

Supplementary Table

Table S1. Cassette sequence used in this study.

Cassette	Sequence (5'-NNN-3')
KANMX6	GACATGGAGGCCCAAGAATACCCTCCTTGACAGTCTTGACG TGCGCAGCTCAGGGGCATGATGTGACTGTCGCCCCGTACAT TTAGCCCATACATCCCCATGTATAATCATTTGCATCCATACA TTTTGATGGCCGCACGGCGCGAAGCAAAAATTACGGCTCC TCGCTGCAGACCTGCGAGCAGGGAAACGCTCCCCTCACA GACGCGTTGAATTGTCCCCACGCCGCGCCCCCTGTAGAGA AATATAAAAGGTTAGGATTTGCCACTGAGGTTCTTCTTTCA TATACTTCCTTTTAAAATCTTGCTAGGATACAGTTCTCACA TCACATCCGAACATAAACAACCATGGGTAAGGAAAAGACT CACGTTTCGAGGCCGCGATTAAATTCCAACATGGATGCTG ATTTATATGGGTATAAATGGGCTCGCGATAATGTCGGGGCAA TCAGGTGCGACAATCTATCGATTGTATGGGAAGCCCGATG CGCCAGAGTTGTTTCTGAAACATGGCAAAGGTAGCGTTG CCAATGATGTTACAGATGAGATGGTCAGACTAAACTGGCT GACGGAATTTATGCCTCTTCCGACCATCAAGCATTTTATCC GTACTCCTGATGATGCATGGTTACTCACCCTGCGATCCC CGGCAAAACAGCATTCCAGGTATTAGAAGAATATCCTGAT TCAGGTGAAAATATTGTTGATGCGCTGGCAGTGTTCTCTGC GCCGGTTGCATTTCGATTCCTGTTTGTAATTGTCCTTTTAAC AGCGATCGCGTATTTTCGTCTCGCTCAGGCGCAATCACGAA TGAATAACGGTTTGGTTGATGCGAGTGATTTTGATGACGA GCGTAATGGCTGGCCTGTTGAACAAGTCTGGAAAGAAAT GCATAAGCTTTTGCCATTCTCACCGGATTCAGTCGTCCT CATGGTGATTTCTCACTTGATAACCTTATTTTTGACGAGGG GAAATTAATAGGTTGTATTGATGTTGGACGAGTCGGAATC GCAGACCGATAACCAGGATCTTGCCATCCTATGGAACCTGCC TCGGTGAGTTTTCTCCTTCATTACAGAAACGGCTTTTTTCA AAAATATGGTATTGATAATCCTGATATGAATAAATTGCAGT TTCATTTGATGCTCGATGAGTTTTTCTAATCAGTACTGACA

	ATAAAAAGATTCTTGTTTTCAAGAACTTGTCATTTGTATAG TTTTTTTATATTGTAGTTGTTCTATTTTAATCAAATGTTAGC GTGATTTATATTTTTTTTCGCCTCGACATCATCTGCCCAGA TGCGAAGTTAAGTGCGCAGAAAGTAATATCATGCGTCAAT CGTATGTGAATGCTGGTCGCTATACTG
HPHMX6	GACATGGAGGCCCGAGAATACCCTCCTTGACAGTCTTGACG TGCGCAGCTCAGGGGCATGATGTGACTGTCGCCCCGTACAT TTAGCCCATACATCCCCATGTATAATCATTGTCATCCATACA TTTTGATGGCCGCACGGCGCGAAGCAAAAATTACGGCTCC TCGCTGCAGACCTGCGAGCAGGGAAACGCTCCCCCTCACA GACGCGTTGAATTGTCCCCACGCCGCGCCCCCTGTAGAGA AATATAAAAGGTTAGGATTTGCCACTGAGGTTCTTCTTTCA TATACTTCCTTTTAAAATCTTGCTAGGATACAGTTCTCACA TCACATCCGAACATAAACAACCATGGGTAAAAAGCCTGAA CTCACCGCGACGTCTGTGCGAGAAGTTTCTGATCGAAAAGT TCGACAGCGTCTCCGACCTGATGCAGCTCTCGGAGGGCG AAGAATCTCGTGCTTTTCAGCTTCGATGTAGGAGGGCGTGG ATATGTCCTGCGGGTAAATAGCTGCGCCGATGGTTTCTAC AAAGATCGTTATGTTTATCGGCACTTTGCATCGGCCGCGC TCCCGATTCCGGAAGTGCTTGACATTGGGGAATTCAGCGA GAGCCTGACCTATTGCATCTCCCGCCGTGCACAGGGTGTC ACGTTGCAAGACCTGCCTGAAACCGAACTGCCCCGCTGTT CTGCAGCCGGTCGCGGAGGCCATGGATGCGATCGCTGCG GCCGATCTTAGCCAGACGAGCGGGTTCGGCCCATTTCGGA CCGCAAGGAATCGGTCAATACACTACATGGCGTGATTTC TATGCGCGATTGCTGATCCCCATGTGTATCACTGGCAAAC TGTGATGGACGACACCGTCAGTGCGTCCGTCGCGCAGGC TCTCGATGAGCTGATGCTTTGGGCGGAGGACTGCCCCGA AGTCCGGCACCTCGTGCACGCGGATTTCGGCTCCAACAA TGTCTTGACGGACAATGGCCGCATAACAGCGGTCATTGAC TGGAGCGAGGCGATGTTGCGGGGATTCCCAATACGAGGTC GCCAACATCTTCTTCTGGAGGCCGTGGTTGGCTTGTATGG AGCAGCAGACGCGCTACTTCGAGCGGAGGCATCCGGAGC

