OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for RC203485

NDUFS2 (NM_004550) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NDUFS2 (NM_004550) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	NDUFS2
Synonyms:	CI-49; MC1DN6
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

View online »

ORF Nucleotide Sequence:

>RC203485 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCGGCGCTGAGGGCTTTGTGCGGCTTCCGGGGCGTCGCGGCCCAGGTGCTGCGGCCTGGGGCTGGAG
TCCGATTGCCGATTCAGCCCAGCAGAGGTGTTCGGCAGTGGCAGCCAGATGTGGAATGGGCACAGCAGTT
TGGGGGAGCTGTTATGTACCCAAGCAAAGAAACAGCCCACTGGAAGCCTCCACCTTGGAATGATGTGGAC
CCTCCAAAGGACACAATTGTGAAGAACATTACCCTGAACTTTGGGCCCCAACACCCAGCAGCGCATGGTG
TCCTGCGACTAGTGATGGAATTGAGTGGGGAGATGGTGCGGAAGTGTGATCCTCACATCGGGCTCCTGCA
CCGAGGCACTGAGAAGCTCATTGAATACAAGACCTATCTTCAGGCCCTTCCATACTTTGACCGGCTAGAC
TATGTGTCCATGATGTGTAACGAACAGGCCTATTCTCTAGCTGTGGAGAAGTTGCTAAACATCCGGCCTC
CTCCTCGGGCACAGTGGATCCGAGTGCTGTTTGGAGAAATCACACGTTTGTTGAACCACATCATGGCTGT
GACCACACATGCCCTGGACCTTGGGGCCATGACCCCTTTCTTCTGGCTGTTTGAAGAAAGGGAGAAGATG
TTTGAGTTCTACGAGCGAGTGTCTGGAGCCCGAATGCATGCTGCTTATATCCGGCCAGGAGGAGTGCACC
AGGACCTACCCCTTGGGCTTATGGATGACATTTATCAGTTTTCTAAGAACTTCTCTCTTCGGCTTGATGA
GTTGGAGGAGTTGCTGACCAACAATAGGATCTGGCGAAATCGGACAATTGACATTGGGGTTGTAACAGCA
GAAGAAGCACTTAACTATGGTTTTAGTGGAGTGATGCTTCGGGGCTCAGGCATCCAGTGGGACCTGCGGA
AGACCCAGCCCTATGATGTTTACGACCAGGTTGAGTTTGATGTTCCTGTTGGTTCTCGAGGGGACTGCTA
TGATAGGTACCTGTGCCGGGTGGAGGAGATGCGCCAGTCCCTGAGAATTATCGCACAGTGTCTAAACAAG
ATGCCTCCTGGGGAGATCAAGGTTGATGATGCCAAAGTGTCTCCACCTAAGCGAGCAGAGATGAAGACTT
CCATGGAGTCACTGATTCATCACTTTAAGTTGTATACTGAGGGCTACCAAGTTCCTCCAGGAGCCACATA
TACTGCCATTGAGGCTCCCAAGGGAGAGTTTGGGGTGTACCTGGTGTCTGATGGCAGCAGCCGCCCTTAT
CGATGCAAGATCAAGGCTCCTGGTTTTGCCCATCTGGCTGGTTTGGACAAGATGTCTAAGGGACACATGT
TGGCAGATGTCGTTGCCATCATAGGTACCCAAGATATTGTATTTGGAGAAGTAGATCGG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC203485 protein sequence
Red=Cloning site Green=Tags(s)

