

1 **Supplementary information**

2 Yu et al. Deletion of *ADA2* increases antifungal drug susceptibility and virulence in *Candida*
3 *glabrata*

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5 **Table S1. PCR primers used in this study**

Primer	Use	Sequence (5' to 3')
JC765	3' NCR of <i>ADA2</i>	<u>GTGGTAATTATTACTATTTACAATCAAAGGTGGTCCTT</u> GGTTAGCTTAAGGTCATGG
JC644	3' NCR of <i>ADA2</i>	CAAAGAACGCTGTGAATTCC
JC641	5' NCR of <i>ADA2</i>	TCAGGGCTAAACACTTGCAT
JC764	5' NCR of <i>ADA2</i>	<u>TCGTTTTCTTTATTATTCTCTAGTTTTGACGCGTGATTGA</u> AATTCACCAGC
JC723	<i>SAT1</i> marker	CGTCAAAACTAGAGAATAA
JC724	<i>SAT1</i> marker	AGGACCACCTTTGATTGT
JC647	<i>ADA2</i> ORF	TTCATTGTGACGTGTGCTCA
JC648	<i>ADA2</i> ORF	CTTTTCAGCACGAACTGTCAA
JC820	<i>ADA2</i> 5' disruption confirmation	TCTGTCTGCTACCAAAGAAGA
JC821	<i>ADA2</i> 3' disruption confirmation	TGTGGATGTGTGGATAAGTTG
JC887	3' NCR of <i>ADA2</i> (SacII)	aaaccgeggCATGGTTTACATAACCAATGG
JC888	3' NCR of <i>ADA2</i> (SacI)	aaagagctcCAAAGAACGCTGTGAATTCC
JC885	5' NCR of <i>ADA2</i> (KpnI)	aaaggtaccTCAGGGCTAAACACTTGCAT
JC886	5' NCR of <i>ADA2</i> (ApaI)	aaagggcccCGTGATTGAAATTCACCAGC
JC893	<i>ADA2</i> complementation	aaggtaccATACCGTTTTTTTTTACGCGA
JC894	<i>ADA2</i> complementation	aaaagcttTCATATCCAATGCTGTAGTTG
JC48	Disruption confirmation	ACAATCAAAGGTGGTCCT
JC81	Disruption confirmation	AACTTCCTCGAGGGGGGGCC
JC974	3' NCR of <i>ERG6</i> (SacII)	aaaccgeggTGCAGCATAACTATATTCACA
JC975	3' NCR of <i>ERG6</i> (SacI)	aaagagctcTGGCAAGGCTGACTCTGGTAT
JC972	5' NCR of <i>ERG6</i> (KpnI)	aaaggtaccTTCTGTGCCAAGGCCTTTTT
JC973	5' NCR of <i>ERG6</i> (ApaI)	aaagggcccTCCTTCTGTATTAGTATCGGG
JC1078	<i>ERG6</i> ORF	TTTGGAGGACTACAACGAGGC
JC1079	<i>ERG6</i> ORF	GACGGTGAACATCTTTGGAA
JC1080	<i>ERG6</i> 5' disruption confirmation	CTTGTCCCTGGCGTGTCTAA
JC1081	<i>ERG6</i> 3' disruption confirmation	TGTTGCTGAGAGAAGAAGCTG

JC370	qPCR <i>ACT1</i> ORF	GTACCACCATGTTCCCAGGT
JC371	qPCR <i>ACT1</i> ORF	ACCACCGATCCAGACAGAGT
JC851	qPCR <i>GAS3</i> ORF	ACTTGATTGCCCGGAGAAAA
JC852	qPCR <i>GAS3</i> ORF	GGTAATGCCAGGCAAGGTAATAAT
JC853	qPCR CAGL0L01771g	CAGTCGCTGGAGATGGTAAGG
JC854	qPCR CAGL0L01771g	ACCACCGACACGCCATTAG
JC855	qPCR CAGL0G05269g	TCACTTGAAGAAAGACCAAAATGC
JC856	qPCR CAGL0G05269g	GGTGCTCTTACCGTGTTCAGTT
JC873	qPCR <i>ADA2</i> ORF	GCCTCCGTGCCGTCTTG
JC874	qPCR <i>ADA2</i> ORF	CCAAAGGTTGATCATCTGGTTCA
JC875	qPCR <i>ERG6</i> ORF	CAACAACGACTACCAGATCCAAAA
JC876	qPCR <i>ERG6</i> ORF	TTGGCTCAAACCTCCATGTTCAT
JC1042	qPCR <i>EPA23</i> ORF	TGATACTTCCCCCAAAAACG
JC1043	qPCR <i>EPA23</i> ORF	TGGTTCACTTGATATGGCTGATG
JC1044	qPCR <i>YPS4</i> ORF	GTTTGGCTTGGCTGCTTTCT
JC1045	qPCR <i>YPS4</i> ORF	TCTAGAGCCATTGGCAGCAA
JC1046	qPCR <i>EPA20</i> ORF	TGTCAAGCCATCCAGTTCAGTT
JC1047	qPCR <i>EPA20</i> ORF	TAACCGTCTGTACATATCGTTGCA
JC1048	qPCR <i>YPS10</i> ORF	GGACACGGGTTCGTCTGATT
JC1049	qPCR <i>YPS10</i> ORF	TGCATCTAAGGAGGCAATGCT

