**SUPPLEMENTARY FILE 1:** *C. elegans* strains

**A. Strain PHX1715 (*coq-2(syb1715)*),deletionmutant in *coq-2* exon 6A**

1) *coq-2* wild-type sequence of exon 6A (capital letters) and 30bp flanking sequence (red):

atctcttacactctctctatcatagtacagGACTCACGTTCAATTGGGGCGCTCTTCTTGGATGGTGTGCGCTGAAAGGTGATTTGTCGTCTAGTGCACCGTTTTGGATGTATGCAGCTGCACTTCAATGGACACTGATCTACGACACTATCTATGCACATCAGgtggcctatttggggattgggactcttttg

2) Deleted sequence (-134 bp):

GACTCACGTTCAATTGGGGCGCTCTTCTTGGATGGTGTGCGCTGAAAGGTGATTTGTCGTCTAGTGCACCGTTTTGGATGTATGCAGCTGCACTTCAATGGACACTGATCTACGACACTATCTATGCACATCAG

3) sgRNA target sites used for strains PHX1715 (PAM motives underlined):

sg1：acagGACTCACGTTCAATTGGGG
sg2：TGTATGCAGCTGCACTTCAATGG
sg3：GCACATCAGgtggcctatttggg

4) PCR and sequencing primers:

GUC01-ko-f: AAATAAGGTTTTCCCGCCAG

GUC01-ko-r: GTCGACTTGACACCGATCAT

**B. Strain PHX1721 (*coq-2(syb1721)*), deletionmutant in *coq-2* exon 6E**

1) *coq-2* wild-type sequence of exon 6E (capital letters) and 30bp flanking sequence (red):

aacctagtctgtcgttttgtacgattgcagGTGCCACCCTAAACTGGAGTGTGCTGATAGCGTGGGCAGAATTGGGCCATTTCAATGATTTTGGCATCTTTTTGCCACTCTACACTGCCACCATCCTGCACACGGTCATCTACGACACTATTTATAGTCATCAGgtagagctaagaaaagcaggaaaaaagtat

2) Deleted sequence (-134 bp):

GTGCCACCCTAAACTGGAGTGTGCTGATAGCGTGGGCAGAATTGGGCCATTTCAATGATTTTGGCATCTTTTTGCCACTCTACACTGCCACCATCCTGCACACGGTCATCTACGACACTATTTATAGTCATCAG

3) sgRNA target sites used for strain PHX1721 (PAM motives underlined):

sg1：CCACCCTAAACTGGAGTGTGCTG

sg2：CCTGCACACGGTCATCTACGACA

4) PCR and sequencing primers:

GUC02-ko-f: CAAAAACAAGTACGGTTCCC

GUC02-ko-r: CGCAGCACGGTATGAGACTTT