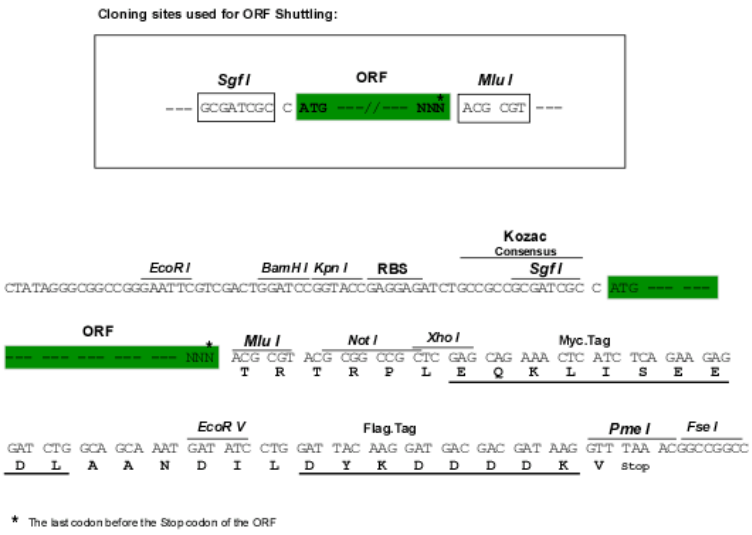
MAALRALCGFRGVAAQVLRPGAGVRLPIQPSRGVRQWQPDVEWAQQFGGAVMYPSKETAHWKPPPWNDVD
PPKDTIVKNITLNFGPQHPAAHGVLRLVMELSGEMVRKCDPHIGLLHRGTEKLIEYKTYLQALPYFDRLD
YVSMMCNEQAYSLAVEKLLNIRPPPRAQWIRVLFGEITRLLNHIMAVTTHALDLGAMTPFFWLFEEREKM
FEFYERVSGARMHAAYIRPGGVHQDLPLGLMDDIYQFSKNFSLRLDELEELLTNNRIWRNRTIDIGVVTA
EEALNYGFSGVMLRGSGIQWDLRKTQPYDVYDQVEFDVPVGSRGDCYDRYLCRVEEMRQSLRIIAQCLNK
MPPGEIKVDDAKVSPPKRAEMKTSMESLIHHFKLYTEGYQVPPGATYTAIEAPKGEFGVYLVSDGSSRPY
RCKIKAPGFAHLAGLDKMSKGHMLADVVAIIGTQDIVFGEVDR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6414_e05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_004550

ORF Size: 1389 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_004550.4

RefSeq Size: 2059 bp

RefSeq ORF: 1392 bp

Locus ID: 4720

UniProt ID: O75306

Cytogenetics: 1q23.3

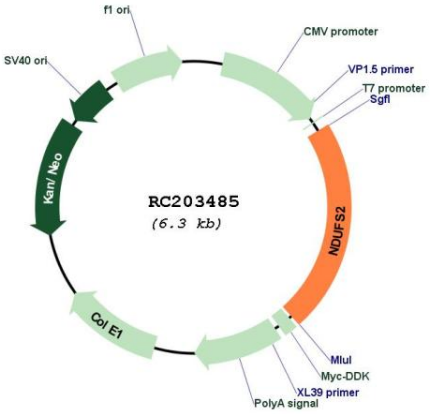
Domains: complex1_49Kd

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

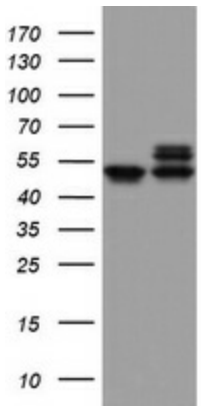
MW: 52.5 kDa

Gene Summary: The protein encoded by this gene is a core subunit of the mitochondrial membrane respiratory chain NADH dehydrogenase (complex I). Mammalian mitochondrial complex I is composed of at least 43 different subunits, 7 of which are encoded by the mitochondrial genome, and the rest are the products of nuclear genes. The iron-sulfur protein fraction of complex I is made up of 7 subunits, including this gene product. Complex I catalyzes the NADH oxidation with concomitant ubiquinone reduction and proton ejection out of the mitochondria. Mutations in this gene are associated with mitochondrial complex I deficiency. Alternatively spliced transcript variants encoding different isoforms have been found for this gene.[provided by RefSeq, Oct 2009]

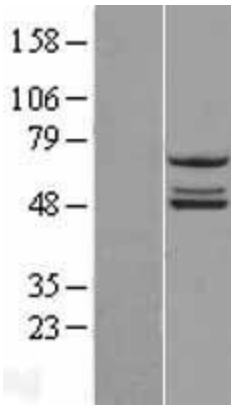
Product images:



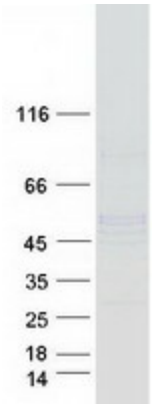
Circular map for RC203485



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY NDUFS2 (Cat# RC203485, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-NDUFS2 (Cat# [TA802340]). Positive lysates [LY417919] (100ug) and [LC417919] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY417919]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC203485 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified NDUFS2 protein (Cat# [TP303485]). The protein was produced from HEK293T cells transfected with NDUFS2 cDNA clone (Cat# RC203485) using MegaTran 2.0 (Cat# [TT210002]).