

Supplementary Figure 1 | Uncropped gel images from gel experiments in main text Fig 1b

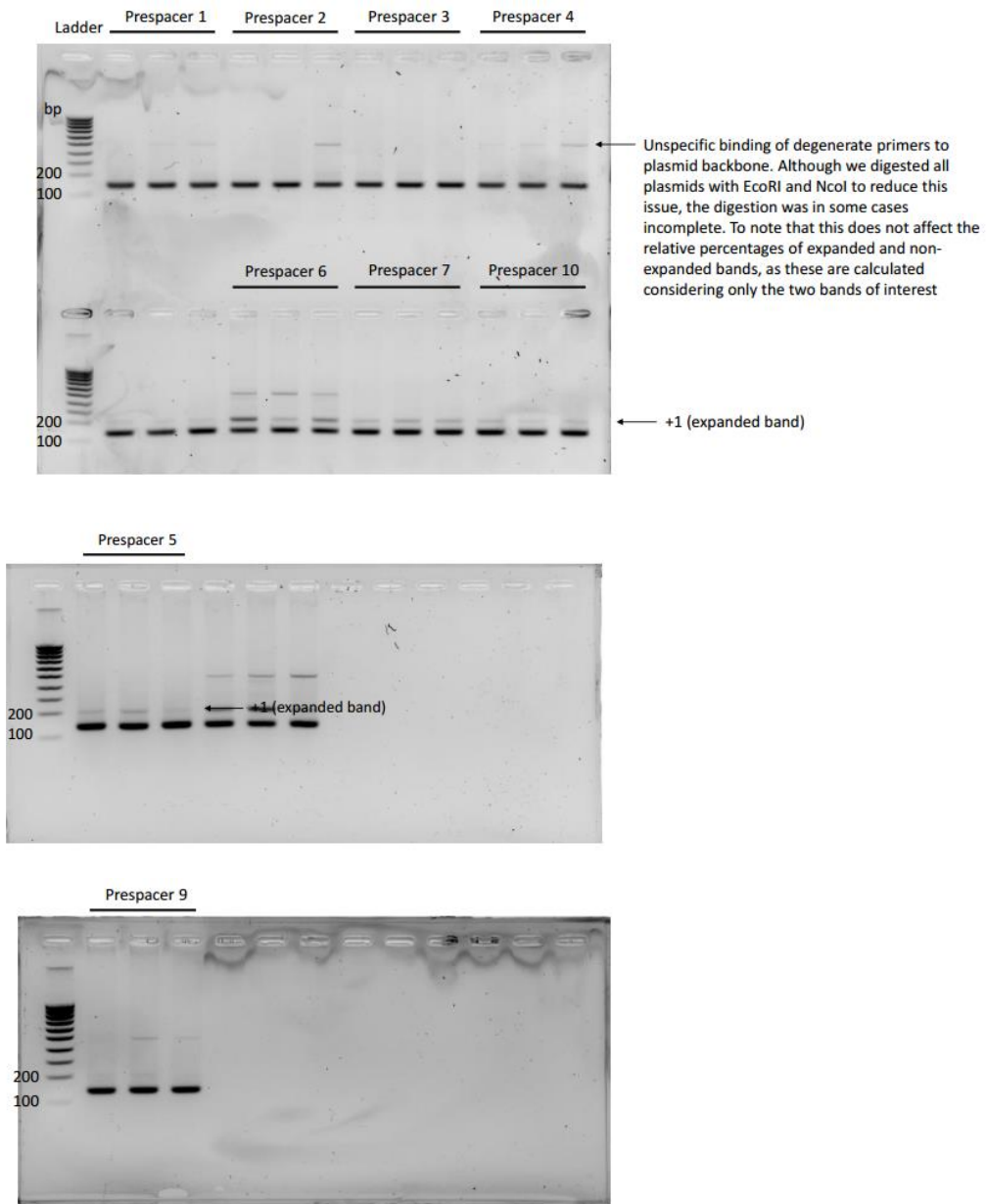


