIYQGHGDVGAPIADVILPGAAYTEKSATYVNTGRAQQTKVAVTPPGLAR
 EDWKIIRALSEIAGMTLPYDLDQVRNRL EEVSPNLVRYDDIEGANYFQQANELSKLVNQQLADPLVPP
 QLTIKDFYMTDSISRASQTMACVKAVTEGAQAVEEPSIC

TRTRPLE - GFP Tag - V

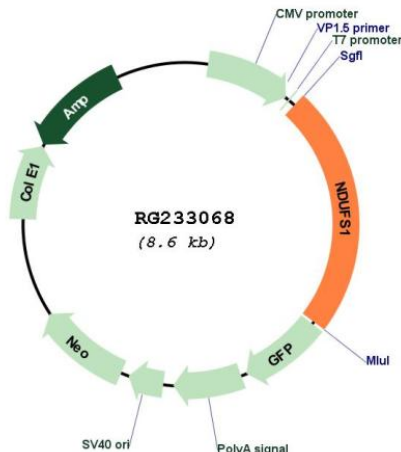
Restriction Sites:

SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



Plasmid Map:


ACCN: NM_001199983

ORF Size: 2010 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_001199983.2](#)

RefSeq Size: 3381 bp

RefSeq ORF: 2013 bp

Locus ID: 4719

UniProt ID: [P28331](#)

Cytogenetics: 2q33.3

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

Gene Summary: The protein encoded by this gene belongs to the complex I 75 kDa subunit family. Mammalian complex I is composed of 45 different subunits. It locates at the mitochondrial inner membrane. This protein has NADH dehydrogenase activity and oxidoreductase activity. It transfers electrons from NADH to the respiratory chain. The immediate electron acceptor for the enzyme is believed to be ubiquinone. This protein is the largest subunit of complex I and it is a component of the iron-sulfur (IP) fragment of the enzyme. It may form part of the active site crevice where NADH is oxidized. Mutations in this gene are associated with complex I deficiency. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jan 2011]