

1 **Supplemental Table 1**

2 **Primers List and Sequence**

3 **Primers used to construct the mutant strains**

Name	Sequence (5'-3')	Description
<i>ndhN</i> Up-F	CCGGAATTCGGCTAAAGAGAAGGAAATTGAAATG	Amplification of upstream region of <i>ndhN</i>
<i>ndhN</i> Up-R	CGGGGTACCCAATTAATGGCAATGGCAACAT	
<i>ndhN</i> Dn-F	CGCGGATCCTGCTTGCAGGCGGCCTAG	Amplification of downstream region of <i>ndhN</i>
<i>ndhN</i> Dn-R	CCCAAGCTTATTAGATGCTGAGAATCGGCC	
<i>ndhH</i> Up-F	CCGGAATTCACTTGAATAAAGGGAAGGGAAAGG	Amplification of upstream region of <i>ndhH</i>
<i>ndhH</i> Up-R	CGGGGTACCTACTGGGCCCGCTTAGGAAC	
<i>ndhH</i> Dn-F	CGCGGATCCGGGAAATGCGGGAGTCGG	Amplification of downstream region of <i>ndhH</i>
<i>ndhH</i> Dn-R	CCCAAGCTTTTACTGGGCGGTTGCACAAC	
<i>ndhJ</i> Up-F	CCGGAATTCGGCAAGCGGATTTGATTATC	Amplification of upstream region of <i>ndhJ</i>
<i>ndhJ</i> Up-R	TCCGAGCTCCAAAGCCATTGGTGGTCAGC	
<i>ndhJ</i> Dn-F	CGCGGATCCAAGGTCACCCCAATTTGAAACG	Amplification of downstream region of <i>ndhJ</i>
<i>ndhJ</i> Dn-R	CCCAAGCTTATAAATTGTTGCTCTGCCACC	
<i>ndhO</i> Up-F	TCCGAGCTCAAAGTTCCAGATAGACCCGGG	Amplification of upstream region of <i>ndhO</i>
<i>ndhO</i> Up-R	CGGGGTACCACTGCCCTTTTTCATTTAGCG	
<i>ndhO</i> Dn-F	CGCGGATCCTAGACCAAATCGAAGCCCTGG	Amplification of downstream region of <i>ndhO</i>
<i>ndhO</i> Dn-R	CCCAAGCTTAATAGGCTGTGCCCGTTGTAG	
<i>ndhM</i> -F	GGGAATTCATATGCTTGTAAATCCACTACCCG	Amplification of <i>ndhM</i> encoding gene fragment
<i>ndhM</i> -R	CGCGGATCCTTAGTTATCCAGCCAATATTTTCCTG	
Primer a	CCCGGACAAATTTGTTTAGAATTACT	Segregation analysis
Primer b	CTCCCTCCAGTTATGGTCAATTGA	
Primer c	ATGTTGCCATTGCCATTAATTG	Segregation analysis
Primer d	CTAGGCCGCCTGCAAGCA	
Primer e	GACAAATACATAAGG AATTATAACC	Segregation analysis
Primer f	CACAACGTGGCTTTCCCGGATCC	
Primer g	ATGGCCGCTAAAATGAAAAAG	Segregation analysis

Primer h	CTAAGCCAGGGCTTCGATTTG	
Primer i	ATGACCAAGATTGAAACCAGAACC	Segregation analysis
Primer j	CTAGCGGTCCACCGATCCC	
Primer k	GTGGCTGAGGAAGTGA ACTCCC	Segregation analysis
Primer l	CTAATAGGCATCCTGGAGTTCGT	

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5 **Primers used to construct vectors to express proteins to raise NdhN, NdhO and NdhJ**

6 **antibodies.**

Name	Sequence (5'-3')	Description
<i>ndhN</i> -NdeF	GGAATTCCATATGTTGCCATTGCCATTAATTG	NdhN antibody
<i>ndhN</i> -BamR	CGCGGATCCCTAGGCCGCCTGCAAGCA	
<i>ndhJ</i> -NdeF	GGAATTCCATATGGTGGCTGAGGAAGTGA ACTCCC	NdhJ antibody
<i>ndhJ</i> -BamR	CGCGGATCCCTAATAGGCATCCTGGAGTTCGT	
<i>ndhO</i> -NdeF	GGAATTCCATATGGCCGCTAAAATGAAAAAG	NdhO antibody
<i>ndhO</i> -BamR	CGCGGATCCCTAAGCCAGGGCTTCGATTTG	

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8 **Primers used to construct fusion protein expression vector**

Name	Sequence (5'-3')	Description
<i>ndhN</i> -EcoF	CCGGAATTCATGTTGCCATTGCCATTAATTG	GST-tagged NdhN
<i>ndhN</i> -SalR	ACGCGTCGACCTAGGCCGCCTGCAAGC	
<i>ndhO</i> -EcoF	CCGGAATTCATGGCCGCTAAAATGAAAAAG	GST-tagged NdhO
<i>ndhO</i> -SalR	ACGCGTCGACCTAAGCCAGGGCTTCGATTTG	
<i>ndhH</i> -F	GGAATTCCATATGACCAAGATTGAAACCAGAACC	His ₆ -tagged NdhH
<i>ndhH</i> -R	CGCGGATCCCTAGCGGTCCACCGATCCC	
<i>ndhI</i> -F	GGAATTCCATATGTTTAAACAACATTCTCAAACAGGTAG	His ₆ -tagged NdhI
<i>ndhI</i> -R	CGCGGATCCCTATTCTGCTTTCACCAAATCTTCG	
<i>ndhJ</i> -F	GGAATTCCATATGGTGGCTGAGGAAGTGA ACTCCC	His ₆ -tagged NdhJ
<i>ndhJ</i> -R	CGCGGATCCCTAATAGGCATCCTGGAGTTCGT	
<i>ndhK</i> -F	GGAATTCCATATGAGTCCCAACCCTGCTAACC	His ₆ -tagged NdhK

<i>ndhK</i> -R	CCGGAATTCTCAGCCACGGTTTAATTGCTC	
<i>ndhM</i> -F	GGGAATTCCATATGCTTGTTAAATCCACTACCCG	His ₆ -tagged NdhM
<i>ndhM</i> -R	CGCGGATCCTTAGTTATCCAGCCAATATTTTCCTG	
<i>ndhO</i> -F	GGGAATTCCATATGGCCGCTAAAATGAAAAAG	His ₆ -tagged NdhO
<i>ndhO</i> -R	CGCGGATCCCTAAGCCAGGGCTTCGATTTG	
<i>ndhS</i> -F	GGGAATTCCATATGATTTTTCCCGGTGCAAC	His ₆ -tagged NdhS
<i>ndhS</i> -R	CGCGGATCCCTAGATGGGTTTGACTGCTTCC	

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