

Table S1. Fungal Strains, Plasmids, and Gene Fragments

Fungal strains

Strain	Description	Genotype	Phenotype	Reference
CY4353	<i>Saccharomyces cerevisiae</i> expressing wild-type <i>TRA1</i>	<i>MATα his3Δ0 leu2Δ0 ura3Δ0 TRA1-HIS3 +DED1pr-YHR100-LEU2</i>	wild-type <i>TRA1</i>	Hoke <i>et al. Curr Genet</i> (2010)
CY6582	<i>Saccharomyces cerevisiae tra1Q3</i> mutant strain with 3 point mutations in the gene <i>TRA1</i> (R3389Q, R3390Q, R3456Q)	<i>MATα his3Δ0 leu2Δ0 ura3Δ0 tra1Q3-HIS3+DED1pr-YHR100-LEU2</i>	<i>tra1Q3</i>	Berg <i>et al. G3</i> 2018
fRS302	Wild-type <i>Candida albicans</i> strain SC5314 containing empty CRISPR-Cas9 backbone (pRS252), selected for based on NAT resistance background; the control strain for the mutant <i>tra1Q3</i>	<i>NAT-Cas9</i>	<i>NATr</i>	
fRS318	<i>Candida albicans tra1Q3</i> mutant strain with 3 point mutations in the gene <i>TRA1</i> (K3471Q, R3472Q, R3538Q). Plasmid pRS290 (CRISPR-Cas9 plasmid targeting <i>TRA1</i>) was co-transformed with gene block gRS11 (repair template containing 3 <i>TRA1</i> mutations) into the WT <i>C. albicans</i> strain SC5314. Mutations were verified using Sanger sequencing. One of two mutant strains used.	<i>NAT-Cas9 tra1Q3/tra1Q3 (K3471Q, R3472Q, R3538Q)</i>	<i>NATr tra1Q3</i>	
fRS319	<i>Candida albicans tra1Q3</i> mutant strain with 3 point mutations in the gene <i>TRA1</i> (K3471Q, R3472Q, R3538Q). Plasmid pRS290 (CRISPR-Cas9 plasmid targeting <i>TRA1</i>) was	<i>NAT-Cas9 tra1Q3/tra1Q3 (K3471Q, R3472Q, R3538Q)</i>	<i>NATr tra1Q3</i>	

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	co-transformed with gene block gRS11 (repair template containing 3 <i>TRA1</i> mutations) into the WT <i>C. albicans</i> strain SC5314. Mutations were verified using Sanger sequencing. One of two mutant strains used.			
fRS572	<i>Candida albicans tra1</i> mutant strain, with a deletion of the <i>TRA1</i> open reading frame. Plasmid pRS477 (CRISPR-Cas9 plasmid targeting <i>TRA1</i>) was co-transformed with gene block gRS83 (repair template) into the WT <i>C. albicans</i> strain SC5314. Mutations were verified by PCR. One of two mutant strains used.	NAT-Cas9 <i>tra1/tra1</i>	NATr <i>tra1</i>	
fRS573	<i>Candida albicans tra1</i> mutant strain, with a deletion of the <i>TRA1</i> open reading frame. Plasmid pRS477 (CRISPR-Cas9 plasmid targeting <i>TRA1</i>) was co-transformed with gene block gRS83 (repair template) into the WT <i>C. albicans</i> strain SC5314. Mutations were verified by PCR. One of two mutant strains used.	NAT-Cas9 <i>tra1/tra1</i>	NATr <i>tra1</i>	

Plasmids

Plasmid	Description	aka	Citation
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pRS252	CRISPR-Cas9 optimized for <i>Candida albicans</i> plasmid backbone; contains homology regions for NEUT5L integration, <i>C. albicans</i> -optimized Cas9, NAT resistance marker, and AMP selection. Linearized with Pacl for integration. Linearized with NgoMIV for Gibson assembly.	Addgene ID: 89576, pJK-caCas9-NatMX-Neut5L	Shapiro et al. Nature Microbiology, 2018
pRS290	CRISPR-Cas9 <i>C. albicans</i> plasmid assembled by cloning the plasmid pRS252 and the geneblock fragment gRS10; CRISPR-Cas9 targets <i>TRA1</i> with two sgRNAs flanking the Q3 loci. Contains homology regions for <i>NEUT5L</i> integration, <i>C. albicans</i> -optimized Cas9, NAT resistance marker, and AMP selection. Linearized with Pacl for integration.		
pRS477	CRISPR-Cas9 <i>C. albicans</i> plasmid assembled by cloning the plasmid pRS252 and the geneblock fragment gRS83; CRISPR-Cas9 targets <i>TRA1</i> with two sgRNAs flanking the <i>TRA1</i> open reading frame. Contains homology regions for <i>NEUT5L</i> integration, <i>C. albicans</i> -optimized Cas9, NAT resistance marker, and AMP selection. Linearized with Pacl for integration.		