6 *Complementary sequences to *SAT1* gene sequences are underlined.

7 #Lowercase letters represent restriction enzyme cutting sites and three adenine nucleotides to protect
8 primers.

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21 **Table S2. Plasmids used in this study**

Plasmid	Relevant insert	Parent
pSFS2A		(1)
pYSJ32	3'NCR of <i>CgADA2</i>	pSFS2A
pYSJ36	5'NCR of <i>CgADA2</i>	pYSJ32
pYSJ46	5'NCR and ORF of <i>CgADA2</i>	pYSJ32
pYSJ89	3'NCR of <i>CgERG6</i>	pSFS2A
pYSJ91	5'NCR of <i>CgERG6</i>	pYSJ89

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23 Reference

- 24 1. **Reuß O, Vik Å, Kolter R, Morschhäuser J.** 2004. The *SAT1* flipper, an optimized tool for
 25 gene disruption in *Candida albicans*. *Gene* **341**:119-127.

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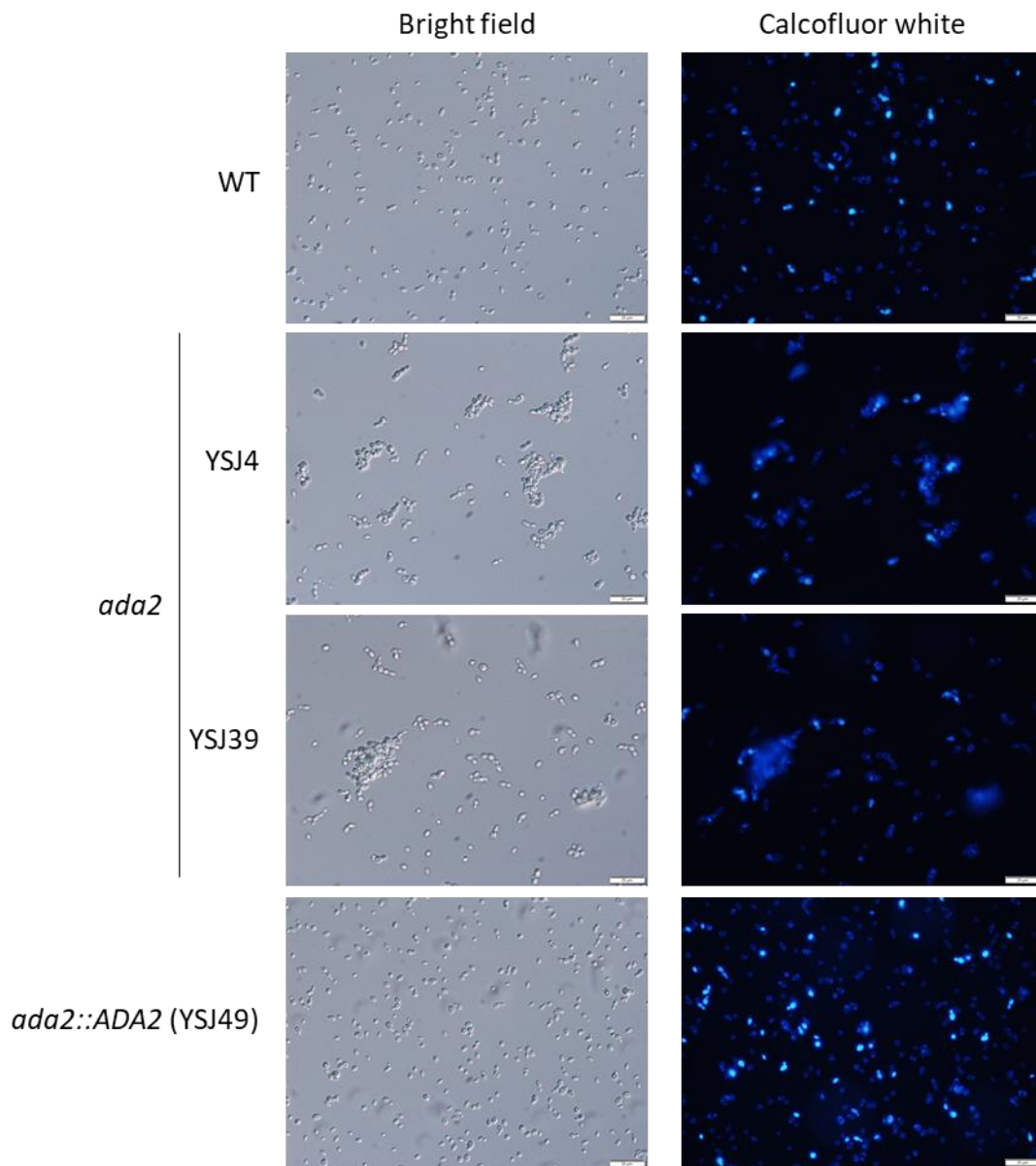
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39 **Figure S1**