Fig 1b and Extended Fig 2g

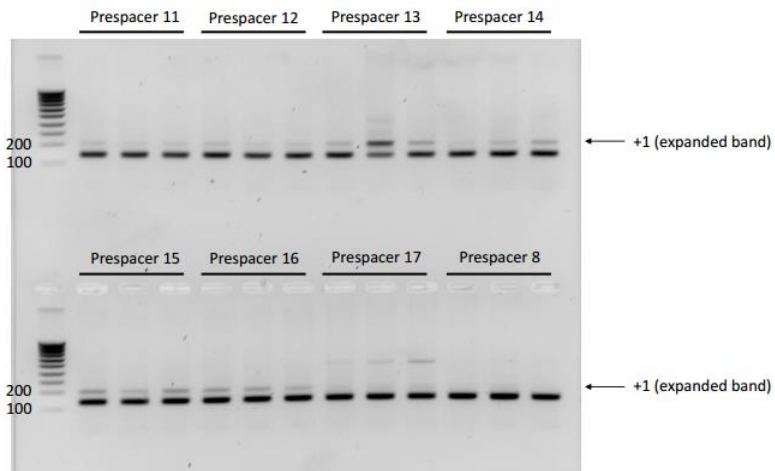
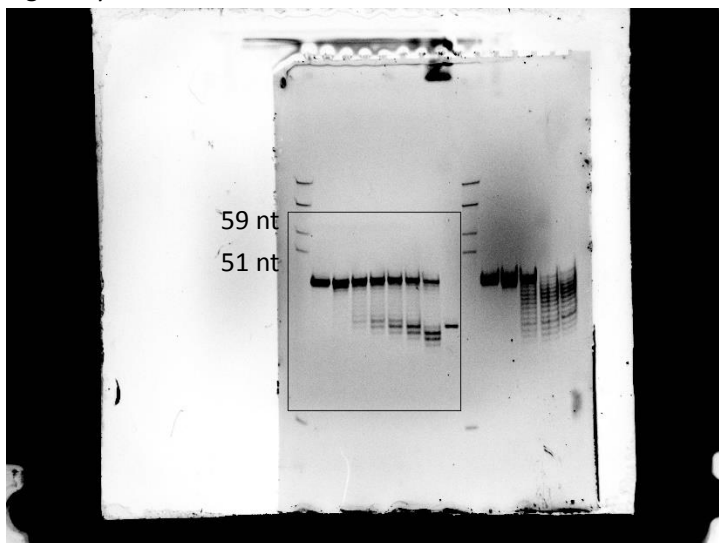
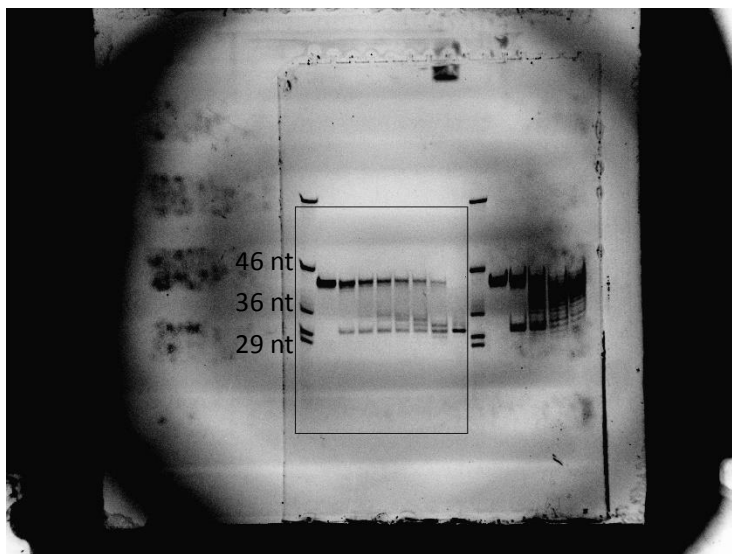


