
Supplementary information

Multi-interface licensing of protein import into a phage nucleus

In the format provided by the
authors and unedited

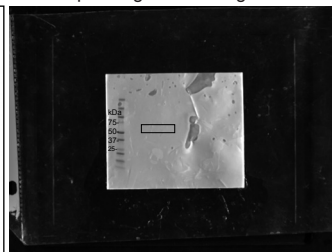
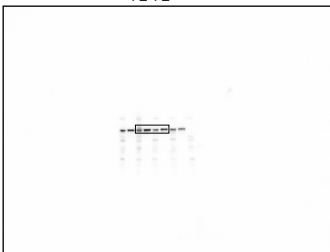
Uncropped images associated with Figure 4a

Black boxes around bands represent how the image was cropped for the figure. These boxes are present in the ladder image to allow for comparison with the ladder.

His pull-down of Imp1-His with Imp6-FLAG or gp70-FLAG, visualized with α -Imp1 (custom ab)

Imp1-His +
Imp6-FLAG
Imp1-His +
gp70-FLAG
| E | E |

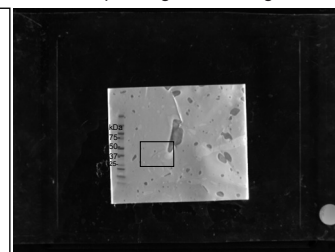
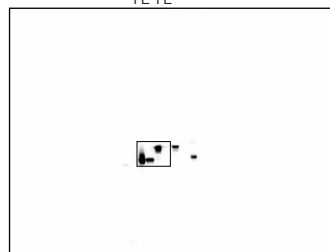
Corresponding ladder image



His pull-down of Imp1-His with Imp6-FLAG or gp70-FLAG, visualized with α -FLAG

Imp1-His +
Imp6-FLAG
Imp1-His +
gp70-FLAG
| E | E |

Corresponding ladder image

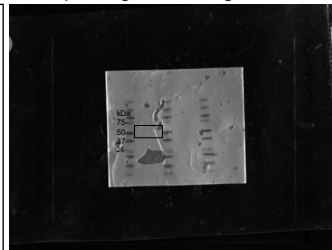
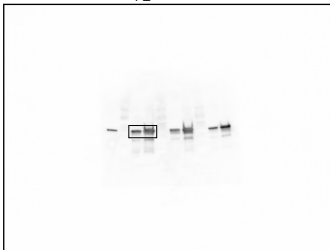


Uncropped images associated with Figure 4a

His pull-down of Nlp1-His with Imp6-FLAG, visualized with α -His

Nlp1-His +
Imp6-FLAG
| E |

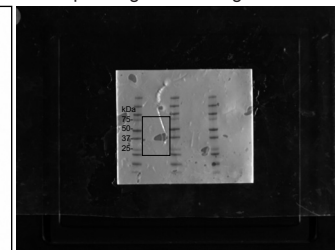
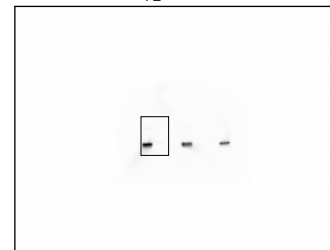
Corresponding ladder image



His pull-down of Nlp1-His with Imp6-FLAG, visualized with α -FLAG

Nlp1-His +
Imp6-FLAG
| E |

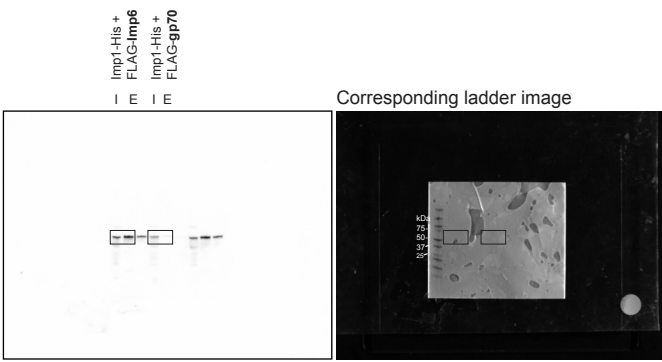
Corresponding ladder image



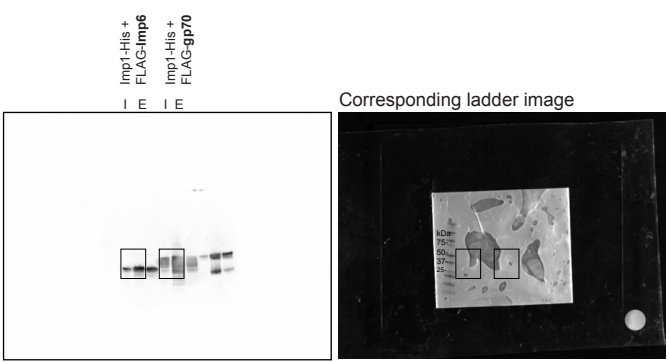
Uncropped images associated with Figure 4b

Black boxes around bands represent how the image was cropped for the figure. These boxes are present in the ladder image to allow for comparison with the ladder.

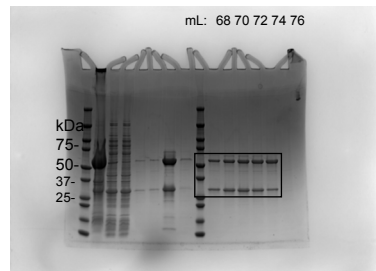
FLAG pull-down of FLAG-Imp6 or gp70-FLAG with Imp1-His, visualized with α -Imp1 (custom ab)



FLAG pull-down of FLAG-Imp6 or gp70-FLAG with Imp1-His, visualized with α -FLAG



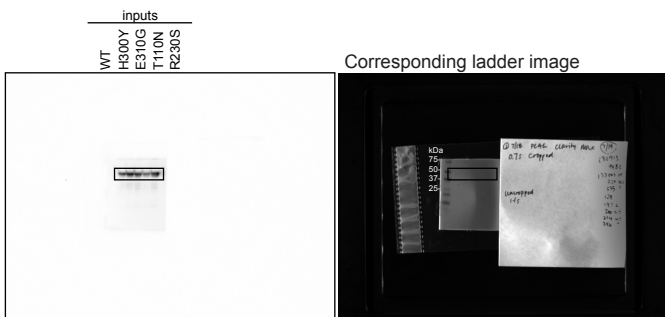
Uncropped image associated with Figure 4c



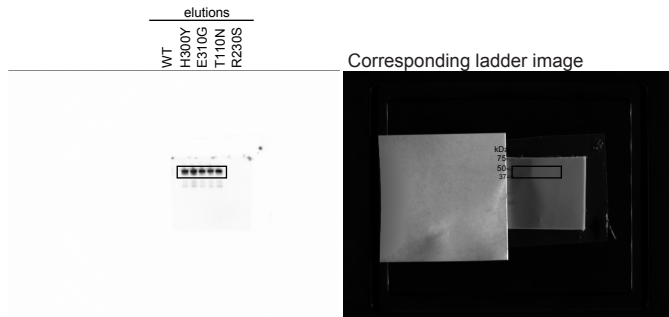
Uncropped images associated with Figure 4e

Black boxes around bands represent how the image was cropped for the figure. These boxes are present in the ladder image to allow for comparison with the ladder.

