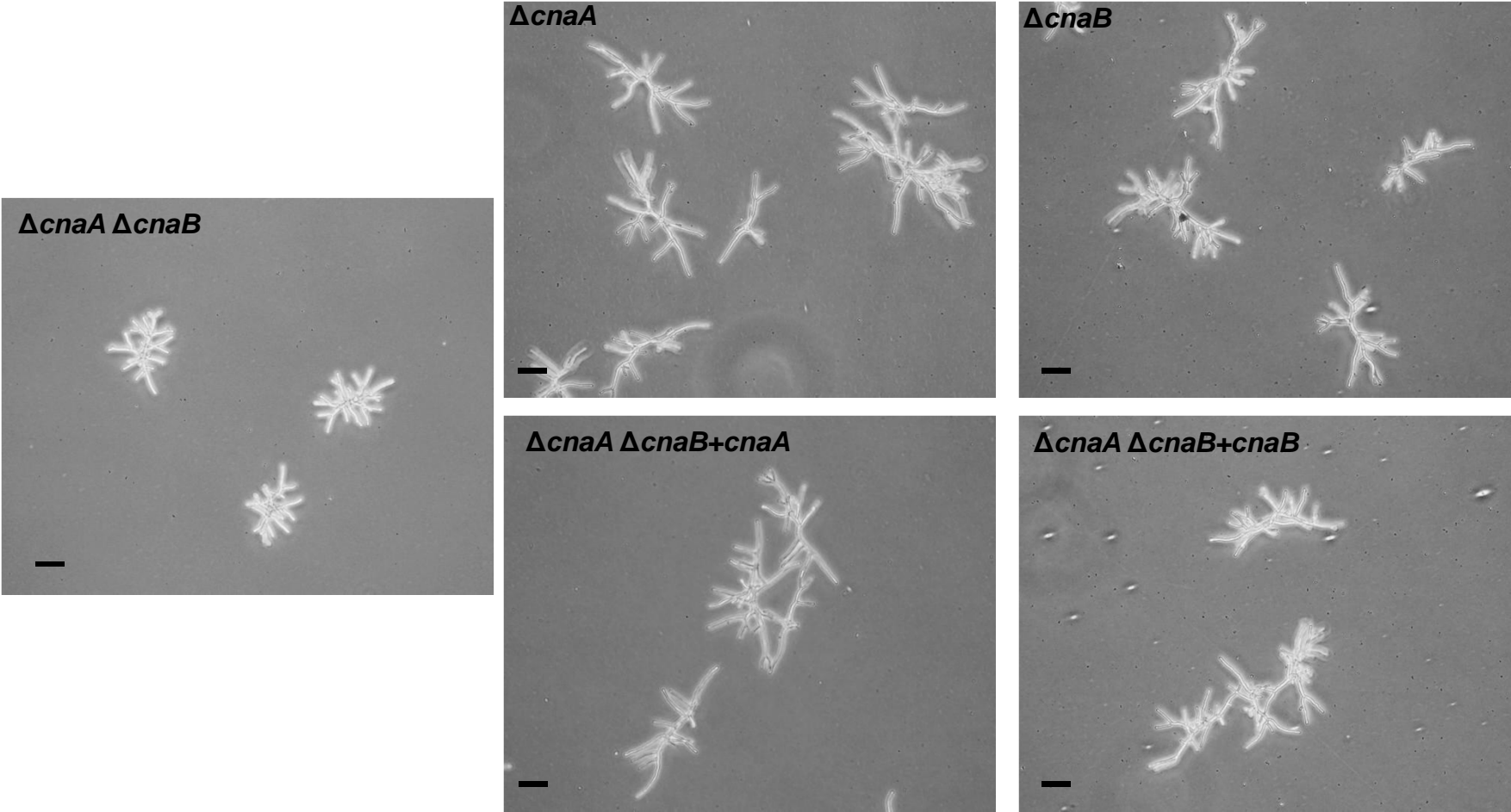
