### Supplementary Table S2: Primers

| Name   | Sequences                                                                 | Purpose                           |
|--------|---------------------------------------------------------------------------|-----------------------------------|
| a1-F   | TGACTACCAGCCTGATAGGCAC                                                   | Real-Time PCR for \(a\1\)         |
| a1-R   | GGAAGGAAGGTCCCCTTTCC                                                    | Real-Time PCR for \(a\1\)         |
| a1-S1  | GGGTAAAGCAACTATAGGGAAGCTTTGAT GACTGGAGGGCTATCCCGTACGGTCGAC                | construction of \(a\1\\)Δ          |
| a1-S2  | TAGAAGGCTTCAATCTTTAATCGTAGAATTCGAG                                      | construction of \(a\1\\)Δ          |
| a2-F   | AACACTACAGACGACGGAC                                                     | Real-Time PCR for \(a\2\)         |
| a2-R   | GAAGCGCTAGAAGACACT                                                      | Real-Time PCR for \(a\2\)         |
| a2-S1  | AGGATCTAATAGATGATCTTTGAGAGTTAAA TCAATAACGAAAAATATCGTAGACTTAAAATCGTAC      | construction of \(a\2\\)Δ          |
| act1-4 | ACACAGACGCTGAGGAGTCC                                                   | Real-Time PCR for \(ACT1\)        |
| act1-5 | GGTGTTCTACAGAGACGT                                                     | Real-Time PCR for \(ACT1\)        |
| alpha1-F | CAGATGCGTGAAGATCGGA                                                     | Real-Time PCR for \(\alpha\1\)    |
| alpha1-R | TTGAAAAAGGCTTCCCTCTGCTCTT                                             | Real-Time PCR for \(\alpha\1\)    |
| alpha1-S1 | TAGAATCAGATACGCTGCTCTCCAAAAGTA  TCAATTGGGAATATCGTAGACTTAAAATCGTAC       | construction of \(\alpha\1\\)Δ    |
| alpha1-S2 | AATATTTGTGACTGCTCTGCTGTAATAACTACTCT                                   | construction of \(\alpha\1\\)Δ    |
| act1-4 | CAGATGCGTGAAGATCGGA                                                     | Real-Time PCR for \(ACT1\)        |
| act1-5 | GGTGTTCTACAGAGACGT                                                     | Real-Time PCR for \(ACT1\)        |
| alpha2-F | CAGATGCGTGAAGATCGGA                                                     | Real-Time PCR for \(\alpha\2\)    |
| alpha2-R | TTGAAAAAGGCTTCCCTCTGCTCTT                                             | Real-Time PCR for \(\alpha\2\)    |
| alpha2-S1 | TAGAATCAGATACGCTGCTCTCCAAAAGTA  TCAATTGGGAATATCGTAGACTTAAAATCGTAC       | construction of \(\alpha\2\\)Δ    |
| alpha2-S2 | AATATTTGTGACTGCTCTGCTGTAATAACTACTCT                                   | construction of \(\alpha\2\\)Δ    |
| ATG1-S1F | CAGAACACACTATGTGTGCA                                                   | construction of \(atg1\)Δ         |
| ATG1-S1R | GTCACCTCACTAGGCCTGACATGGACGTCGAC                                       | construction of \(atg1\)Δ         |
| ATG1-S2F | CAGAACACACTATGTGTGCA                                                   | construction of \(atg1\)Δ         |
| ATG1-S2R | GTCACCTCACTAGGCCTGACATGGACGTCGAC                                       | construction of \(atg1\)Δ         |
| ATG13-S1F | CAGAACACACTATGTGTGCA                                                   | construction of \(atg13\)Δ        |
| ATG13-S1R | GTCACCTCACTAGGCCTGACATGGACGTCGAC                                       | construction of \(atg13\)Δ        |
| ATG13-S2F | CAGAACACACTATGTGTGCA                                                   | construction of \(atg13\)Δ        |
| ATG13-S2R | GTCACCTCACTAGGCCTGACATGGACGTCGAC                                       | construction of \(atg13\)Δ        |
| CDC28-11 | AACACAAAACCCGCGATGTTGCA                                               | amplify \(CDC28\) fragment        |
| CDC28-5  | CTCCATCTTTTGCTCGTGA                                                     | amplify \(CDC28\) fragment        |
| contig66-LS-S2 | GATCTCTACACGTCTGTGACGAATTCGACTAGACT                                   | construction of \(1\)\(\alpha\)IR2Δ |
| contig66L-S1 | TACATGTATGCTGCTCGTCAATAGTTAGGAAGAATGCA                                  | construction of \(1\)\(\alpha\)IR2Δ |

Note: The sequences are provided in a tabular format with columns for Name, Sequences, and Purpose. The table includes various primers for different genes and their specific functions, such as Real-Time PCR or construction of specific gene deletions (\(\Delta\)).
N-alpha2-S2  -  TAACAAAGGTATCACACATGCAAGCTC  -  construction of IR2Δmat-αΔ
                CCGTCAAGGGATCCCTAGGAATGATAGAT
                GATGAATTCGAGCTCG

primer_A  -  AGGAACAGTGTGAGACTGG  -  PCR α and PCR α
primer_B  -  TTAACACAGTACGCAGGAAA  -  PCR α
primer_C  -  ATATAGTACTCACATCGAGGC  -  PCR α

RME1-1  -  GCAGCAGCAGAGGCAATACT  -  Real-Time PCR for RME1
RME1-2  -  TTGCGGGAAGCCATTAGC  -  Real-Time PCR for RME1
RME1-S1  -  ACGTTACCTTTCTAATAATTGTCAATTAG  -  construction of rme1Δ
            AAAGTGCGCTTTTCTAGACGCGGACACGTA
            CGCTCGAGGTCGAC

RME1-S2  -  ACCGCTCTGGACAACGAATAAAATCCACGGA  -  construction of rme1Δ
            AGTACGGAGTGAACATTAAATATTAGACATC
            GATGAATTCGAGCTCG

Sa2-S2  -  CACTATTACGTAATCAGAAGAAGCTTTCGG  -  construction of α2Δ
            TGATATATAGTTACCGCTCTGGATTAATCGA
            GATGAATTCCGAGCTCG

STE2-S1  -  ATCCCTCCAGCATAAACAGTTGCAAGGCTCGA  -  construction of ste2Δ
            CACCTCATTTACACGATCTCCAAATGCCTAG
            GCCTCGAGGTCGAC

STE2-S2  -  CTGGCTGACTTTTAAGTATTAAATTTCGCTG  -  construction of ste2Δ
            GACGATCAGAAAAAGCCGGAATTATCAGA
            GAATTCGAGCTCG

STE3-S1  -  AGCTGACCGAAAAATTATAAAAGCAGAGCCGAC  -  construction of ste3Δ
            AGGGAGACAGAAAATGACATCACAGAATGCCTG
            CGCTCGAGGTCGAC

STE3-S2  -  CCGGCGGTCTTTTATTATATAGGATGCTGG  -  construction of ste3Δ
            TCCATGCTGAATCTTGGAATATTACCTAG
            GAATTCGAGCTCG

STE4-S1  -  GGGGACGGGAGGATGCAGCGAAGATCGGAGATG  -  construction of ste4Δ
            GATTTGCCAGAATCTTTGGAAAGATTATCAGAT
            GGACGATCAGAAGCCGAC

STE4-S2  -  GGGGACGGGAGGATGCAGCGAAGATCGGAGATG  -  construction of ste4Δ
            GTATACATACATGCGCTTTATTACTAATCGA
            GAATTCGAGCTCG