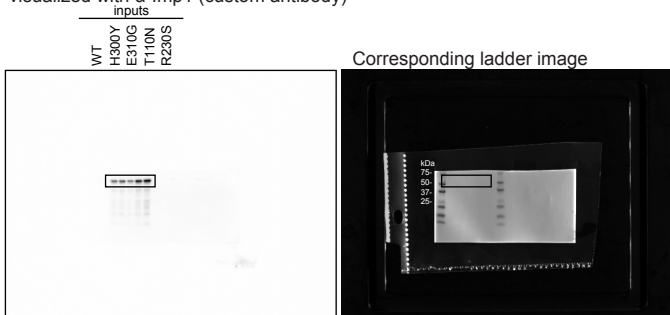
inputs of FLAG pull-down of Nlp2-FLAG with Imp1-His,
visualized with α -FLAG



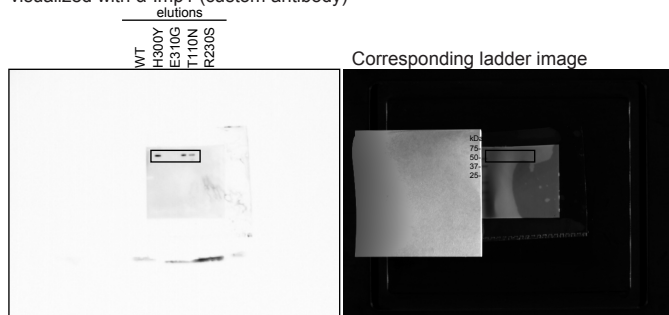
elutions of FLAG pull-down of Nlp2-FLAG with Imp1-His,
visualized with α -FLAG



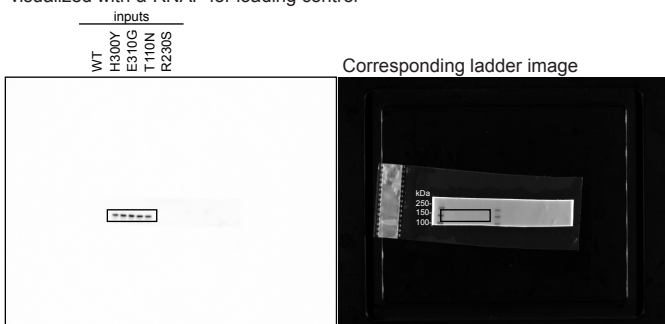
inputs of FLAG pull-down of Nlp2-FLAG with Imp1-His,
visualized with α -Imp1 (custom antibody)



elutions of FLAG pull-down of Nlp2-FLAG with Imp1-His,
visualized with α -Imp1 (custom antibody)



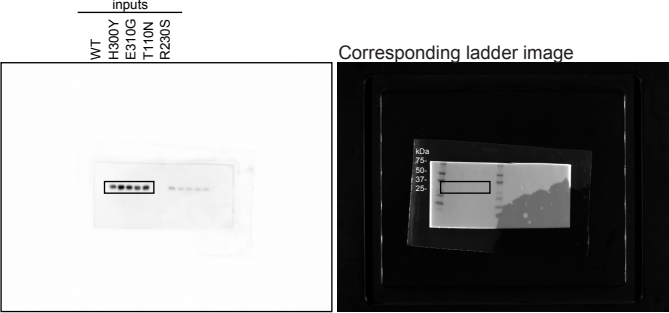
inputs of FLAG pull-down of Nlp2-FLAG with Imp1-His,
visualized with α -RNAP for loading control



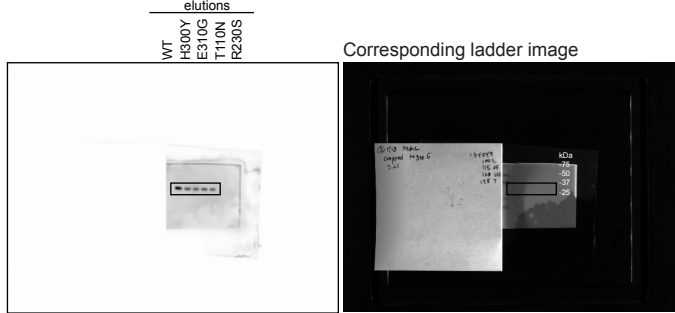
Imp1-Nlp2 pull down inputs and elutions were run on the same gel. After membrane transfer, the blot was cut in two at the 75kDa marker to incubate with α -Imp1 and α -RNAP (input loading control) separately. The portion of the blot visualized with α -Imp1 was then stripped, re-blocked, and incubated with α -FLAG to visualize Nlp2.

Uncropped images associated with Figure 4e
Black boxes around bands represent how the image was cropped for the figure. These boxes are present in the ladder image to allow for comparison with the ladder.

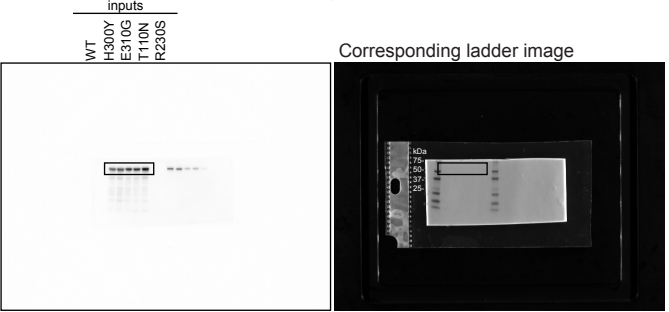
inputs of FLAG pull-down of FLAG-Imp6 with Imp1-His,
visualized with α -FLAG



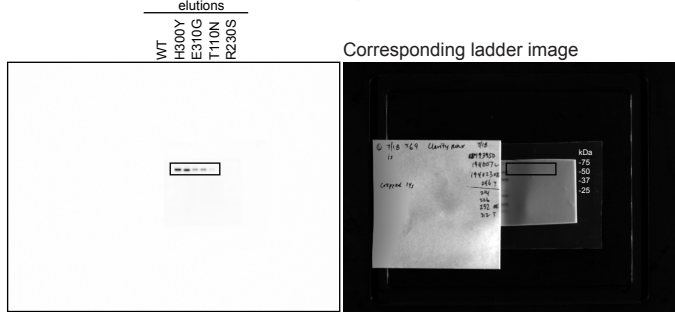
elutions of FLAG pull-down of FLAG-Imp6 with Imp1-His,
visualized with α -FLAG



