

Supplementary raw data (Figure)

Engineering the oleaginous red yeast *Rhodotorula glutinis* for simultaneous β -carotene and cellulase production

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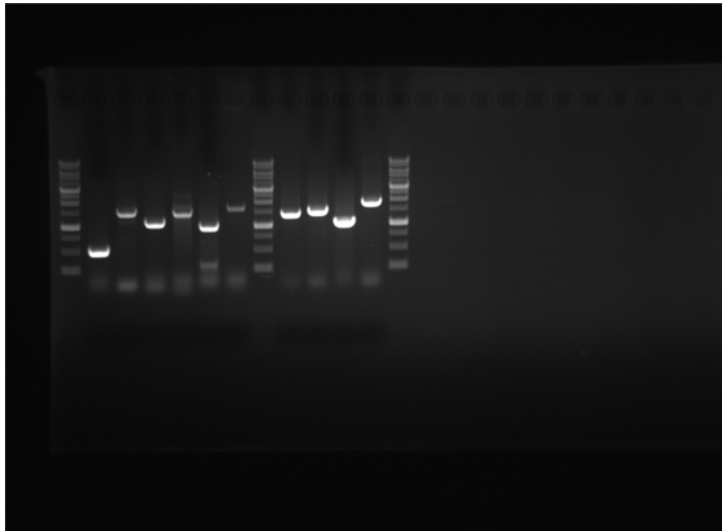
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whli@uchicago.edu; whli@gate.sinica.edu.tw (W-H Li) and lancecjj@gmail.com (J-J Chang)

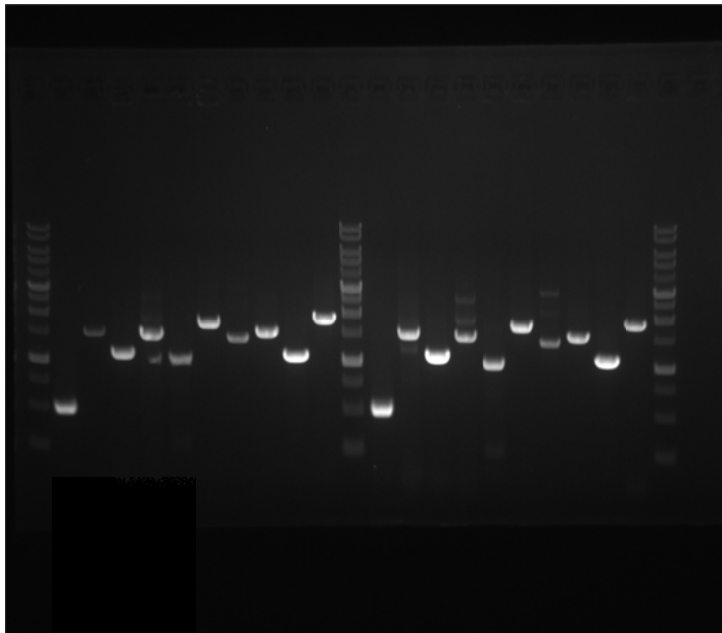
Supplementary Information:

Supplementary raw data (Figure)

The raw figures used in making Figures 5, Supplementary Table S1 and other related Supplementary Figures. The way we generated the figures from raw images were labeled in **red**.

