

**Table S1. Oligonucleotides used in this study.**

Name	Sequence (5'→3') <sup>a</sup>	Purpose
oligo346	CCATGTGTGTCGAGTCCTTC	5' <i>efl</i> for qRT-PCR normalization
oligo347	GAACGTACAGCAACAGTCTGG	3' <i>efl</i> for qRT-PCR normalization
oligo303	GCTACCACTCTGCATCCTCA	5' <i>abaA</i> for qRT-PCR
oligo304	TACGAGCTCCAGCATGATTC	3' <i>abaA</i> for qRT-PCR
oligo305	ACGGCAGGAAGTTGTCTTCT'	5' <i>wetA</i> for qRT-PCR
oligo306	CTGTCAGCGACTTGTTGGAT	3' <i>wetA</i> for qRT-PCR
oligo256	TTCCAAGCAGAGCTTGTCAC	5' <i>brlA</i> for qRT-PCR
oligo257	CCAGGTTCTTTGCACTTGAA	3' <i>brlA</i> for qRT-PCR
oligo1557	TTCCACACCAACCTCGATGA	5' <i>imd2</i> for qRT-PCR
oligo1558	GAGACAAGGTTTCCGTCTGC	3' <i>imd2</i> for qRT-PCR
oligo1559	GGGTTGAAGGTGCAGGAGTA	5' <i>sdt1</i> for qRT-PCR
oligo1560	GTCTCCCTTTCCGCAAACCTC	3' <i>sdt1</i> for qRT-PCR
oligo273	AGTCTCGGACGGACTGATCT	5' <i>laeA</i> for qRT-PCR
oligo247	GATACTTGTTGGCCACATCG	3' <i>laeA</i> for qRT-PCR
oligo271	AAATCCATCACATCCACCCT	5' <i>gliZ</i> for qRT-PCR
oligo272	GGTTGTTTCATGGTCAGTTGC	3' <i>gliZ</i> for qRT-PCR

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oligo1591	GCCCTATGCAGCTTTCTTCC	5' catalase for qRT-PCR
oligo1592	TCCATCATCCGCTCTCTTCC	3' catalase for qRT-PCR
oligo1593	GGTCAGTTCCAGCCTCTTCT	5' MnSOD for qRT-PCR
oligo1594	CTTGAAGTACTCGGCCTTGC	3' MnSOD for qRT-PCR
oligo1595	CTGGGAGAGAAGAAGCCCAA	5' thioredoxin reductase for qRT-PCR
oligo1596	GCATAGAAGAGACCGTTGGC	3' thioredoxin reductase for qRT-PCR
oligo1597	ACGCAGATCCTCAAGTCGAT	5' quinone oxidoreductase for qRT-PCR
oligo1598	GCCAGTGATCTCCTTCACCT	3' quinone oxidoreductase for qRT-PCR
oligo697	GCAATGTAAAGCTAACGTGCGTG	5' <i>AnpyrG</i> marker
oligo698	TGCCTTTAAGCTTCGGGTAGAG	3' <i>AnpyrG</i> marker
oligo1402	GCAGCCACCAAAGTTACCTT	5' flanking region of <i>AfukdmA</i>
oligo1403	<i>TTGTAGGCTTTGGGCTGTTCA</i> ATCGATAAAGATGAGAGCGCC	5' <i>AfukdmA</i> with <i>AnpyrG</i> tail
oligo1404	<i>CTGATCTACCCCTTGGAACGCAGCAT</i> GGAAGATGGTGCTTG CATG	3' <i>AfukdmA</i> with <i>AnpyrG</i> tail
oligo1405	TGAGCGCCAGTAAAGGAAGA	3' flanking region of <i>AfukdmA</i>
oligo1406	GGTGTTTCCCATCCTGCAAA	5' nested of <i>AfukdmA</i>
oligo1407	GATCGCAAGCGAAGAGTAAG	3' nested of <i>AfukdmA</i>
oligo1513	<i>TAGTTCTGTTACCGAGCCGGCAT</i> GCAAGCACCATCTTCCA	3' <i>AfukdmA</i> with <i>hygR</i> tail for complementation
oligo1514	<i>GCTCTGAACGATATGCTCCAACAT</i> GCTCTCTGTACATGCGTG	5' <i>AfukdmA</i> with <i>hygR</i> tail for complementation

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oligo1396	TTACCTTGTCGTCCGTTTGC	5' flanking region of <i>AfukdmB</i>
oligo1397	<i>TTGTAGGCTTTGGGCTGTT</i> CACAAAGCTGGGTGGGGGACAAA	5' <i>AfukdmB</i> with <i>AnpyrG</i> tail
oligo1398	<i>CTGATCTACCCCTTGGAACGCAGCATT</i> TACGAACGGAAGCACTG	3' <i>AfukdmB</i> with <i>AnpyrG</i> tail
oligo1399	TTGGGTGGATGCCGAAAAG	3' flanking region of <i>AfukdmB</i>
oligo1400	ATTCGACCCTTGCCTCATCA	5' nested of <i>AfukdmB</i>
oligo1401	GTTCGGCTTGATGATCGGTT	3' nested of <i>AfukdmB</i>
oligo1511	<i>TAGTTCTGTTACCGAGCCGGCAGTGCTTCCGTT</i> CGTGAAA	3' <i>AfukdmB</i> with <i>hygR</i> tail for complementation
oligo1512	<i>GCTCTGAACGATATGCTCCAACCCGATTGTATT</i> CCTCTTCGG	5' <i>AfukdmB</i> with <i>hygR</i> tail for complementation
oligo1422	CCGGCTCGGTAAACAGAACTANNNNNNNNNNGCCNNNNNNNNNN CAGAACGGCGTAACCAAAAAGTCAC	5' of <i>hygR</i>
oligo1423	GTTGGAGCATATCGTTCAGAGCNNNNNNNNNNNTAGNNNNNNNNNN NTTCATCTTGACGACCGTTGATCTG	3' of <i>hygR</i>

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<sup>a</sup> Tail sequence is in italic.