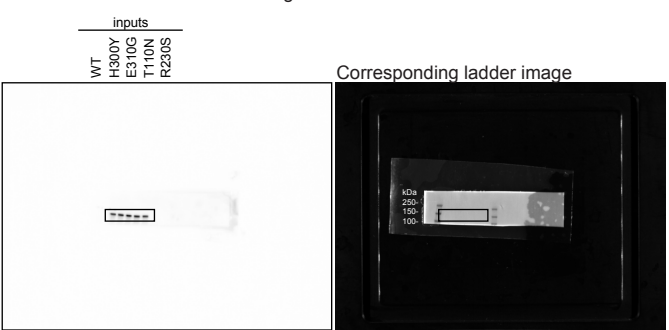
inputs of FLAG pull-down of FLAG-Imp6 with Imp1-His,
visualized with α -Imp1 (custom antibody)



elutions of FLAG pull-down of FLAG-Imp6 with Imp1-His,
visualized with α -Imp1 (custom antibody)



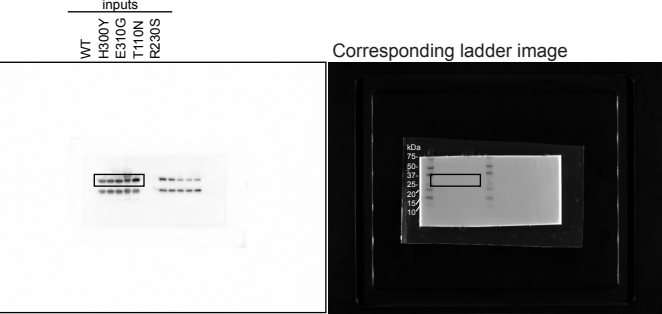
inputs of FLAG pull-down of FLAG-Imp6 with Imp1-His,
visualized with α -RNAP for loading control



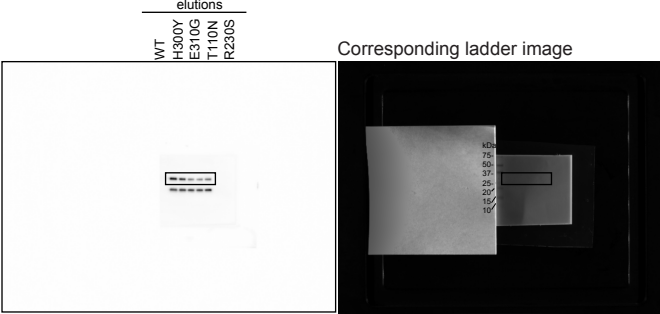
Imp1-Imp6 pull down inputs and elutions were run on the same gel. After membrane transfer, the blot was cut in two at the 75kDa marker to incubate with α -Imp1 and α -RNAP (input loading control) separately. The portion of the blot visualized with α -Imp1 was then stripped, re-blocked, and incubated with α -FLAG to visualize Imp6.

Uncropped images associated with Figure 4e
Black boxes around bands represent how the image was cropped for the figure. These boxes are present in the ladder image to allow for comparison with the ladder.

inputs of FLAG pull-down of sfCherry2-FLAG with Imp1-His,
visualized with α-FLAG

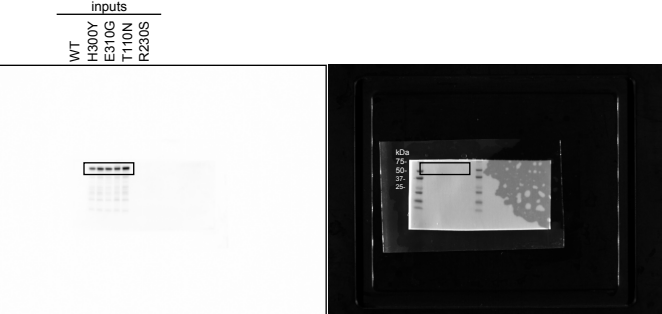


elutions of FLAG pull-down of sfCherry2-FLAG with Imp1-His,
visualized with α-FLAG

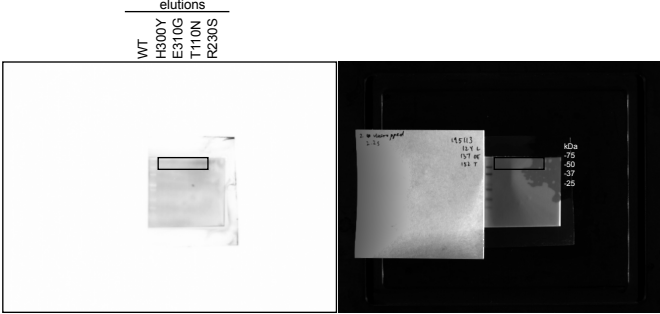


The predicted molecular weight of sfCherry2-FLAG is ~26.5 kDa, and the bands cropped for the main figure run at the expected size. A secondary band under the 20 kDa ladder band in the sfCherry2 samples is presumed to be a truncation product of sfCherry2-FLAG.

inputs of FLAG pull-down of sfCherry2-FLAG with Imp1-His,
visualized with α-Imp1 (custom antibody)



elutions of FLAG pull-down of sfCherry2-FLAG with Imp1-His,
visualized with α-Imp1 (custom antibody)

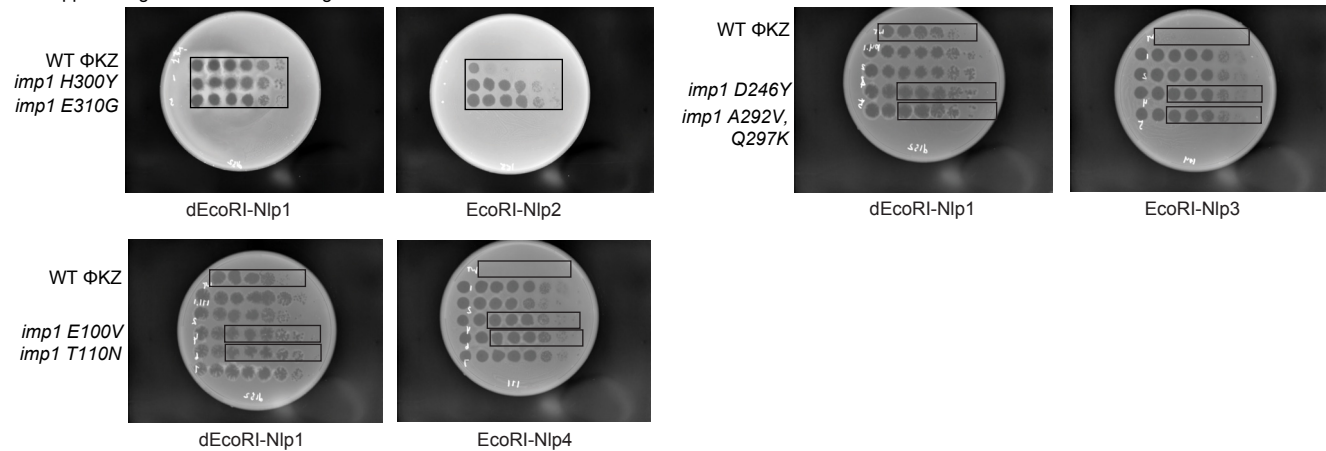


inputs of FLAG pull-down of sfCherry2-FLAG with Imp1-His,
visualized with α-RNAP for loading control