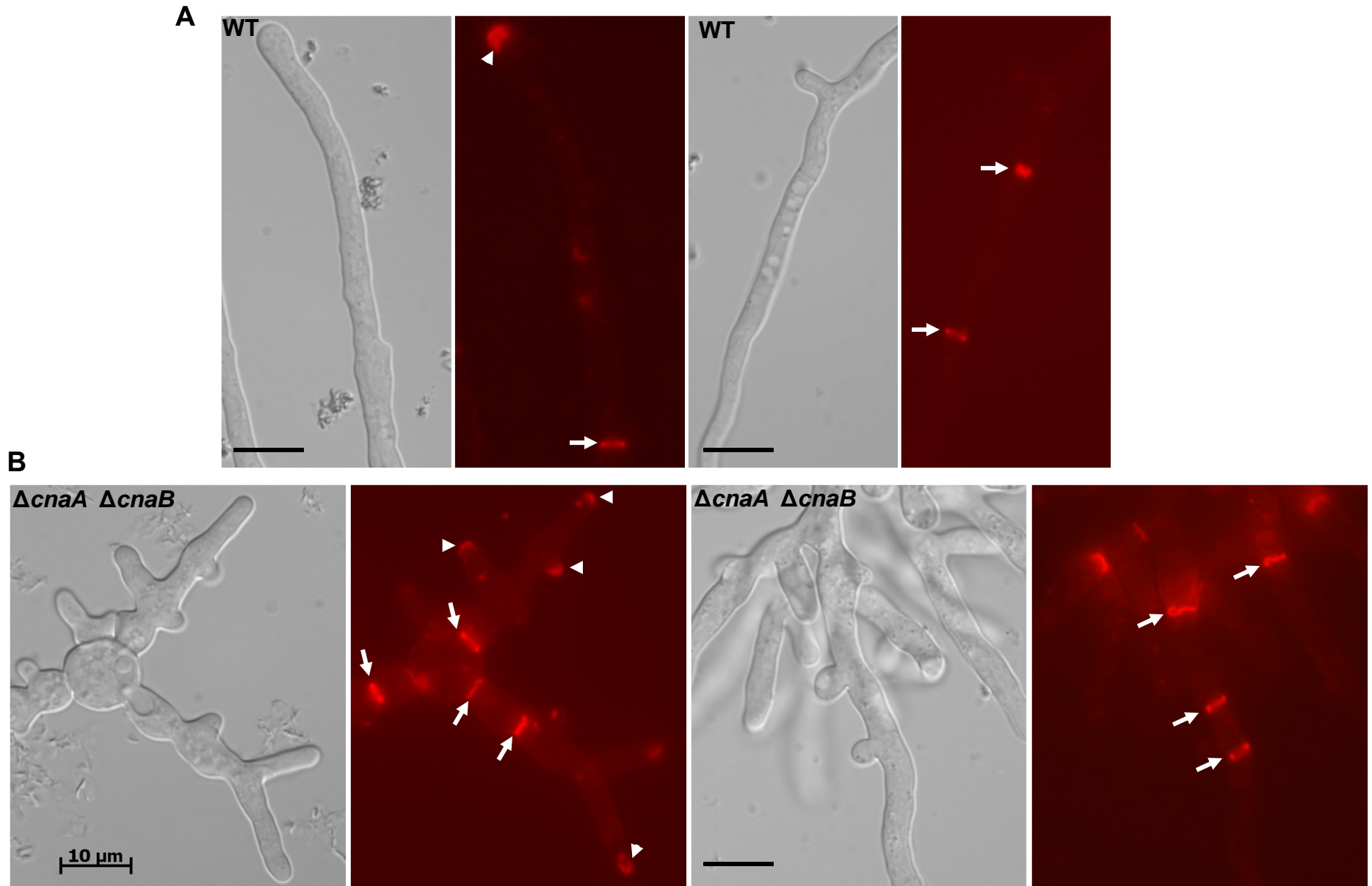