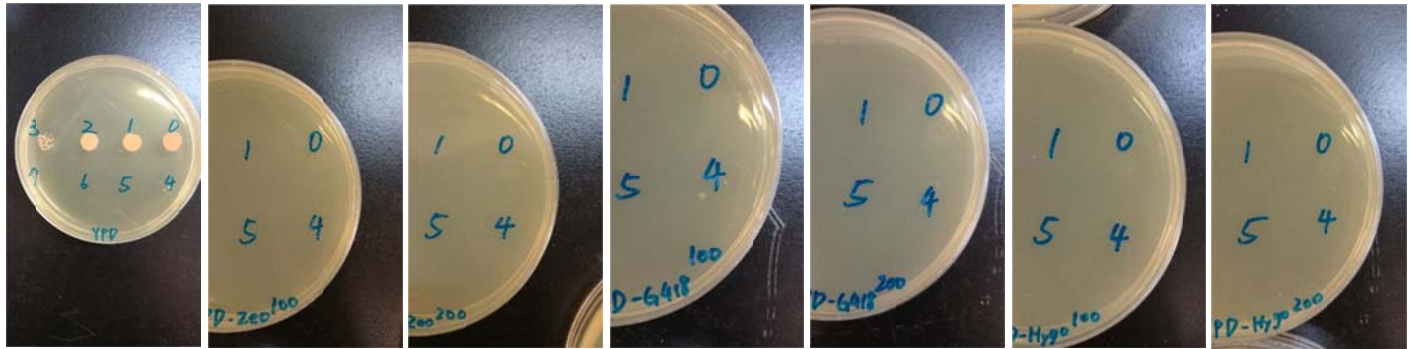


P4-10-9-63Y-14B

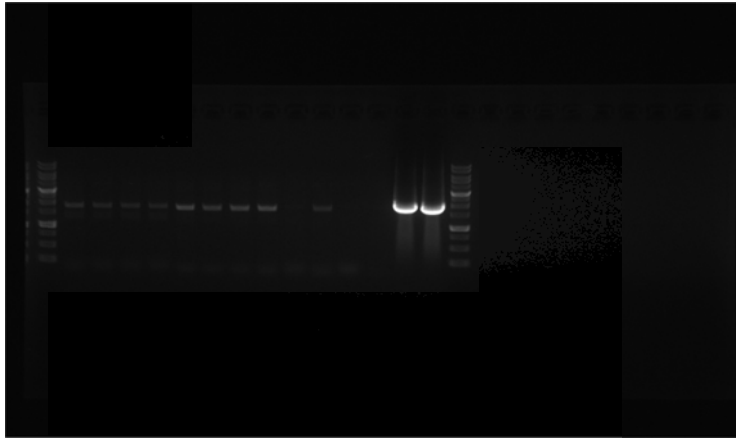


P4-10-9-63Y-23C and -27C

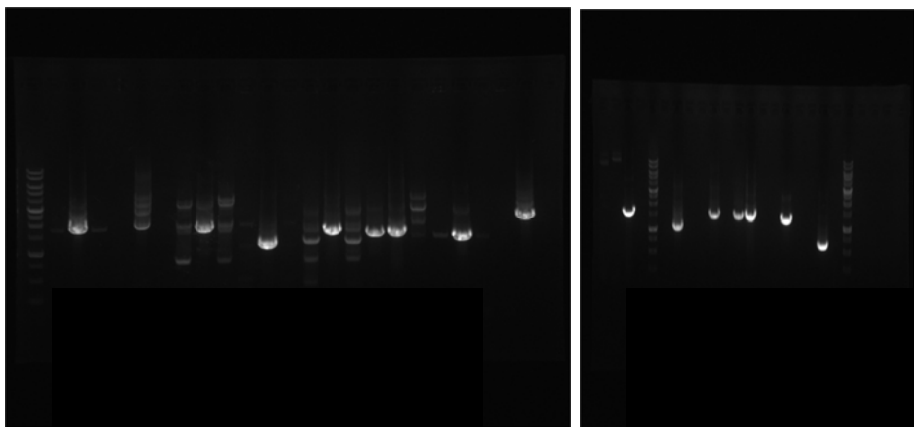
The raw images used in making Fig. 5. To make the Fig. 5 in the main text, we cut the gel image and combine these two gel images together.