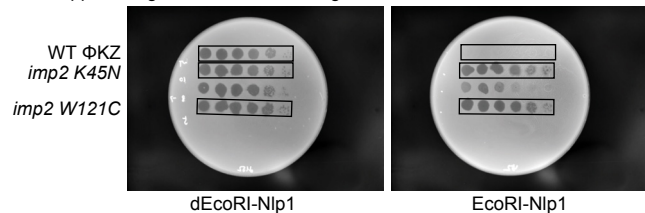


Imp1-sfCherry2 pull down inputs and elutions were run on the same gel. After membrane transfer, the blot was cut in two at the 75kDa marker to incubate with α-Imp1 and α-RNAP (input loading control) separately. The portion of the blot visualized with α-Imp1 was then stripped, re-blocked, and incubated with α-FLAG to visualize sfCherry2.

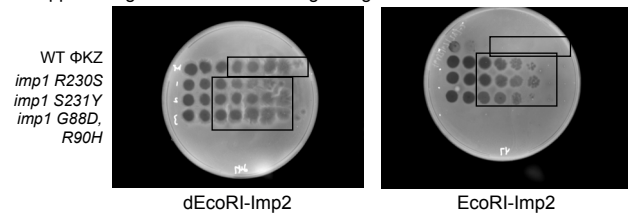
Uncropped images associated with Figure 1b



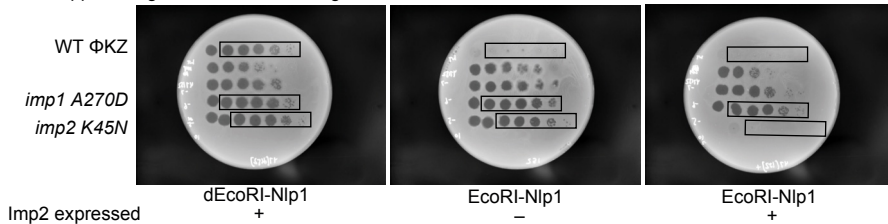
Uncropped images associated with Figure 1d



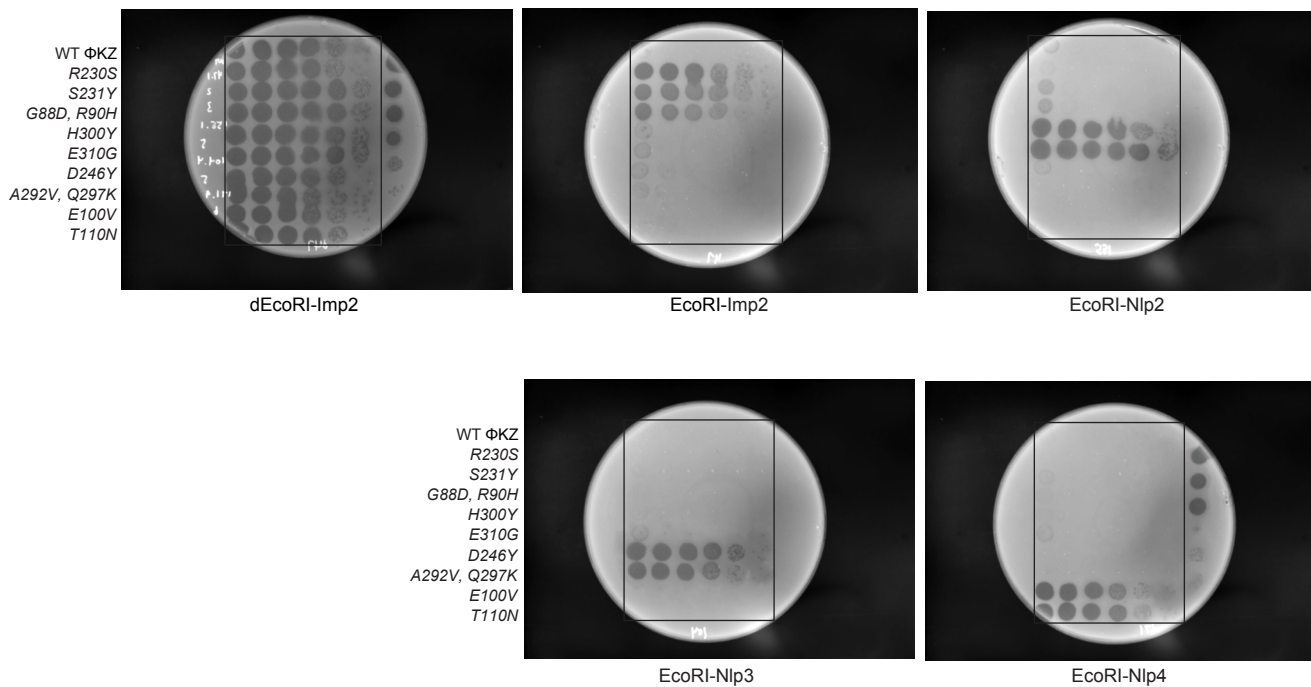
Uncropped images associated with Figure 1g