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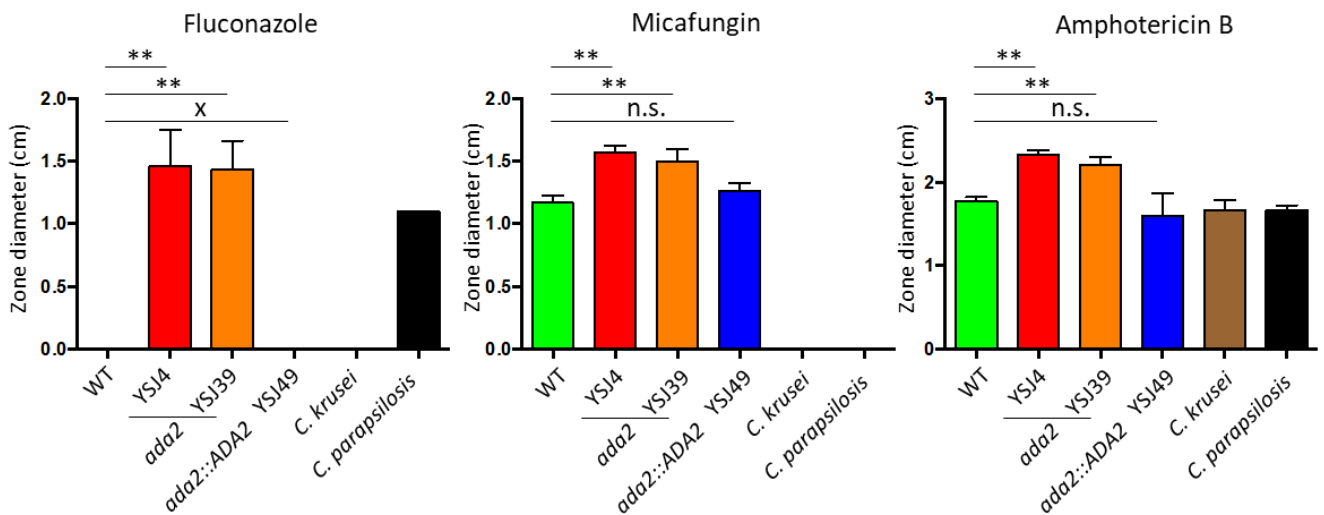
41 **Figure S1.** The *ada2* mutants exhibited clumping phenotypes. Strains were grown for 18 h in liquid
42 YPD medium at 37°C with shaking, washed twice with dH₂O, stained with 1 mg/mL calcofluor white
43 for 5 min, and washed once with dH₂O before microscopic observation. The scale bar represents 20
44 μm.

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47 **Figure S2**

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50 **Figure S2.** Bar graphs of disk diffusion assays. The histogram represents the diameter of inhibitory
51 zone of fluconazole, micafungin, and amphotericin B against *Candida* strains. *Candida* cells were
52 plated onto Mueller Hinton medium containing 2% glucose and 0.5 $\mu\text{g/mL}$ methylene blue. The disks
53 containing 20 μg FLC, 40 ng MCF, or 2.5 μg AmB were placed on the agar surface and incubated
54 at 35°C for 24 h. The data shown were calculated from three technical replicates. Data represent the
55 mean \pm standard error of the mean. The statistical analyses of *P* values were determined by the unpaired
56 *t* test. ***P* < 0.001; “x” unable to determine; “n.s.” not significant.