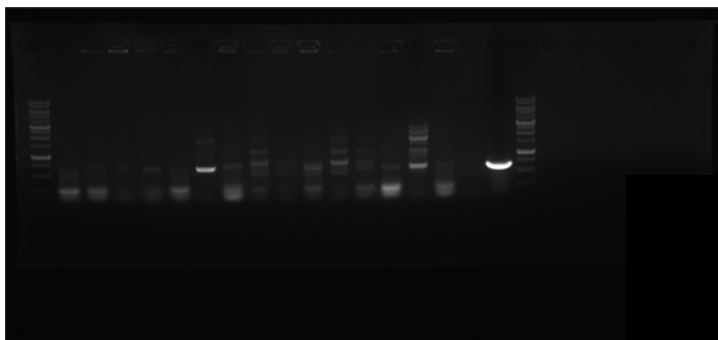
The raw images used in making Supplementary Table S1. To make the Supplementary Table S1 in the Supplementary Information file, we cut the colonies image and reorganizes these images together as table. There were no colony growing in either 100 or 200 $\mu\text{g/ml}$ concentration of any of the three antibiotics plates so we did not put the images.



Supplementary Figure S2a raw image

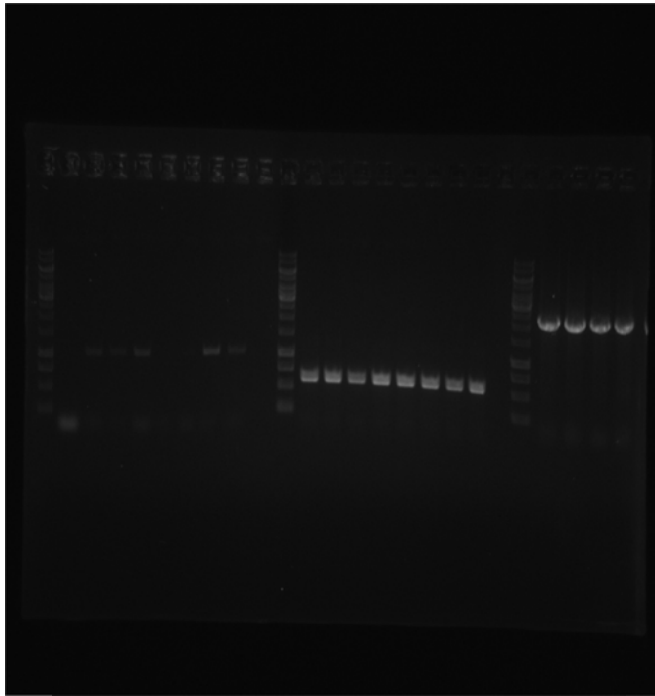


Supplementary Figure S2b raw image

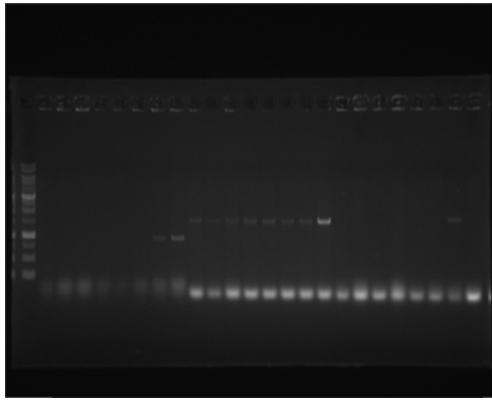


Supplementary Figure S2c raw image

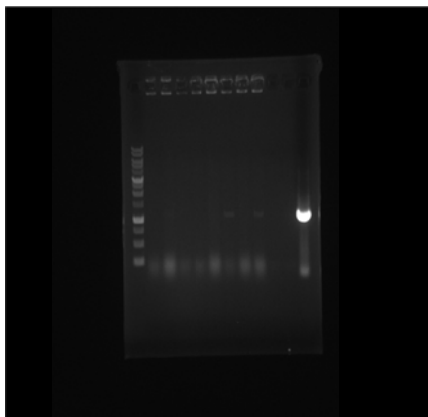
The raw images used in making Supplementary Fig. S2. To make the Supplementary Fig. S2 in the Supplementary Information file, we cut the gel image, inverted color and combine these gel images together.