Uncropped images associated with Figure 1h

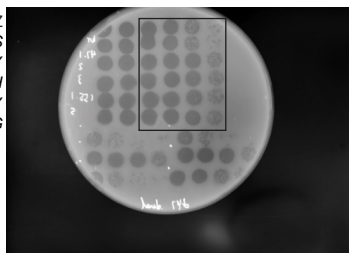


Uncropped images associated with Figure 2a

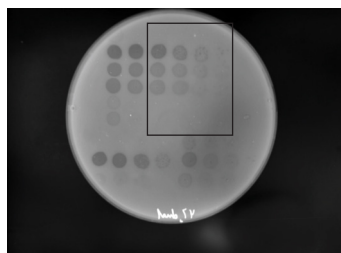


Uncropped images associated with Figure 2c

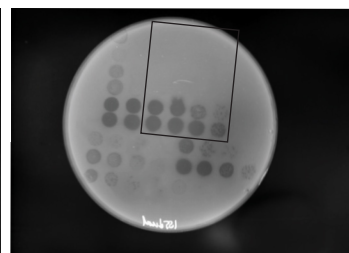
WT ΦKZ
R230S
S231Y
G88D, R90H
H300Y
E310G



dEcoRI-Imp2

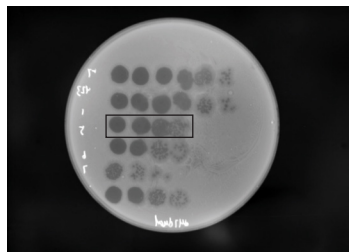


EcoRI-Imp2

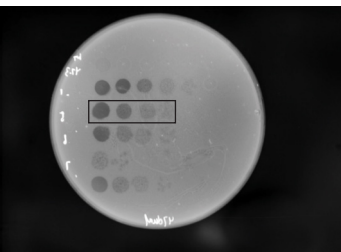


EcoRI-Nlp2

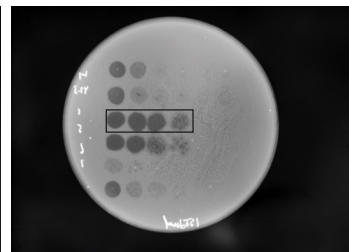
G88D, R90H,
R306L



dEcoRI-Imp2

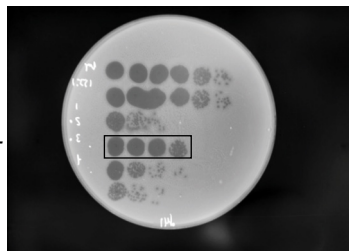


EcoRI-Imp2

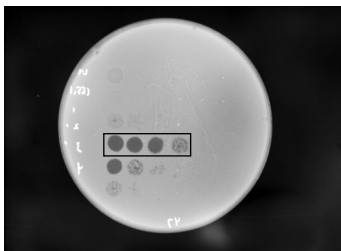


EcoRI-Nlp2

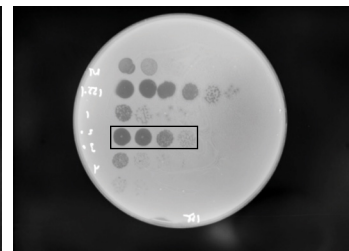
H300Y, I226T



dEcoRI-Imp2

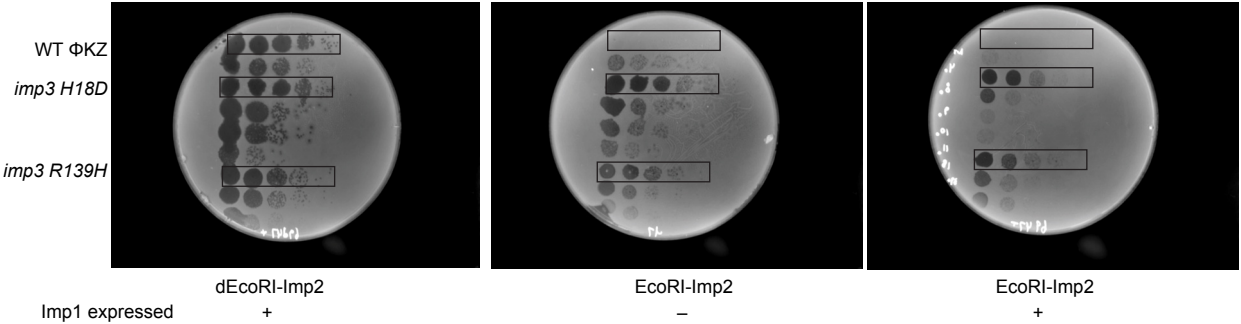


EcoRI-Imp2

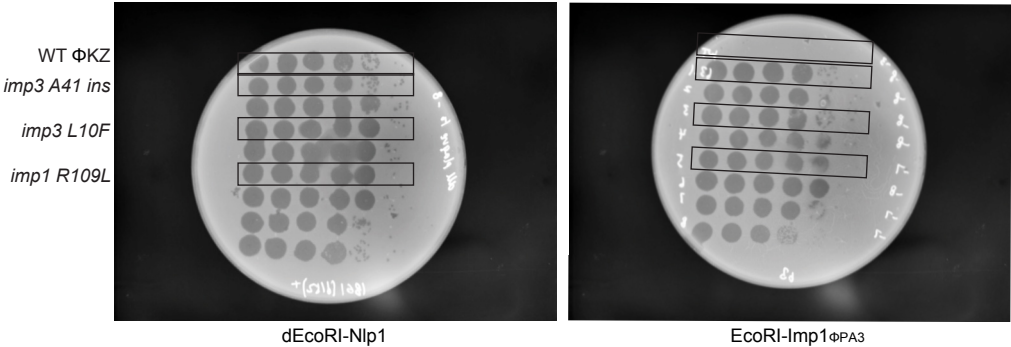


EcoRI-Nlp2

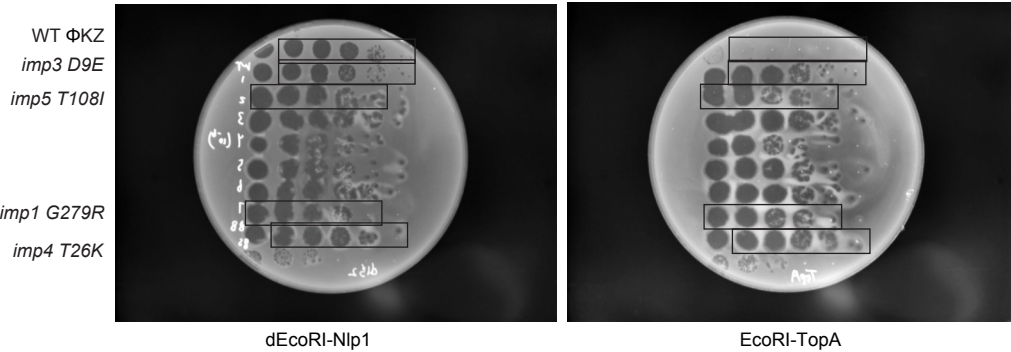
Uncropped images associated with Figure 3a