Gene fragments

Gene block	Description	Sequence
gRS10	Gene block to be cloned into pRS252 to target <i>TRA1</i> for cleavage with 2 sgRNAs. Block contains regions of homology to plasmid for Gibson assembly, sgRNA promoter, two sgRNAs (containing sgRNA tail)	GAGATCCAGAAAACCTGAATTGTGCTTGAATACCACTTG TTTAGCCTAAAAGTCATTGGTCAATAACTATACTCGAGT ATTGCCTCATCAAAGAAACAATCAAATATTATAGATACT CACTCCATCACGTGATAATTTCACTGGTATGGAAAAGT GGAAAATTTTATAAAAAAAAAATTTGATGCCTTTGGCATA GCTGAAACTTCGGCCCAATAGGATTGGAGAATATGTTT TCGCAGCGTTCTTACAATTAATTGTGGTGGAAAGTTTCG AGACTTGCGTAAACTATTTTTAATTTGACCACGAGCTAA ATCAATGGGTTTTAGAGCTAGAAATAGCAAGTTAAAATA AGGCTAGTCCGTTATCAACTTGAAAAAGTGGCACCGA

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		<p>GTCGGTGGTGCGTATCGGGTTTGGGTAATCTTGTTTTA GAGCTATGCTGAAAAGCATAGCAAGTTAAAATAAGGCA GTGATTTTTAATCCAGTCCGTACACAACCTTGAAAAAGT GCGCACCGATTCCGGTGCTTTTTTTTTGGCGAACGTGGC GAGAAAGGAAGGGAAGAAAGCGAAAGGAGCGGGCG CTAG</p>
gRS11	<p>Gene block acts as a repair template to be used with CRISPR plasmid pRS290. Repair template contains homology to <i>TRA1</i> and contains 5 mutations: 3 Q3 mutations (R3471Q, R3472Q, R3538Q), and 2 synonymous mutations in the sgRNA PAM sites to block further CRISPR activity after integration of repair template</p>	<p>CGAAGCTAATATAACCAGATTTGCTGAAACTGTACTTC CAAAACAGATTAGAGCTGAATTTGAAAAGATTTGGTA ATTTGAAACCAAACCTTGAAACTTATATTTCTAAATTA AGAAATTGGAGAGATAGGTTAGAGGACAAATTAGATAG ACGGTTTTTCGCAAGTCAATTTGGAGAATTTATGTCCTC ATTTGAGTGAATTTTCATCATCAGAAATTTGAAGAAATTG AAGTTCCAGGGCAATATTTGTTGAACAAaGATAGCAAC GCCCATTTTGTAAAATTGAAAGATTCTTTGgACCATT GATTTAGCTCGTGGTTCTAGTGCCTGTTATcAGcaATTG AGAATTCGTGGTCATGATGGTAGTTTACACACATTTGC GGTCCAATTTCCAGCGGCTCGTAATTGTCGTGCTGAG GAATCGGTATTTCAACTTTTCAGAATATTTAACGACAGC ATTTGAGAAAAGTTGAGACTCGTCGTGTAATATCCA ATTTACTTTACCAATTGCCGTTCCATTATCTCCACATATT CaaATTGTCAATGATGATACTAGAGATGTGACATTACAA AGAGTTTATGAAGATTTCTGTAAAAAGAATGGTAAGAG TCGTGATGAACCATTTATTTATACAGTcGAGAAATTAAG AGCCGCTTTTGAiCAAAGATTACCCAAACCCGATATTG CTAGTGTTAAAGTTGAAATCTTGAGTGCAATTCAATCAT TATTGGTTCCCTCCACGGTGTGAAAAACCATTTTATC AATTTGTATCCAAATTTTGAAGATTTCTGGTTATTCCGT AAGCAATTCACCTCACAAATATGCGTCATTTATTTTACC ACATACATGATGTGTATTAATGCTAGACAACCACAGAAA ATTCATGTTAATAGAGGTTCCAGGAGCTGTTTGGACTTC TGATATGTTACCATACAGATTATCAACCAGAAATAATGG TGAAATTACCCATAATAACAATCTCCTATATTTGTT</p>
gRS83	<p>Gene block to be cloned into pRS252 to target the <i>TRA1</i> open reading frame for cleavage with 2 sgRNAs. Block contains regions of homology to plasmid for Gibson assembly, sgRNA promoter, two sgRNAs (containing sgRNA tail)</p>	<p>GAGATCCAGAAAACCTGAATTGTGCTTGAATACCACTTG TTTAGCCGTATTATGCCTTTGTCAATGTGTGTAGAATTT GGTTATTACATATCCATGTGTAATATATATGTTGATCAA AAACGCGATCTTCTCTTTGGTGTAGTGTGTTACACAAA AAATTCACTAGTCTAGGTCACATGATAATCACGTGAAA ATCAAAAATTTGTTGAAATTGAATTTCTCAATTTTGAA ATTTTGTGTTGAAATAAAAGTCATTGGTCAATAACTATACT CGAGTATTGCCTCATCAAAGAAACAATCAAATATTATAG ATACTCACTCCATCACGTGATAATTTCACTGGTATGGAA AAGTGGAAAATTTTATAAAAAAAAAAATTTGATGCCTTTGG CATAGCTGAAACTTCGGCCCAATAGGATTGGAGAATAT</p>

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		GTTTTCGCAGCGTTCTTACAATTAATTGTGGTGAAG TTCGAGACTTGCGTAACTATTTTTAATTTGGTTACGCG ACTTAATGATAGGTTTTAGAGCTAGAAATAGCAAGTTAA AATAAGGCTAGTCCGTTATCAACTTGAAAAAGTGGCAC CGAGTCGGTGGTGCGTAGCTTCAGCTGATACCTTAGT TTTAGAGCTATGCTGAAAAGCATAGCAAGTTAAAATAA GGCAGTGATTTTTAATCCAGTCCGTACACAACCTTGAAA AAGTGCGCACCGATTCCGGTGCTTTTTTTTTATTGTATTG TATTTATATATGTTTATTAAACTATTAGTATTATTGTTGTAT TTATTAAATTTTCCCATTTTATTGTTATCATTGACTCAA ACTGAGTAATACCTATCTAATCTATATCGATAATCATCTA TTGATTCAGAACCGATACGAATCTTCTATTTTCGTTTAA GTACTCTTCTATCAACTTTATTACCAATATATTCTAAAGC CTTTTCACAAATTATGGCGAACGTGGCGAGAAAGGAA GGGAAGAAAGCGAAAGGAGCGGGCGCTAG
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