Suppl. Figure 1



Hyphal growth recovery in the $\Delta cnaA \Delta cnaB$ strain transformed with either *cnaA* or *cnaB* alone was observed by inoculating a total of 1×10^4 conidia GMM liquid medium and incubating at 37 C for 24 h. Note that the double mutant strains containing either *cnaA* or *cnaB* grow better and resemble the single mutants ($\Delta cnaA$ and $\Delta cnaB$). Scale Bar 40 μ m.

Suppl. Figure 2



The wild-type and the $\Delta cnaA \Delta cnaB$ strains expressing Lifeact-RFP were visualized by fluorescence microscopy. Actin localization was observed at the tips in both the strains (indicated by arrow heads). Moreover, contractile actin rings were normally formed in the $\Delta cnaA \Delta cnaB$ strain (indicated by arrows) when compared to the wild-type strain. Scale bar, 10 μm .

Supplementary Table S1: Strains used in the present study

Strain	Parent strain	Genotype
Af293		Wild type
Af293.1	Af293	<i>pyrG1</i>
Af293.6	Af293	<i>argB1, pyrG1</i>
Δ <i>cnaA</i>	Af293.1	Δ <i>cnaA::pyrG1</i>
Δ <i>cnaB</i>	Af293.1	Δ <i>cnaB::pyrG1</i>
Δ <i>cnaA</i> Δ <i>cnaB</i>	Af293.6	Δ <i>cnaA::argB1</i> Δ <i>cnaB::pyrG1</i>
OCNAG3	Af293.1	Δ <i>cnaA::pyrG1 otef-cnaA-gfp-hph</i>
OCNBG2	Af293.1	Δ <i>cnaB::pyrG1 otef-cnaB-gfp-hph</i>
AKO-CNBG1	Af293.1	Δ <i>cnaA::pyrG1 otef-cnaB-gfp-hph</i>
BKO-CNAG2	Af293.1	Δ <i>cnaB::pyrG1 otef-cnaA-gfp-hph</i>
OCNACB1	Af293.6	Δ <i>cnaA::argB1</i> Δ <i>cnaB::pyrG1 otef-cnaA-gfp-hph otef-mcherry-cnaB-phleo</i>
ABKO-NPCNACNB1	Af293.6	Δ <i>cnaA::argB1</i> Δ <i>cnaB::pyrG1 cnaA</i> <i>promo-cnaA-gfp-hph cnaB</i> <i>promo-mcherry-cnaB-phleo</i>
ABKO-NPCNA-1	Af293.6	Δ <i>cnaA::argB1</i> Δ <i>cnaB::pyrG1 cnaA</i> <i>promo-cnaA-gfp-hph</i>
ABKO-NPCNB-1	Af293.6	Δ <i>cnaA::argB1</i> Δ <i>cnaB::pyrG1 cnaB</i> <i>promo-mcherry-cnaB-phleo</i>
OCNAG3-LARFP	Af293.1	Δ <i>cnaA::pyrG1 otef-cnaA-gfp-hph otef-LifeAct-RFP-phleo</i>
WT-LARFP	Af293	<i>otef-LifeAct-RFP-phleo</i>
ABKO-LARFP	Af293.6	Δ <i>cnaA::argB1</i> Δ <i>cnaB::pyrG1 otef-LifeAct-RFP-phleo</i>
ABKO-CNA-T359P-CNB-1	Af293.6	Δ <i>cnaA::argB1</i> Δ <i>cnaB::pyrG1 cnaA</i> <i>promo-cnaA-T359P-gfp-hph cnaB</i> <i>promo-mcherry-cnaB-phleo</i>
ABKO-CNA-L365S-CNB-1	Af293.6	Δ <i>cnaA::argB1</i> Δ <i>cnaB::pyrG1 cnaA</i> <i>promo-cnaA-L365S-gfp-hph cnaB</i> <i>promo-mcherry-cnaB-phleo</i>
BKO-OCNBG-tB3	Af293.1	Δ <i>cnaB::pyrG1 otef-cnaB</i> <i>tB3-gfp-hph</i>
BKO-OCNBG-SW2	Af293.1	Δ <i>cnaB::pyrG1 otef-cnaB</i> <i>-SW2-gfp-hph</i>
BKO-OCNBG-RG	Af293.1	Δ <i>cnaB::pyrG1 otef-cnaB</i> ^{mt} <i>-RRRR-GGGG-gfp-hph</i>
BKO-OCNBG-RA	Af293.1	Δ <i>cnaB::pyrG1 otef-cnaB</i> ^{mt} <i>-RLRKR-AAAAA-gfp-hph</i>
BKO-OCNBG-KA	Af293.1	Δ <i>cnaB::pyrG1 otef-cnaB</i> ^{mt} <i>-KLDK-AAAA-gfp-hph</i>
OCNBG-tB1	Af293	<i>otef-cnaB-tB1-gfp-hph</i>
OCNBG-tB2	Af293	<i>otef-cnaB-tB2-gfp-hph</i>
OCNBG-tB3	Af293	<i>otef-cnaB-tB3-gfp-hph</i>
OCNBG-tB4	Af293	<i>otef-cnaB-tB4-gfp-hph</i>
OCNBG-tB5	Af293	<i>otef-cnaB-tB5-gfp-hph</i>
OCNBG-tB6	Af293	<i>otef-cnaB-tB6-gfp-hph</i>
OCNBG-tB7	Af293	<i>otef-cnaB-tB7-gfp-hph</i>
OCNBG-tB8	Af293	<i>otef-cnaB-tB8-gfp-hph</i>
BKO-NPCNB-1	Af293.1	Δ <i>cnaB::pyrG1 cnaB</i> <i>promo-cnaB-gfp-hph</i>
BKO-NPCNB-tB4	Af293.1	Δ <i>cnaB::pyrG1 cnaB</i> <i>promo-cnaB</i> <i>tB4-gfp-hph</i>
BKO-NPCNB-tB5	Af293.1	Δ <i>cnaB::pyrG1 cnaB</i> <i>promo-cnaB</i> <i>tB5-gfp-hph</i>
BKO-NPCNB-tB7	Af293.1	Δ <i>cnaB::pyrG1 cnaB</i> <i>promo-cnaB</i> <i>tB7-gfp-hph</i>
BKO-NPCNB-tB8	Af293.1	Δ <i>cnaB::pyrG1 cnaB</i> <i>promo-cnaB</i> <i>tB8-gfp-hph</i>