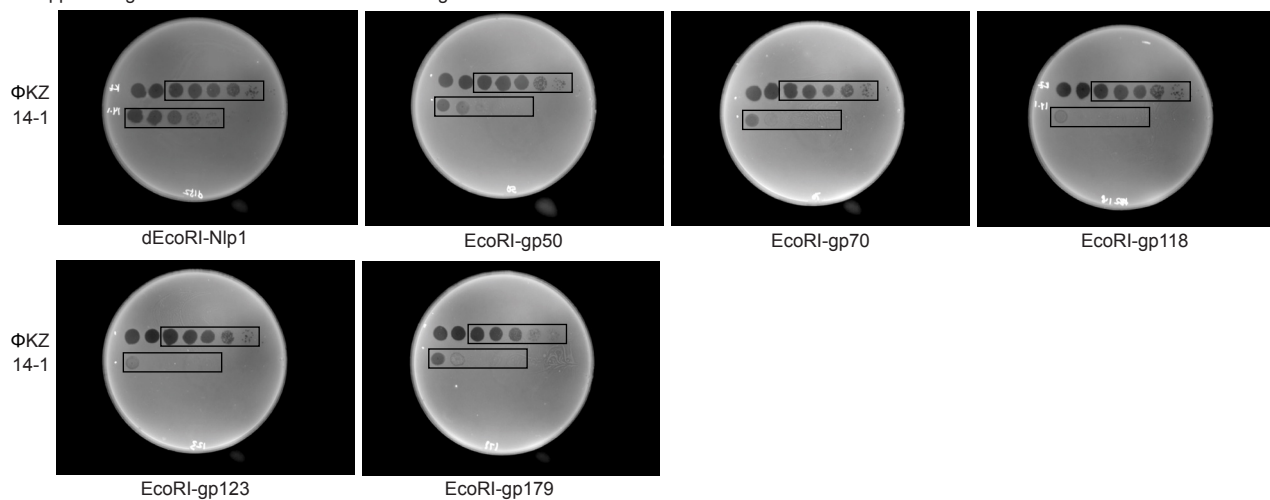
Uncropped images associated with Figure 3b



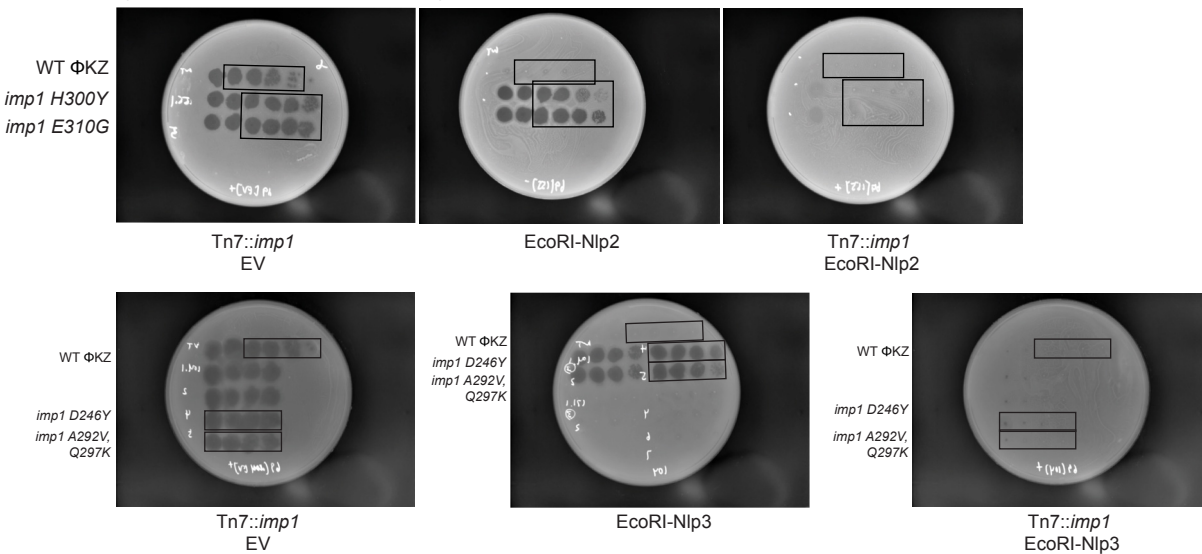
Uncropped images associated with Figure 3d



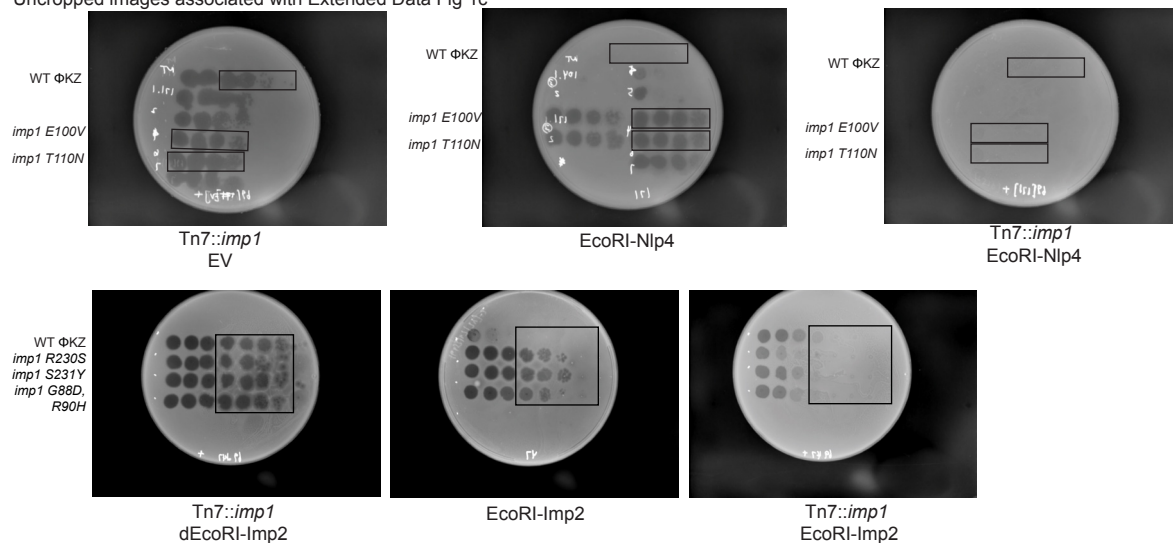
Uncropped images associated with Extended Data Fig 1b



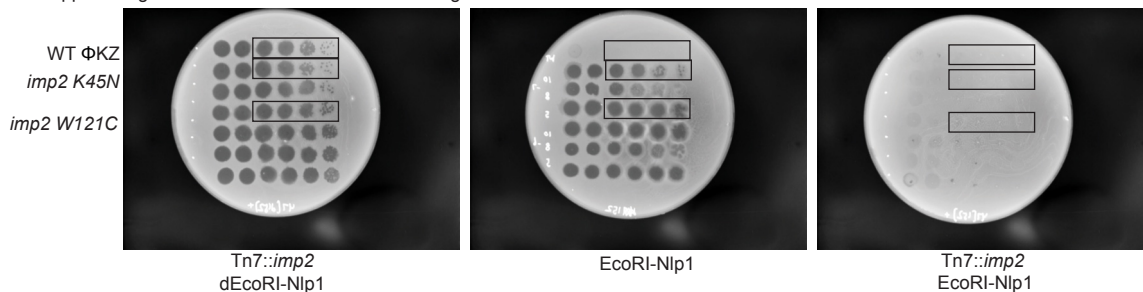
Uncropped images associated with Extended Data Fig 1c