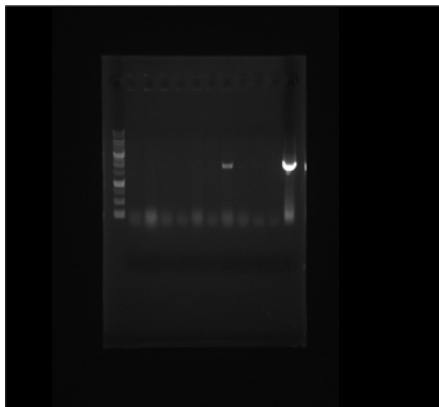
The raw images used in making Supplementary Fig. S3. To make the Supplementary Fig. S3b in the Supplementary Information file, we cut the gel image and inverted color.



Supplementary Figure S4a raw image

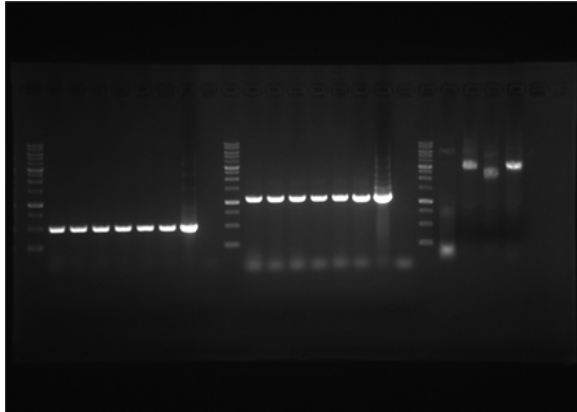


Supplementary Figure S4b raw image

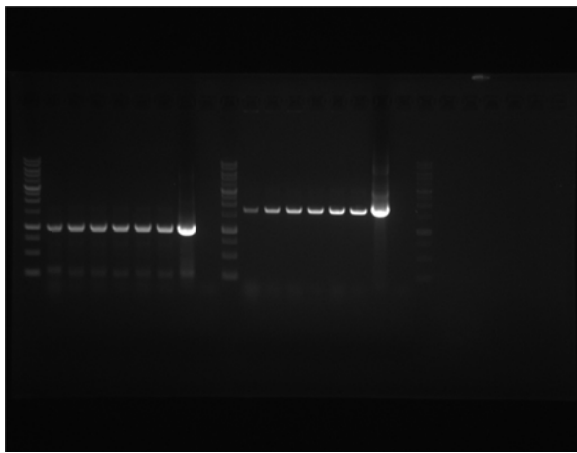


Supplementary Figure S4c raw image

The raw images used in making Supplementary Fig. S4. To make the Supplementary Fig. S4 in the Supplementary Information file, we cut the gel image, inverted color and combine these gel images together.

