

## Product datasheet for **RC202715**

### **NDUFA2 (NM\_002488) Human Tagged ORF Clone**

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** NDUFA2 (NM\_002488) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** NDUFA2  
**Synonyms:** B8; CD14; CIB8; MC1DN13  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >RC202715 ORF sequence  
**Red=Cloning site Blue=ORF Green=Tags(s)**

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGGCGCGCGCCGAGCAAGTCGAGGAGTCGGGGCAAAGCTGGCCTGCGTGAGATTCGCATCCACTTAT  
GTCAGCGCTCGCCCGGCAGCCAGGGCGTCAGGGACTTCATTGAGAAACGCTACGTGGAGCTGAAGAAGGC  
GAATCCCGACTACCCATCCTAATCCGGAATGCTCCGATGTGCAGCCCAAGCTCTGGGCCGCTACGCA  
TTTGGCCAAGAGACGAATGTCCCTTTGAACAACCTCAGTGCTGATCAGGTAACCAGAGCCCTGGAGAACG  
TTCTAAGTGGTAAAGCC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC202715 protein sequence  
**Red=Cloning site Green=Tags(s)**  
MAAAAASRGVAKLGLREIRIHLQRSPGSQGVRFIEKRYVELKKNPDLPIILIRECSDVQPKLWARYA  
FGQETNVPLNNSADQVTRALENVLSGKA

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6415\\_a08.zip](https://cdn.origene.com/chromatograms/mk6415_a08.zip)

**Restriction Sites:** SgfI-MluI



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**Cloning Scheme:**


**ACCN:** NM\_002488

**ORF Size:** 297 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\\_002488.5](#)

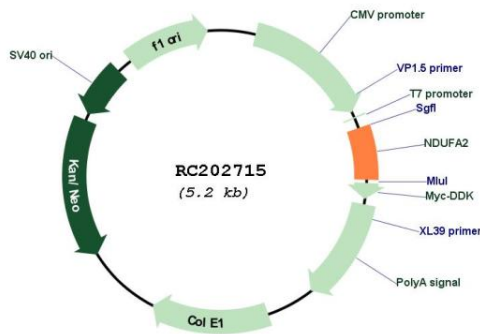
**RefSeq Size:** 726 bp

**RefSeq ORF:** 300 bp

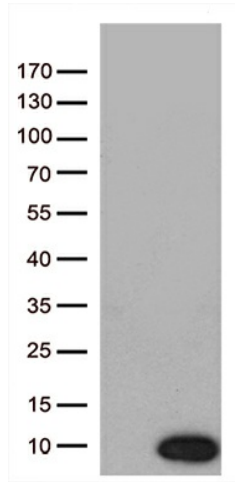
**Locus ID:** 4695

**UniProt ID:** [O43678](#)  
**Cytogenetics:** 5q31.3  
**Domains:** L51\_S25\_CI-B8  
**Protein Pathways:** Alzheimer's disease, Huntington's disease, Metabolic pathways, Oxidative phosphorylation, Parkinson's disease  
**MW:** 10.9 kDa  
**Gene Summary:** The encoded protein is a subunit of the hydrophobic protein fraction of the NADH:ubiquinone oxidoreductase (complex 1), the first enzyme complex in the electron transport chain located in the inner mitochondrial membrane, and may be involved in regulating complex I activity or its assembly via assistance in redox processes. Mutations in this gene are associated with Leigh syndrome, an early-onset progressive neurodegenerative disorder. Alternative splicing results in multiple transcript variants.[provided by RefSeq, May 2010]

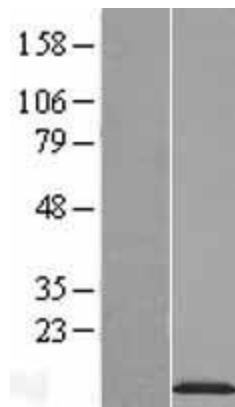
### Product images:



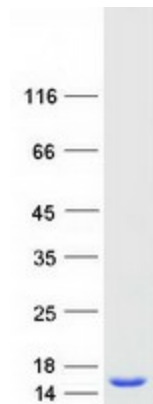
Circular map for RC202715



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY NDUFA2 (Cat# RC202715, 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-NDUFA2 (1:200) (Cat# [TA811465]). Positive lysates [LY419296] (100ug) and [LC419296] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY419296]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC202715 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified NDUFA2 protein (Cat# [TP302715]). The protein was produced from HEK293T cells transfected with NDUFA2 cDNA clone (Cat# RC202715) using MegaTran 2.0 (Cat# [TT210002]).