

## Product datasheet for **SC117328**

### NDUFA1 (NM\_004541) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	NDUFA1 (NM_004541) Human Untagged Clone
Tag:	Tag Free
Symbol:	NDUFA1
Synonyms:	CI-MWFE; MC1DN12; MWFE; ZNF183
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC117328 sequence for NM_004541 edited (data generated by NextGen Sequencing)

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ATGTGGTTCGAGATTCTCCCCGACTCTCCGTCATGGGCGTGTGCTTGTGATTCCAGGA
CTGGCTACTGCGTACATCCACAGTTTCACTAACGGGGCAAGGAAAAAAGGGTTGCTCAT
TTTGGGTATCACTGGAGTCTGATGGAAAGAGATAGGCGCATCTCTGGAGTTGATCGTTAC
TATGTGTCAAAGGGTTTGGAGAACATTGATTAA
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Clone variation with respect to NM\_004541.3

5' Read Nucleotide Sequence:	>OriGene 5' read for NM_004541 unedited TAGTTGCGTAGACGCACTATAGGCGGCCGCGCATGNCGCGGGGCGAAGCCAGGTCAC CTTTCAGGACCCAGAATAGGGTTTTGGCCTAGGTAACGGGGCAGAGATGTGGTTCGAGAT TCTCCCCGACTCTCCGTCATGGGCGTGTGCTTGTGATTCCAGGACTGGCTACTGCGTA CATCCACAGGTTCACTAACGGGGCAAGGAAAAAAGGGTTGCTCATTTTGGGTATCACTG GAGTCTGATGGAAAGAGATAGGCGCATCTCTGGAGTTGATCGTTACTATGTGTCAAAGGG TTACGAGAACATTGATTAAGGAAGCATTTCCTGATTGATAAAAAATAACTCAGTTAT GGCCATCTACCCCTGCTAGAAGGTTACAGTGTATTATGTAGCATGCAATGTGTTATGTAG TGCTTAATAAAAAATAAATGAACAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAACCTGACTCT AGATTGCGGCCGCGGCCATAGCTGTTTCCTGAACAGATCCCGGGTGGCATCCCTGTGACC CCTCCCCAGTGCCTCTCCTGGCCCTGGAAGTTGCCACTCCAGTGCCACCAGCCTTGTC TAATAAAATTAAGTTGCATCATTTTGTCTGACTAGGTGTCCTTCTATATATTATGGGGTG GAGGGGGTGGTATGGAGCAAGGGGCAAGTTGGGAAAACAACCTGTAGGGCCTGCGGGGT CTATTGGGAACCAAGCTGGAGTGACAGGCCCAATCCTTGGCTCACTGCAATCTCCGCT CCCTGAGTTCAAGCGGATTCTCTTGCCCAACCTCCCCGAGTTTGTGGATTCCACGGC ATGCATGACCANGCTTCAACTAATTTTGTCTTTCTTGAACAGACGGGGTTTACCATATT GGCAGGTTGGTCTCAAACCTAATTTCCAGGGATCTACCCCTCTGCCCCAAATGGTGG GATTCACGCGTGAACCTGTCCCTTT
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<b>3' Read Nucleotide Sequence:</b>	>OriGene 3' read for NM_004541 unedited NTTTTACTCTGNACCGCGCCGCATTTCTANGATCGAGTTAATTTTAATAAAGCACTACATAACACATTGCATGCTACATAATACA CTGAAACCTTCTACCAGGGGTAGATGGCCATAACTGAGTTATTTTTTTCATCAATCAGGA AAATGCTTCCTTAATCAAGGTTCTCAAACCCTTTGACACATTAACGACCAACTCCAA AGATGCGCCTATCTTTCCATCATACTCCAGGGATACCCAAAATGAGCAACCCTTTTTT CCTTGCCCCGTTAGTGAACCTGTGGATGTCCGCACTATCCAGCCCTGGAATCAACAACC ACACGCCCATGACGGAAAGCCCGGGGAGAATCTCGAACCACATCTTTGCCCGTTACCTA GGCCAAAACCCTACTCTTGGGCCCTTGAAAGGGGACCTGCTTTCGCCCTTGGGCCGAAC TCCCGCCGCCCTCTCGTGACTCCCATTCACAAACCCCGCCGCGCCATTACACCACCCTG CTTATATAAACCCCCCCCCCTACCCCCCCCCGCCCCTTTTGCTCCACCGCGCGCCGT TTCTCCCCCCTTTTTGGCCATTCGCGCCATCCCTGGCCCCAACCAACCCGCCATG ACCCCTCGCGGGGGGCGCACGGGACAACCCTGCGGACAACCCCTCCCCACCACCAT TCGGTGCGCTCGCCACCACCCTCGCCGCTCCGTATACCCGGCCTACTCCTCCCCGT TCCGCCCCCCCCGAACCCCTAGAGCCCCGCCCGGCATAAATGCCCGGCGGCCCTC TACCCGGCCTCCGCCCTGGGGCCCTCCCGTTTACCACCCCCACGTCTGCCCGCC GCCCTTCCCC
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_004541
<b>Insert Size:</b>	460 bp
<b>OTI Disclaimer:</b>	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).
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<a href="#">NM_004541.2</a> , <a href="#">NP_004532.1</a>
<b>RefSeq Size:</b>	479 bp
<b>RefSeq ORF:</b>	213 bp
<b>Locus ID:</b>	4694
<b>UniProt ID:</b>	<a href="#">O15239</a>
<b>Cytogenetics:</b>	Xq24
<b>Protein Families:</b>	Transmembrane

<b>Protein Pathways:</b>	Alzheimer's disease, Huntington's disease, Metabolic pathways, Oxidative phosphorylation, Parkinson's disease
<b>Gene Summary:</b>	The human NDUFA1 gene codes for an essential component of complex I of the respiratory chain, which transfers electrons from NADH to ubiquinone. It has been noted that the N-terminal hydrophobic domain has the potential to be folded into an alpha-helix spanning the inner mitochondrial membrane with a C-terminal hydrophilic domain interacting with globular subunits of complex I. The highly conserved two-domain structure suggests that this feature is critical for the protein function and might act as an anchor for the NADH:ubiquinone oxidoreductase complex at the inner mitochondrial membrane. However, the NDUFA1 peptide is one of about 31 components of the "hydrophobic protein" (HP) fraction of complex I which is involved in proton translocation. Thus the NDUFA1 peptide may also participate in that function. [provided by RefSeq, Jul 2008]