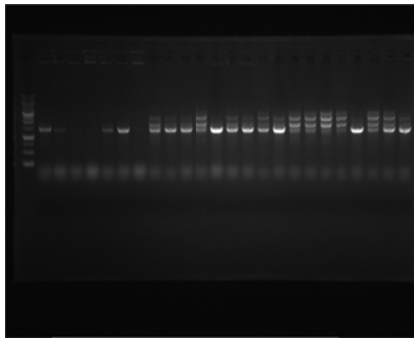


eglA and *eglIII*

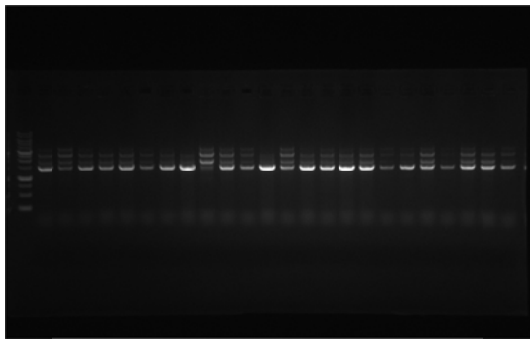


CBHII and *BGS*

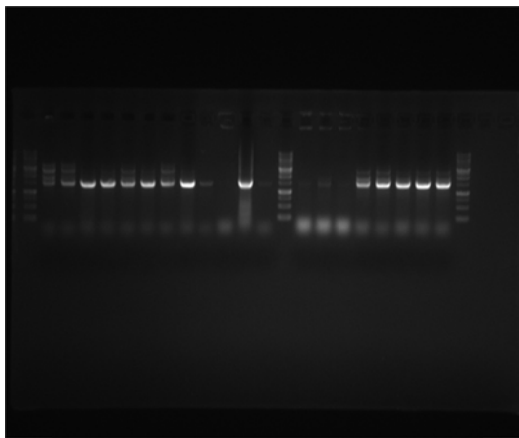
The raw images used in making Supplementary Fig. S5a. To make the Supplementary Fig. S5a in the Supplementary Information file, we cut the gel image, inverted color and combine these gel images together.



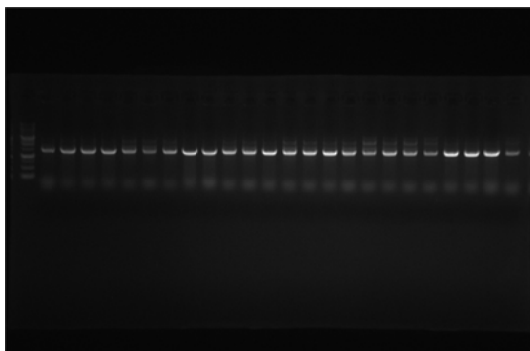
cbhI (B1-24)



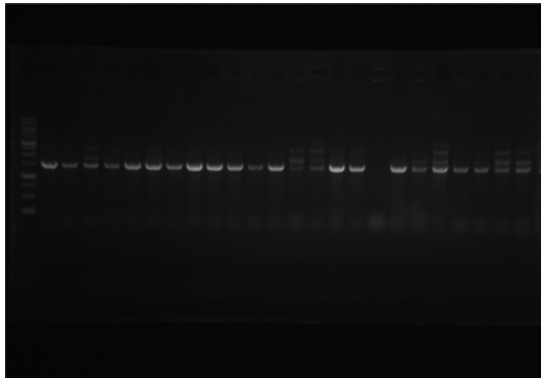
cbhI (B25-48)



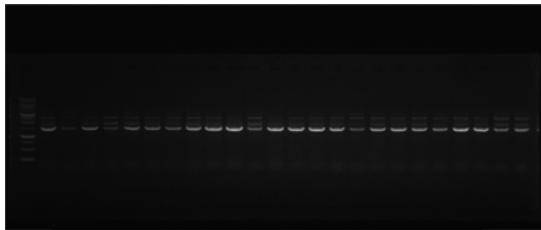
cbhI (B49-58 and A1-8)



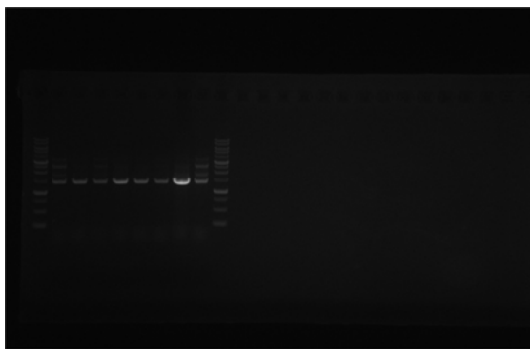
cbhI (A9-32)



cbhI (A33-44 and C1-12)

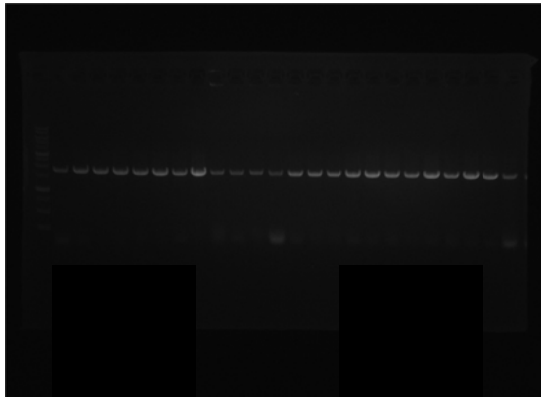


cbhI (C13-36)