Supplementary Table S2: List of primers used in this study

Name	Sequence (5'-3')	Direction
<p><u>Deletion of <i>cnaA</i></u> <u>To clone into pLysB</u> 5'cnaA LA ApaI 3'cnaA LA EcoRI 5'cnaA RA XbaI 3'cnaA RA NotI</p>	<p>TTTTGGGGCCCTTGATTGAACGGGTGCCG TTTTGAATTTCGCGCAGTGTGAACTAAGG TTTTCTAGAATTGCTTCGGTCACGTCC TTTTGCGGCCGCGACGGGGTAGCGCACTGC</p>	<p>Forward Reverse Forward Reverse</p>
<p><u>Deletion of <i>cnaB</i></u> <u>To clone into pJW24</u> cnaB KO OL1 SalI cnaB KO OL2 EcoRI cnaB KO RA NotI cnaB KO RA SpeI</p>	<p>TTGTCTGACTTACTGAGGACGGTTTCT CCGAATTCTGGTTCGTGTGTGGTTGAG TTTTGCGGCCGCGATCGCGACGCTTCT TTTTACTAGTCAGGCCAAATCTAAGC</p>	<p>Forward Reverse Forward Reverse</p>
<p><u>Complementation of <i>cnaA</i></u> <u>To clone into pUCGH</u> GCNA-F2 GCNA-R-Bam</p>	<p>CGACGGATCCATGGATCAAGCACTGGCG CGACGGATCCGGCTTCCCTAGTCTC</p>	<p>Forward Reverse</p>
<p><u>Complementation of <i>cnaB</i></u> <u>To clone into pUCNCR-phleo</u> CnB-F CnB-R <u>To clone into pUCGH</u> CnaB-BamHI-F CnB-Bam-R</p>	<p>TTGCGGCCGCGATGGAGCAGCCCAGTGAACC TTGCGGCCGCGAACATACTCAGTGTTCATGC CGACGGATCCATGGAGCAGCCCAGTGAACC CGACGGATCCGAACATACTCAGTGTTCATGC</p>	<p>Forward Reverse Forward Reverse</p>
<p><u>Cloning of <i>CnaA</i> and <i>CnaB</i> promoters</u> <u>To clone into pUCGH</u> CnaA-promo-KpnI-F CnaA-promo-BamHI-R <u>To clone into pUCGH</u> CnaB-promo-KpnI-F CnaB-promo-BamHI-R <u>To clone into pUCNCR-phleo</u> CnaB-promo-KpnI-F CnaB-promo-BamHI-R</p>	<p>GTACGGTACCAAGTAGTCACCTGCGTGGACGTGG CATAGGATCCCTTGCGCAGTGTGAACTAAGGAAT GTACGGTACCCGTATCTAGTCATACGAACTTTGG CATAGGATCCGTTGGTAAATGGTTCGTGTGTGGTT GTACGGTACCCGTATCTAGTCATACGAACTTTGG CATAGGATCCGTTGGTAAATGGTTCGTGTGTGGTT</p>	<p>Forward Reverse Forward Reverse Forward Reverse</p>
<p><u>Mutations of <i>cnaA</i></u> <u>T359P mutation</u> GCNAF2 CnaA-T359P-R2 CnaA-T359P-F2 GCNA-R-Bam</p>	<p>CGACGGATCCATGGATCAAGCACTGGCG GTACGGGTGAGGCGGGCAGTTGAAC GTTCAACTGCCCCGCCTCACCCGTAC CGACGGATCCGGCTTCCCTAGTCTC</p>	<p>Forward Reverse Forward Reverse</p>