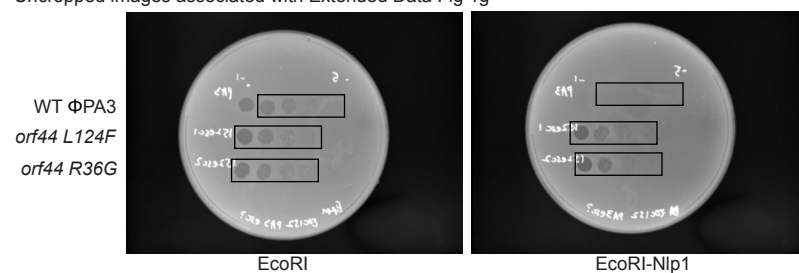
Uncropped images associated with Extended Data Fig 1c



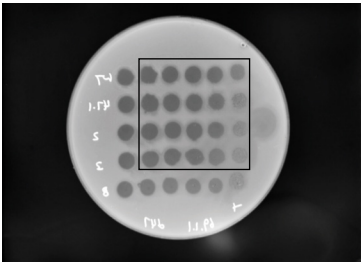
Uncropped images associated with Extended Data Fig 1d



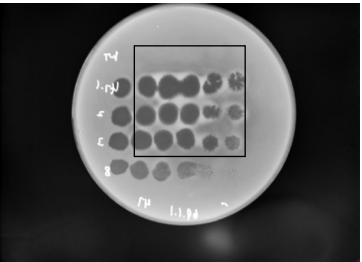
Uncropped images associated with Extended Data Fig 1g



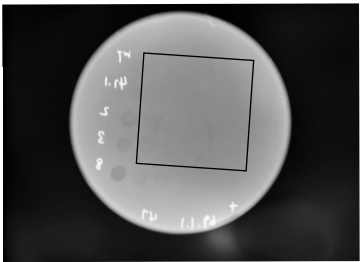
WT Φ KZ
imp1 R230S
imp1 S231Y
imp1 G88D, R90H



Tn7::*imp1*
dEcoRI-Imp2

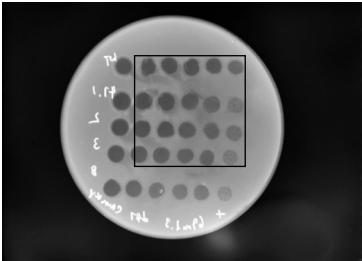


EcoRI-Imp2

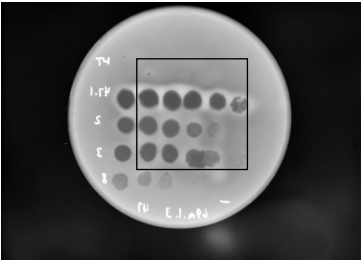


Tn7::*imp1*
EcoRI-Imp2

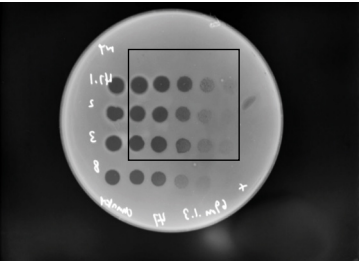
WT Φ KZ
imp1 R230S
imp1 S231Y
imp1 G88D, R90H