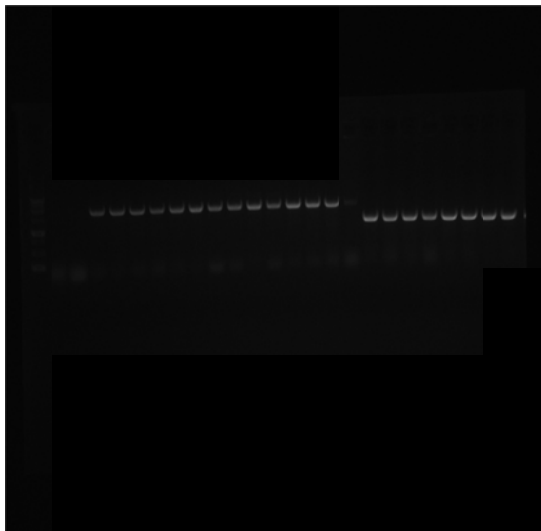


cbhI (C37-44)

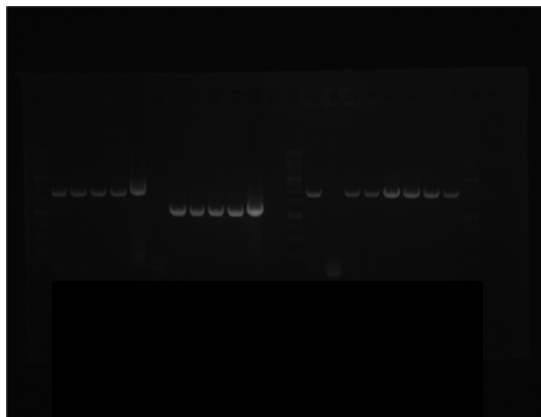
The raw images used in making Supplementary Fig. S5b. To make the Supplementary Fig. S5b in the Supplementary Information file, we cut the gel image, inverted color and combine these gel images together.



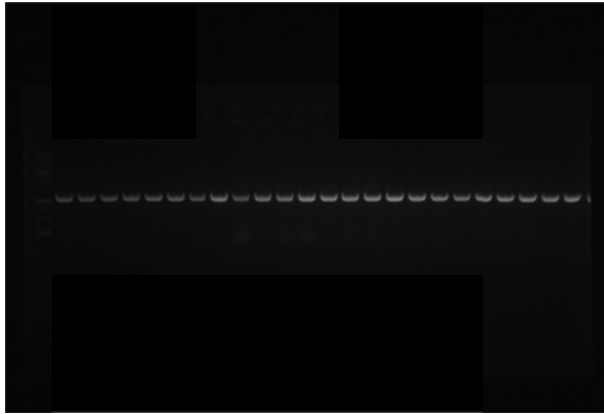
crtYB (1-24)



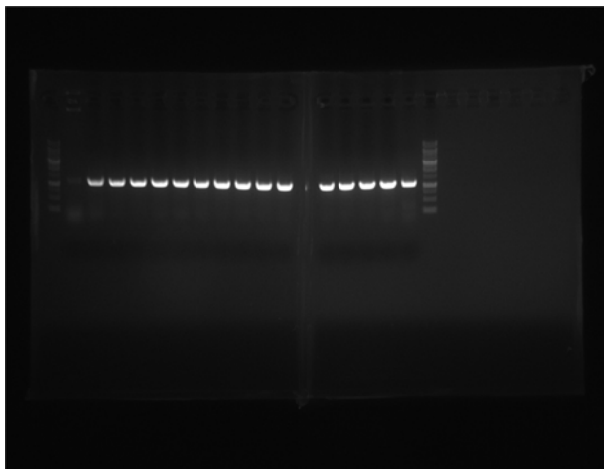
crtYB (25-37) and *crtE* (25-32)



crtYB (38-48) and *crtE* (45-48)