	TTGCAGGATCGCCGCGGCTCCGGGCGTATATGCTCCGCAT TGGTCTTGACCAACTCTATCAGAGCTTGGTTGACGGCAAT TTCGATGATGCAGCTTGGGCGCAGGGTTCGATGCGACGCA ATCGTCCGATCCGGAGCCGGGACTGTCGGGCGTACACAA ATCGCCCGCAGAAGCGCGGGCCGTCTGGACCGATGGCTGT GTAGAAGTACTCGCCGATAGTGGAACCGACGCCCCAGC ACTCGTCCGAGGGCAAAGGAATAATCAGTACTGACAATAA AAAGATTCTTGTTTTCAAGAACTTGTCATTTGTATAGTTTT TTTATATTGTAGTTGTTCTATTTTAATCAAATGTTAGCGTGA TTTATATTTTTTTTCGCCTCGACATCATCTGCCCAGATGCG AAGTTAAGTGCGCAGAAAGTAATATCATGCGTCAATCGTAT GTGAATGCTGGTCGCTATACTG
HIS3MX6	GACATGGAGGCCCAAGAATACCCTCCTTGACAGTCTTGACG TGCGCAGCTCAGGGGCATGATGTGACTGTCGCCCCGTACAT TTAGCCCATACATCCCCATGTATAATCATTGTCATCCATACA TTTTGATGGCCGCACGGCGCGAAGCAAAAATTACGGCTCC TCGCTGCAGACCTGCGAGCAGGGAAACGCTCCCCTCACA GACGCGTTGAATTGTCCCCACGCCGCGCCCCCTGTAGAGA AATATAAAAGGTTAGGATTTGCCACTGAGGTTCTTCTTTCA TATACTTCCTTTTAAAATCTTGCTAGGATACAGTTCTCACA TCACATCCGAACATAAACAACCATGGGTAGGAGGGCTTTT GTAGAAAGAAATACGAACGAAACGAAAATCAGCGTTGCCA TCGCTTTGGACAAAGCTCCCTTACCTGAAGAGTCGAATTT TATTGATGAACTTATAACTTCCAAGCATGCAAACCAAAAAG GGAGAACAAGTAATCCAAGTAGACACGGGAATTGGATTCT TGGATCACATGTATCATGCACTGGCTAAACATGCAGGCTG GAGCTTACGACTTTACTCAAGAGGTGATTTAATCATCGAT GATCATCACACTGCAGAAGATACTGCTATTGCACTTGGTAT TGCATTCAAGCAGGCTATGGGTAACTTTGCCGGCGTTAAA AGATTTGGACATGCTTATTGTCCACTTGACGAAGCTCTTT CTAGAAGCGTAGTTGACTTGTCGGGACGGCCCTATGCTGT TATCGATTTGGGATTAAAGCGTGAAAAGGTTGGGGAATTG TCCTGTGAAATGATCCCTCACTTACTATATTCCTTTTCGGT