Tn7::*imp1*-mNG
dEcoRI-Imp2

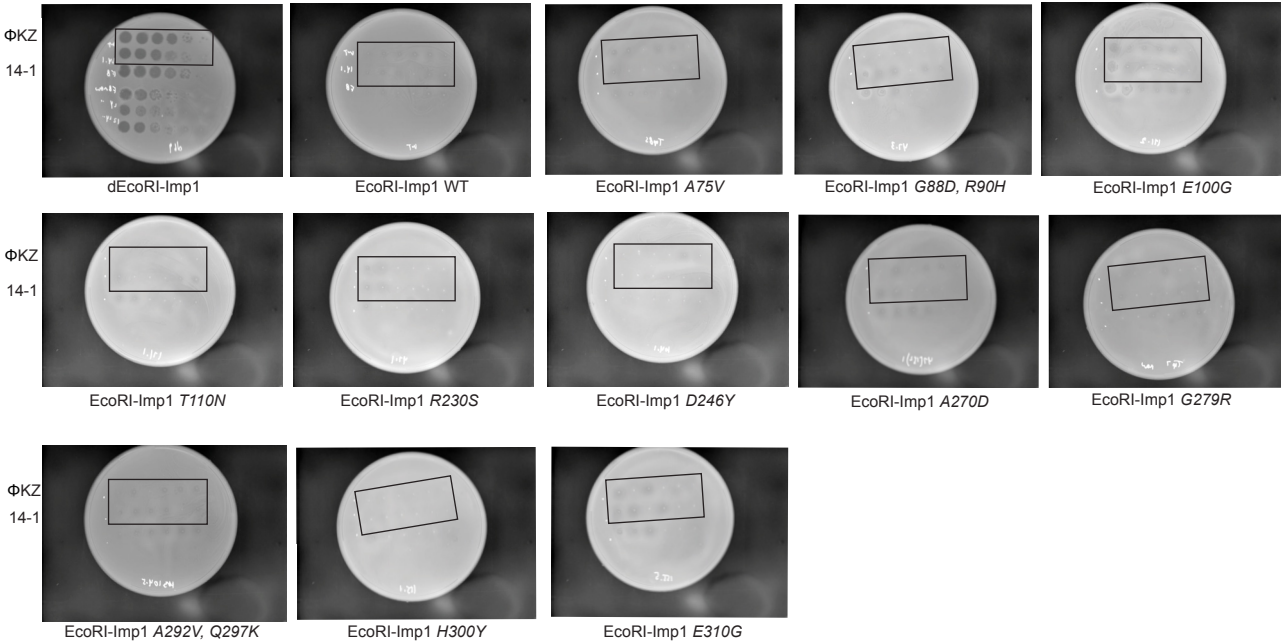


EcoRI-Imp2

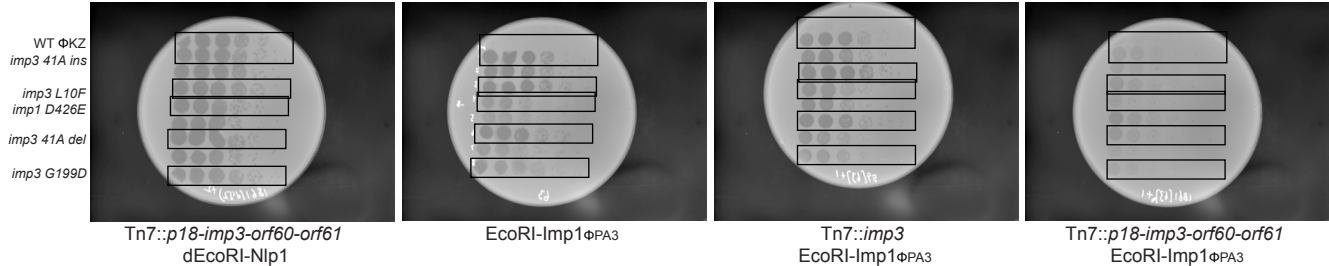


Tn7::*imp1*-mNG
EcoRI-Imp2

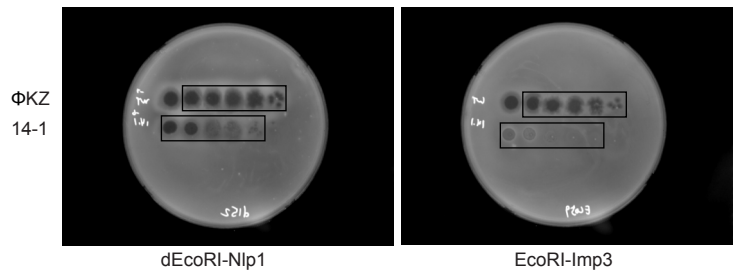
Uncropped images associated with Extended Data Figure 4a



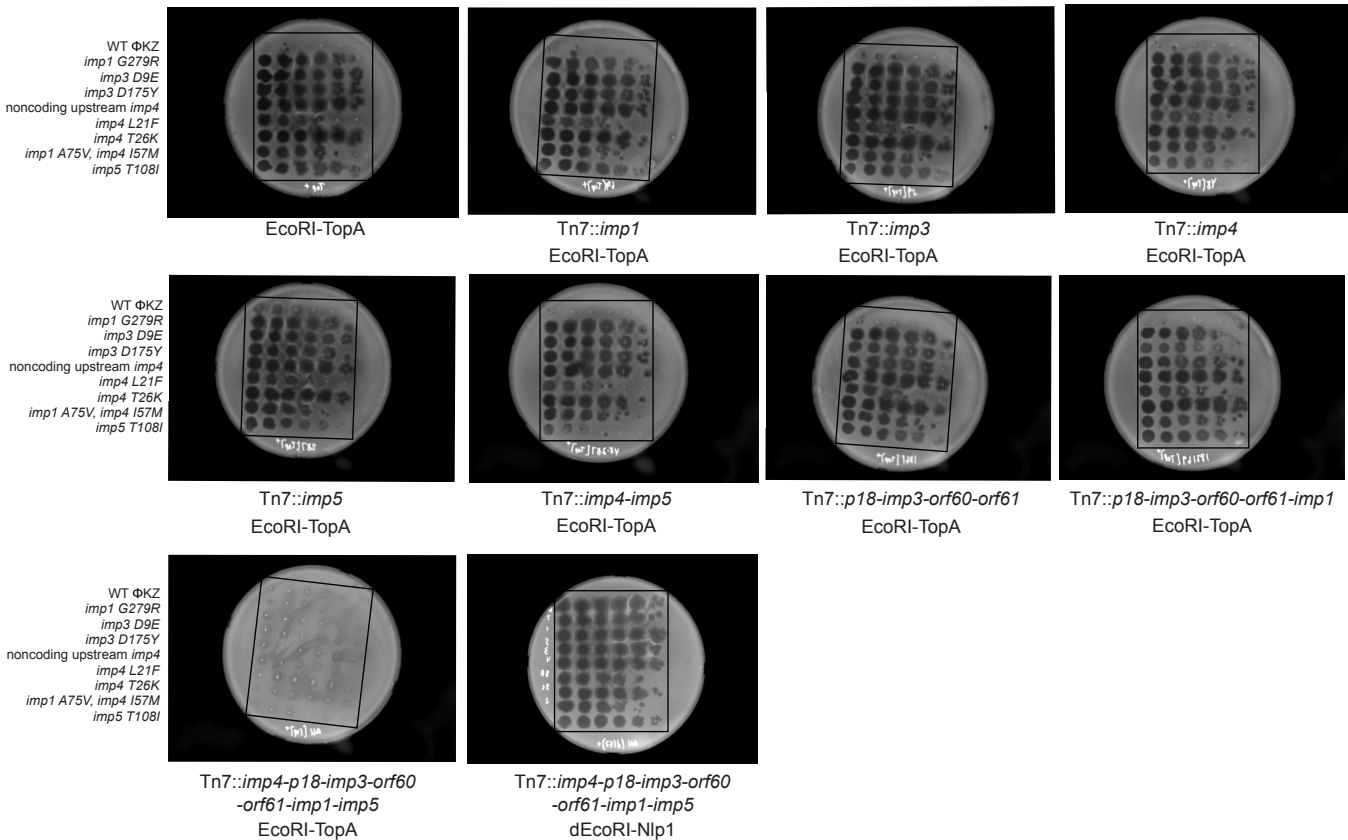
Uncropped images associated with Extended Data Figure 4c

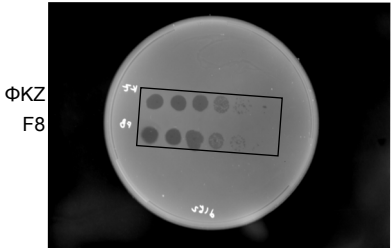


Uncropped images associated with Extended Data Figure 5d

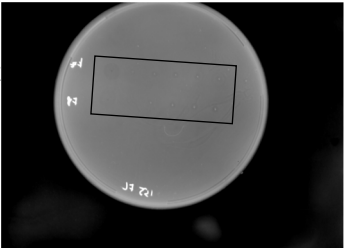


Uncropped images associated with Extended Data Figure 5e

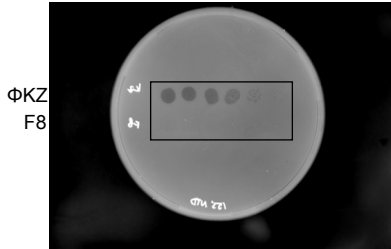




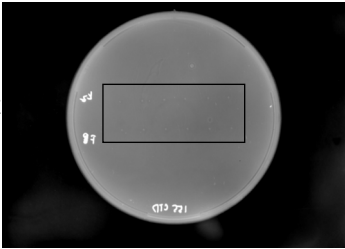
dEcoRI-Nlp1



EcoRI-Nlp2 FL



EcoRI-Nlp2 NTD



EcoRI-Nlp2 CTD