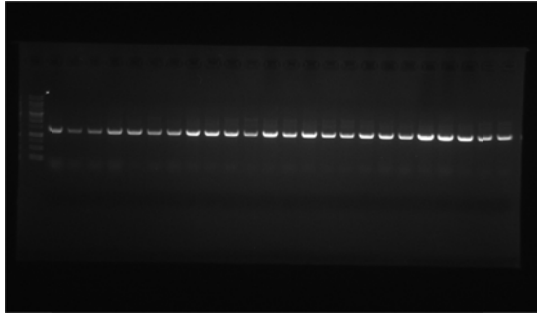


crtE (1-24)

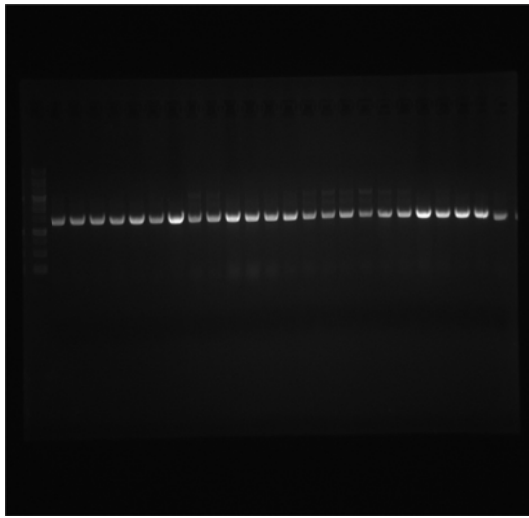


crtE (33-44)

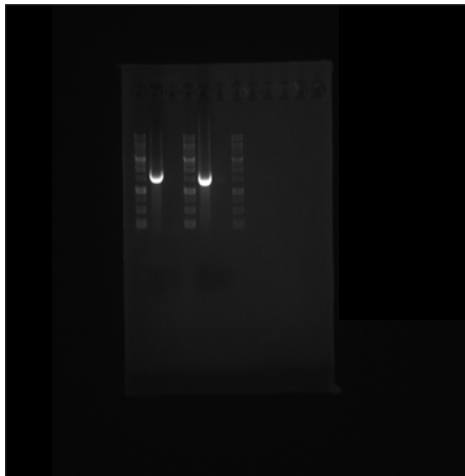
The raw images used in making Supplementary Fig. S5c. To make the Supplementary Fig. S5c in the Supplementary Information file, we cut the gel image, inverted color and combine these gel images together.



tHMG1 (1-24)

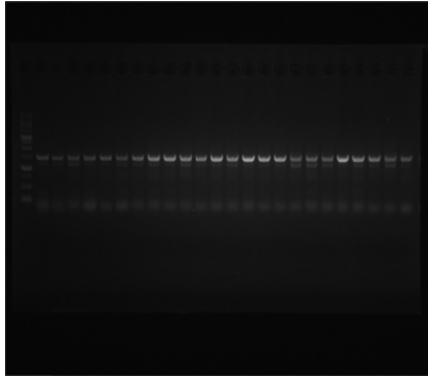


tHMG1 (25-48)

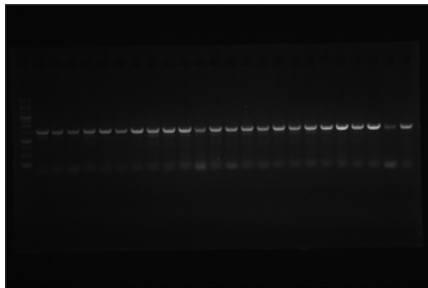


crtI and *tHMG1* (positive and negative control)

