

Product datasheet for **SC117000**

NDUFS1 (NM_005006) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NDUFS1 (NM_005006) Human Untagged Clone
Tag:	Tag Free
Symbol:	NDUFS1
Synonyms:	CI-75k; CI-75Kd; MC1DN5; PRO1304
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >NCBI ORF sequence for NM_005006, the custom clone sequence may differ by one or more nucleotides

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ATGTTAAGGATACCTGTAAGAAAGGCCTTAGTAGGCCCTTCTAAGTCTCCTAAAGGATGTGTTGCAACAA
CTGCCACAGCAGCAAGCAACTTGATTGAAGTATTTGTTGATGGTCAGTCTGTCATGGTGGAAACCGGGAAC
GACCGTCTCCAAGCTTGTGAGAAGGTTGGCATGCAGATCCCTCGATTCTGTTATCATGAAAGGTTGTCT
GTTGCTGGAAACTGCAGGATGTGCCTTGTGAAAATTGAGAAAGCCCTAAGGTTGTAGCTGCTTGTGCCA
TGCCAGTAATGAAGGTTGGAATATCCTAACAACTCAGAAAAATCCAAAAAGCCAGGGGAGGTGTGAT
GGAGTTCTTATTAGCAAATCACCCATTGGACTGTCCTATTTGTGACCAGGGAGGTGAATGTGATCTGCAG
GACCAGTCCATGATGTTTGGAAATGATAGGAGCCGATTTTATAGAGGGGAAGCGTGTGTTGGAAGACAAGA
ACATTGGGCCATTGGTAAAGACCATCATGACAAGATGTATACAGTGTACTCGCTGCATCAGGTTTGAAG
TGAGATTGCAGGAGTAGATGATTTGGGAACAACAGGCAGAGGAAATGATATGCAAGTTGGCACATACATT
GAAAAGATGTTTCATGTCTGAACTGTCTGGGAATATCATTGATATCTGCCCTGTAGGTGCCCTAACCTCTA
AGCCCTATGCCTTACTGCCCGCCTTGGGAAACAAGAAAGACAGAATCCATTGATGTAATGGATGCGGT
TGGAAAGTAATATTGTGGTTAGCACAAAGAACTGGAGAAGTATGAGGATTTGCCAGTATGCATGAGGAC
ATCAATGAAGAGTGGATCTCTGATAAAAACCAGATTTGCCTATGATGGGCTAAAACGTCAAAGACTTACCG
AGCCAATGGTCAGAAATGAAAAAGGGCTTTTAACTATACTTCTTGGGAGGATGCGCTCTCTCGCGTAGC
TGGAAATGTTGCAGAGTTTCAAGGCAAAGATGTGGCAGCAATTGCAGGTGGCTTGGTGGATGCTGAAGCC
CTGGTAGCTCTCAAAGATTTGCTTAATAGAGTGGACTCTGACACCTTATGCACTGAAGAGGTCTTCCCCA
CTGCAGGAGCTGGCACAGATTTGCGTCCAATTATCTTCTAATACTACAATTGCTGGTGTGGAAGAGGC
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AGCTGGCTGCATAATGACTTAAAAGTGGCCCTTATAGGCAGTCCAGTGGACCTCACTTACACATATGACC
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GGAAGCTAAAAAACCAATGGTGGTTTTAGGCAGTTCTGCACTCCAAGAAATGATGGAGCAGCAATTCTT
GCAGCTGTTTCTAGCATTGCACAAAAGATTCGGATGACTAGTGGTGTACTGGTATTGGAAGTTATGA
ATATCCTTCATAGGATTGCAAGTCAAGTAGCTGCTTTGGACCTTGGCTATAAGCCTGGGGTGAAGCAAT
TCGGAAGAACCCTCCAAGGTGCTGTTTCTCTGGGAGCAGATGGAGGTTGTATCACACGACAGGATTTG
CCAAAGGATTGTTTCATTATTTATCAAGGACATCATGGTATGTTGGGGCTCCCATAGCTGATGTTATTC
TCCCAGGAGCTGCTTACACAGAGAAGTCTGCTACATATGTCAACACTGAGGGTAGAGCTCAGCAGACTAA
GGTAGCAGTGACACCTCCTGGCTTGGCAAGAGAAGACTGGAAAAATTATAAGAGCACTCTCTGAGATTGCT
GGAATGACTCTTCCATATGATACTCTGGATCAAGTAAGGAACAGATTGGAAGAAGTCTCTCCTAATCTTG
TTCGATATGATGATATTGAAGGGGCTAATTACTTCCAGCAAGCAATGAGCTCTCAAAGCTAGTGAACCA
GCAGCTTCTTGCTGACCCACTTGTTCACCTCAGCTAACTATAAAAGACTTCTACATGACAGATTCAATT
AGCAGAGCCTCACAGACAATGGCCAAATGTGTCAAAGCTGTACAGAGGGTGCCAGGCAGTAGAGGAAC
CATCCATATGCTGA
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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_005006 unedited
 AAGTCACAAATTGATCCGACTCATATAGGCGGCCGTAATTCGCACGAGCGGCCTCCT
 AGGGGTCGTGGTCCAGACAGTTTAGCAGAACAGCCTCCGCGGCATCCGGGCGAGAAG
 CAATATGTTAAGGATACCTGTAAGAAAGGCCTTAGTAGGCCTTTCTAAGTCTCCTAAAGG
 ATGTGTTGCAACAACGCCACAGCAGCAAGCAACTTGATTGAAGTATTTGTTGATGGTCA
 GTCTGTCATGGTGAACCGGGAACGACCGTCTCCAAGCTTGAGAGAAGTTGGCATGCA
 GATCCCTCGATTCTGTTATCATGAAAGGTTGCTGTTGCTGGAACCTGCAGGATGTGCCT
 TGTGAAATTGAGAACGCCCTAAGGTTGTAGCTGCTTGCCATGCCAGTAATGAAGGG
 TTGAATATCCTAACAACTCAGAAAAATCCAAAAAGCCAGGGAAGGTGTGATGGAGTT
 CTTATTAGCAAATCACCCATTGGACTGTCTATTTGTGACCAGGGAGGTGAATGTGATCT
 GCAGGACCAGTCCATGATGTTTGGAAATGATAGGAGCCGATTTTTAGAGGGGAAGCGTGC
 TGTGGAAGACAAGAACATTGGGCCATTGGTAAAGACCATCATGACAAGATGTATACAGTG
 TACTCCCTGCATCAGTTTGAAGTGAGATTGCAGGAGTAGATGATTTGGGAACAACAGG
 CAGACTGAAAGATATGCAAGTTGCCACATACATTGAAAAGATCTTCATGTCTGAACTGCC
 TCGGCAATATCATTGATATCTGCCCTGTAGGTGCCCTAACCTTTAAGCCCTATGCCTTTA
 CTGGCCTGGCCTTGGGAAACCAGCAAGACCACATCCATTGATTGTCATGGATGCGGTTGG
 CAAGCAAACCTGTGGTTAACCCC