AGCAGCTGGAATTACTTTGCATGTTACCTGCTTATATGGTA GTAATGACCATCATCGTGCTGAAAGCGCTTTTAAATCTCT GGCTGTTGCCATGCGCGCGGCTACTAGTCTTACTGGAAGT TCTGAAGTCCCAAGCACGAAGGGAGTGTTGTAAAGGATA CTGACAATAAAAAGATTCTTGTTTTCAAGAACTTGTCATTT GTATAGTTTTTTTTATATTGTAGTTGTTCTATTTTAATCAAAT GTTAGCGTGATTTATATTTTTTTTCGCCTCGACATCATCTG CCCAGATGCGAAGTTAAGTGCGCAGAAAGTAATATCATGC GTCAATCGTATGTGAATGCTGGTCGCTATACTG

Supplementary figure S1

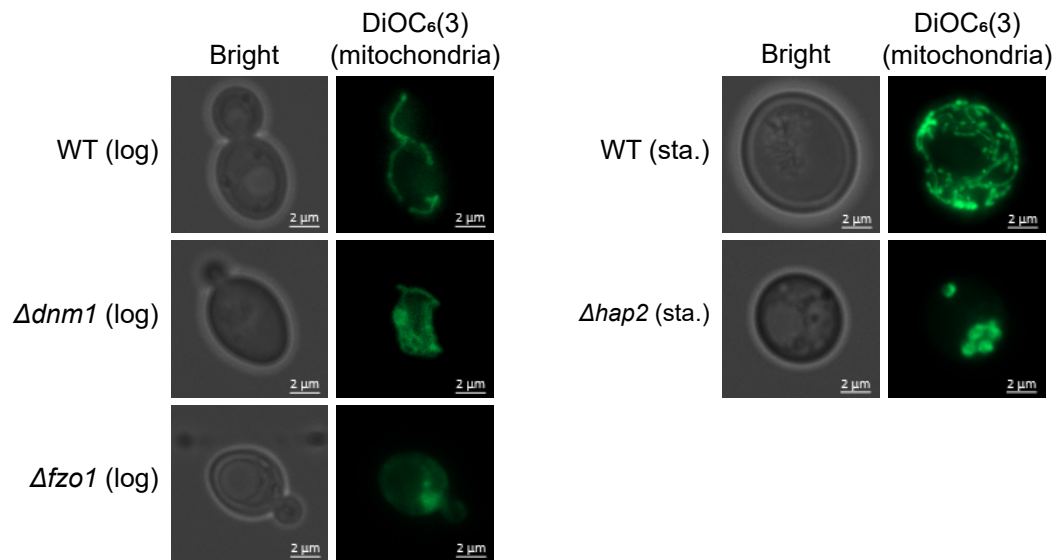


Figure S1. Mitochondria stained with DiOC₆(3) viewed under Zeiss Axioskop 2 mot plus fluorescence microscope.

Mitochondria from WT, $\Delta dnm1$, $\Delta fzo1$, and $\Delta hap2$ in log or stationary phase were labelled with DiOC₆(3) and imaged using a Zeiss Axioskop 2 mot plus fluorescence microscope.

Supplementary figure S2

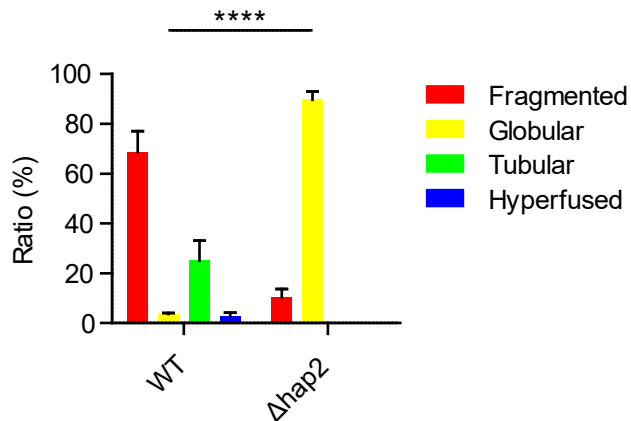


Figure S2. Majority of $\Delta hap2$ cells contain globular mitochondria.

Mitochondria of WT and $\Delta hap2$ in the stationary phase were labeled with preSu9-EGFP and classified by fluorescence microscopy. Mitochondrial morphology was divided into four categories: fragmented, globular, tubular, and hyperfused. Classification results for WT and $\Delta hap2$ were collected from 3 independent experiments ($n > 200$ cells per experiment). Statistical analysis was based on two-way ANOVA. ****: p value < 0.0001 .