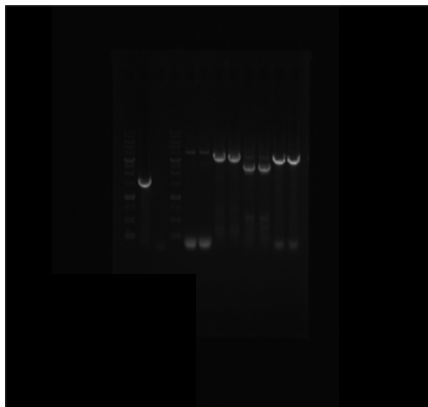
The raw images used in making Supplementary Fig. S5d. To make the Supplementary Fig. S5d in the Supplementary Information file, we cut the gel image, inverted color and combine these gel images together.



egI (1-24)

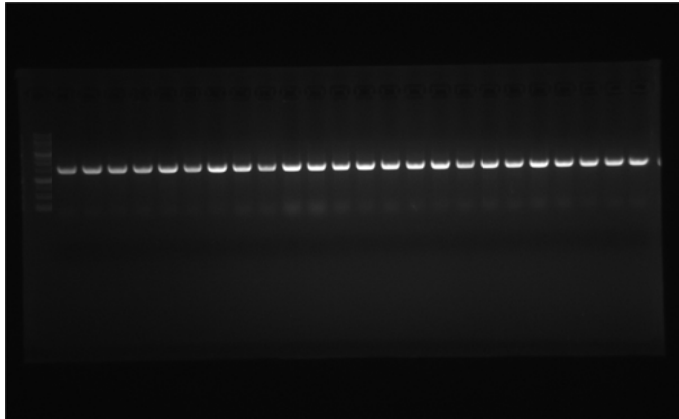


egI (25-48)

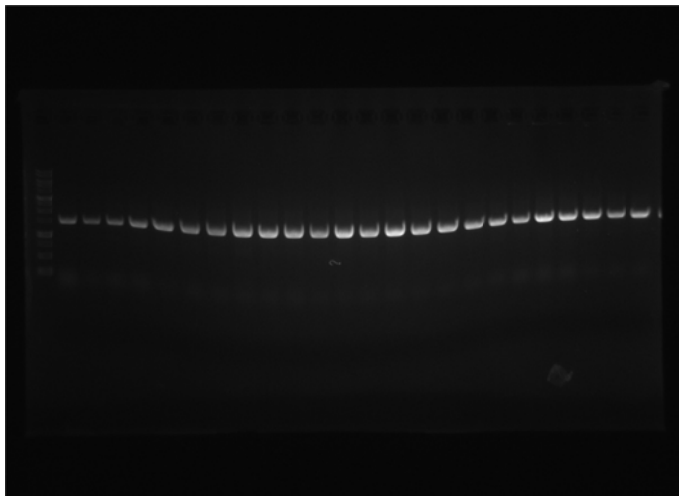


egI (positive and negative control)

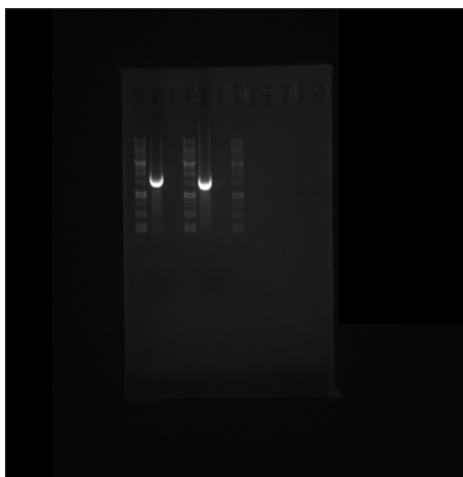
The raw images used in making Supplementary Fig. S5e. To make the Supplementary Fig. S5e in the Supplementary Information file, we cut the gel image, inverted color and combine these gel images together.



crtI (1-24)



crtI (25-48)



crtI and *tHMG1* (positive and negative control)

The raw images used in making Supplementary Fig. S5f. To make the Supplementary Fig. S5f in the Supplementary Information file, we cut the gel image, inverted color and combine these gel images together.