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_005006 unedited
 TCCAGGCCCGGTAAGCACTGGGAGGGGTCACAGGGATGCCACCCGGGATCTGTTCCAGG
 AAACAGCTATGACCGCGCCGAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTTAAGGAT
 CTCTTTATGTTTCGTACAAAGGTTATCAATGCTTTTAAAGAGCATCTGCATAGTTTGTTA
 TTTAACCTTTACACACAATACATGTTTTTCAAACCTGCAAAGTTGATAACTAATATCATT
 TCAAATAGGCATAGTATAACCTTAAATATTACATGATTCAAATTATTATTTTTTTTTTT
 ACAAAGAAATAAACCTGTAAAGGATCACTGCACTACAGTTGTCCATTAATTATCTGCGGC
 AAAACTGGGATCCTAGTAGAAGCTTCAGCATAAGGATGGTTCCTCTACTGCCTGGGCACC
 CTCTGTGACAGCTTTGACACATTTGGCCATTGTCTGTGAGGCTCTGCTAATTGAATCTGT
 CATGTAGAAGTCTTTATAGTTAGCTGAGGTGGAACAAGTGGGTCAGCAAGAAGCTGCTG
 GTTCACTAGCTTTGAGAGCTCATTGCTTGCTGGAAGTAATTAGCCCTTCATATCATCA
 TATCGAACAAGATTAGGAGAGACTTCTTCCAATCTGTTCCCTTACTTGATCCAGAGTATCA
 TATGGAAGAGTCATTCCAGNCATCTCAGAGAGTGCTTTATNNATTTCCAGTCTTCTCTT
 GCCAGCCAGNAGNGTCACTGCTACCTTAGTCTGCTGAGCTCTACCCCTAGTGTGACATA
 TGTANCAGACTTCTGTGGTAGCAGCTCTGGGAGAATACTCAGCTATGGGAGCCACAT
 ACCATGATGTCCTGATAATGAAACANTCTTNGCACATCTGTCTGTGAACAACCTCTCT
 GCTCAGGAGAAAAGACCTGTGGGAGGTCTTTCAAATGCTTCCCCAGCTTATACCAGGT
 CAGCANNTCTGACTGCATCCTGAAGAATTCTACTTCAACCCA

Restriction Sites:

NotI-NotI

ACCN:

NM_005006

Insert Size:

2680 bp

OTI Disclaimer:

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).

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_005006.5](#), [NP_004997.4](#)

RefSeq Size: 3417 bp

RefSeq ORF: 2184 bp

Locus ID: 4719

UniProt ID: [P28331](#)

Cytogenetics: 2q33.3

Domains: fer2, molybdopterin

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]

Transcript Variant: This variant (1) represents the longest and predominant transcript. Variant 1 encodes isoform 1.