<u>L365S mutation</u> GCNAF2 CnaA-L365S-R	CGACGGATCCATGGATCAAGCACTGGCG CCATGAAGTTTGGCGACCAGTACGG	Forward Reverse
CnaA-L365S-F GCNA-R-Bam	CCGTAAGTGGTCGCCAAACTTCATGG CGACGGATCCGGCTTCCCTAGTCTC	Forward Reverse
<u>Mutations of <i>cnaB</i></u>		
<u>RRRR to GGGG</u> CnaB-R-G-F CnB-Bam-R	ATGTATGATGCAGGCCGGGGTGGAGCATCTGTT CGACGGATCCGAACATACTCAGTGTCATGC	Forward Reverse
CnaB-BamHI-F CnaB-R-G-R	CGACGGATCCATGGAGCAGCCCAGTGAACC AACAGATGCTCCACCCCGCCTGCATCATACT	Forward Reverse
<u>RLRKR to AAAAA</u> CnaB-RLRKR-AAAAA-F CnB-Bam-R	GAGGTGGACGCGGCCGCGGCCTTCATG CGACGGATCCGAACATACTCAGTGTCATGC	Forward Reverse
CnaB-BamHI-F CnaB-RLRKR-AAAAA-R	CGACGGATCCATGGAGCAGCCCAGTGAACC CATGAAGGCCGCGGCCGCGTCCACCTC	Forward Reverse
<u>KLDK to AAAA</u> CnaB-KLDK-AAAA-F CnB-Bam-R	CGCTTCATGGCAGCTGCCGCGGATAGCTCC CGACGGATCCGAACATACTCAGTGTCATGC	Forward Reverse
CnaB-BamHI-F CnaB-KLDK-AAAA-R	CGACGGATCCATGGAGCAGCCCAGTGAACC GGAGCTATCCGCGGCAGCTGCCATGAAGCG	Forward Reverse
<u>CnaB-SW2</u> cnaB-swap-2-F CnB-Bam-R	GAGATTCATGAACTTGACAA CGACGGATCCGAACATACTCAGTGTCATGC	Forward Reverse
pUCGH-F cnaB-swap-2-R	GTGCCAGACTTTGTGTGTGC GTCAAGTTTCATGAATCTCT	Forward Reverse
<u>Truncations of <i>cnaB</i></u>		
<u>CnaB-tB1</u> CnB-SVGT-F CnB-Bam-R	TGCAACGGATCCTCTGTTGGGACATCACAGTTA CGACGGATCCGAACATACTCAGTGTCATGC	Forward Reverse
<u>CnaB-tB2</u> CnB-MKLDK-F CnB-Bam-R	CAACGGATCCATGAACTTGACAAGGATAGC CGACGGATCCGAACATACTCAGTGTCATGC	Forward Reverse
<u>CnaB-tB3</u> CnaB-BamHI-F CnB-EF1-3-R	CGACGGATCCATGGAGCAGCCCAGTGAACC CAACGGATCCCATGATCGTCTTATCCACGATC	Forward Reverse
<u>CnaB-tB4</u> CnB-MIAIF-F	CAACGGATCCATGATCACGATCTTC	Forward

CnB-Bam-R	CGACGGATCCGAACATACTCAGTGTCATGC	Reverse
<u>CnaB-tB5</u>		
CnB-MIAIF-F	CAACGGATCCATGATCACGATCTTC	Forward
CnB-EF1-3-R	CAACGGATCCCATGATCGTCTTATCCACGATC	Reverse
<u>CnaB-tB6</u>		
CnaB-BamHI-F	CGACGGATCCATGGAGCAGCCCAGTGAACC	Forward
CnB-MKLDK-R	CAACGGATCCCTTGTCAAGTTTCATGAAGCG	Reverse
<u>CnaB-tB7</u>		
CnaB-BamHI-F	CGACGGATCCATGGAGCAGCCCAGTGAACC	Forward
CnB-EF1-2-R	CAACGGATCCCTTGGAGCTGAAAGCCGACAG	Reverse
<u>CnaB-tB8</u>		
CnB-EF3-4-F	CAACGGATCCCTGTCCGGCTTTCAGCTCCAAG	Forward
CnB-Bam-R	CGACGGATCCGAACATACTCAGTGTCATGC	Reverse