

Supplementary Table 1. Primer sequences

Forward Primers

16.2 kb mito fragment	TGA GGC CAA ATA TCA TTC TGA GGG GC
120 bp mito fragment	CTC TCA CTG CCC AAG AAC TAT C
PPARGC1A	CTGCTTCGTCGTCAAAAACAGCTTGACTGGGATGACCGAAGTGTCTTCCCTCAAGACCTAAGCGACAGCG TGACCTTGTTC
TFAM	CATCGCTCCGGTGGATGAGGCAGTGACCCGACCCCAATCATCTCTCTTTCTTGGTGTGAGAAGATGCTC ATTGCTCGCTTGCCAACTAGGCTAAATACCCTGGTAGCCAACATTCTGCACAATTCTGCGGGTTAGCAGGAAG GTTAGGGAAC
COX4	GAAGAGAAGTAAGCCGAGGGCGTCTTTGATTGTGTAGTAAGGGTGAAGGCTGTTGAGATTATTGAGCTTCA TCATGACCAGAAG
CYTB	AGGCGATGGCGGTGAGTGTGAGGATAGGCAAAAAGGCGGCCAAAGACGCCTATCTCCAGTTTATGATCGGGA AACT
CAT	GGAGACTACGACGCAAAACCAGCACCCCGTCTCCGCGACTACTTTATAGGCCGAACCTAACTCCTCGTACAT TCCTATTGTTTTC
SOD1	AGGGCAGGTCGGGGAGGCTGTGCTTCTGCCTGGAGCCAATTTGGTTTTACTCCCCTCGATTATGCGGAGT GGTGTTCCTCCCTCGTAGGTTTAGAGGAAACACCCTCATAGATGAAAACCTTTCCGGTTATATCTATCATTTA CTTGACACCCT
SOD2	GGCTTCCTGAAAAGCAGTCTTGCTCTCGATCTGCTTACCATCTTGGCACCCTGTGGACGGCAACTCAGAGA TAACGCATAT
GPX1	GCAAGGAGCTGGGGCTCATACTTGATATCCTGAACCCTGGAGAGTGAATCTAGGACGCAAACTCACTTGAAG AAGTAAAAGCGAG
TRX1	TCTTGTCATGAACCTCAGAAACATCAGGCAACTCATGGTTGGAATTCAGCACATTTGGAATGATGTGACTGGG AATAAGACGACG
C1ORF43	TGAGCACACAGAGGGCTACAATGTGATGGCCTCCCATCTCCTTCATCACACCACGCGATGACGTTGTCGTAAG AGTCCGATAATCT
EMC7	AATGTCTCCTTTCCGGATGGTTCGATACGCTCCAGGAAGTACGGCTTAACTGAGGCTGTTAAAGCTGTAGCA ACTCTCCACGA
HPRT1	TCTTCAAGCCATCCTGTGT
VEGF	GTGATGTGCAGCTGATCAAGACT
36B4	GGCTATCCAGCGTACTCAA
B2M	

Reverse Primers

16.2 kb mito fragment	TTT CAT CAT GCG GAG ATG TTG GAT GG
120 bp mito fragment	GGG CTT TAG GGA GTC ATA AGT G
PPARGC1A	CGAAAGCCATGACCTCCGATCACTCGGAGAATTGTTCACTACTGAAATCACTGTCCCTCAGTTCACCGGTCTT GT
TFAM	CGAAAGCCATGACCTCCGATCACTCCAGGGCACTCAGCACGCCCCACATGCTTCCGGAGAAAACGC CGAAAGCCATGACCTCCGATCACTCAAGTCTTCGCTCTTCAACAACATGAGCTCGTACACACACAGAGGTG GAA
COX4	CGAAAGCCATGACCTCCGATCACTCTCGCTAGGAGTCTGGTGAAGAATAGTGTAAATGTCATTAAGGAGAG AAG
CYTB	CGAAAGCCATGACCTCCGATCACTCCTCGAGCACGGTAGGGACAGTTCACAGGTATATGAAGATAATTGGGT CCC
CAT	CGAAAGCCATGACCTCCGATCACTCCCTGGTTCGAGGACTGCAACGGAAAACCCAGACGCTGCA CGAAAGCCATGACCTCCGATCACTCCAGCTGCATGATCTGCGCGTTGATGTGAGGTTCCAGGGCGCCGTAGT CGT
SOD1	CGAAAGCCATGACCTCCGATCACTCCAGTCAACAGGACCAGCACCCATCTCGAGGTGGTATTTTCTGTAAGAT CA
SOD2	CGAAAGCCATGACCTCCGATCACTCCAGTCAACAGGACCAGCACCCATCTCGAGGTGGTATTTTCTGTAAGAT CA
GPX1	CGAAAGCCATGACCTCCGATCACTCCAGTCAACAGGACCAGCACCCATCTCGAGGTGGTATTTTCTGTAAGAT CA
TRX1	CGAAAGCCATGACCTCCGATCACTCCAGTCAACAGGACCAGCACCCATCTCGAGGTGGTATTTTCTGTAAGAT CA
C1ORF43	CGAAAGCCATGACCTCCGATCACTCCTGGGTTTCCAGTTGTAGTAGTCTAGCATCATCATCT CGAAAGCCATGACCTCCGATCACTCGTTTTACTGCTGCCGCTGCTAGATTTGCCAGATGATTTTGAAGAGAAG AG
EMC7	CGAAAGCCATGACCTCCGATCACTCCAGTCAACAGGACCAGCACCCATCTCGAGGTGGTATTTTCTGTAAGAT CA
HPRT1	CGAAAGCCATGACCTCCGATCACTCCAGTCAACAGGACCAGCACCCATCTCGAGGTGGTATTTTCTGTAAGAT CA
VCP	CGAAAGCCATGACCTCCGATCACTCGTTTTCCACCCTTTGAACTCCACAGCACGCATCCACCACGGACAAG AAA
VEGF	CTTCTTTGGTCTGCATTC
36B4	GATGACCAGCCAAAGGAGA
B2M	GATGAAACCCAGACACATAGCA

Supplementary Table 2. Thermal cycler conditions for amplification of long and short mitochondrial fragments

Cycle step	Long mitochondrial fragment	Short mitochondrial fragment
Initial denaturation	98°C for 30 s	95°C for 5 min
Amplification:	18 cycles of:	17 cycles of:
Denaturation	98°C for 5 s	95°C for 30 s
Annealing	60°C for 10 s	55°C for 30 s
Extension	72°C for 4 min 30 s	72°C for 45 s
Final extension	72°C for 5 s	72°C for 7 min
Hold	4°C	4°C