Fig 3b Cy3



Cy3:Non-PAM side cleavage

Fig 3b Cy5



Cy5:PAM side cleavage

Fig 3b Merge

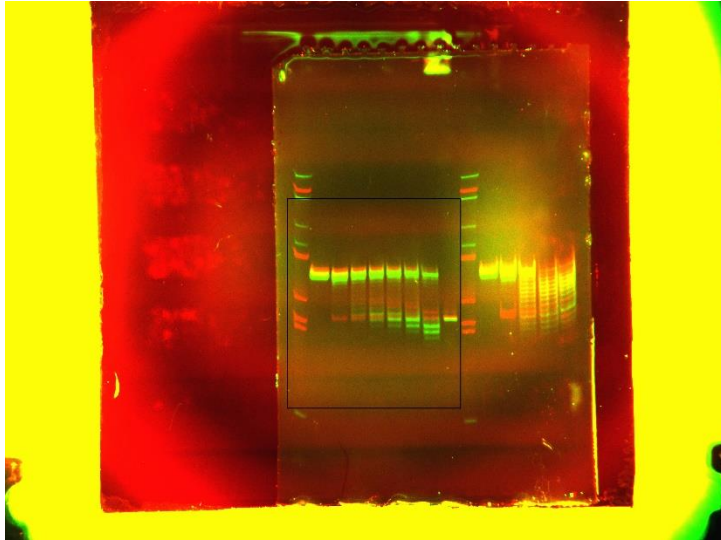
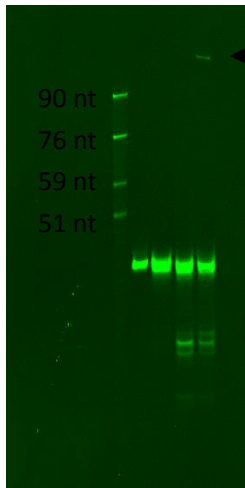
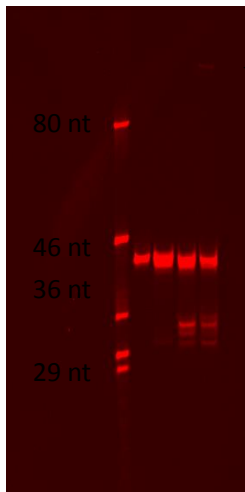


Fig 3d Cy3



Integration band of non PAM side (L-R side integration)

Fig 3d Cy5



Integration band of PAM side (R-S side integration)

Fig 3d Merge

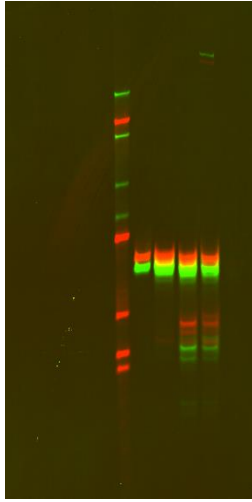


Fig 3f

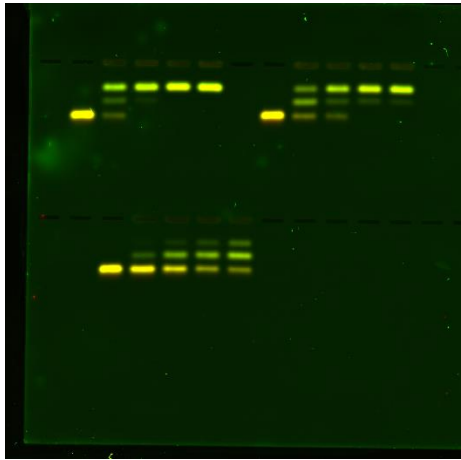


Fig 4a Cy3

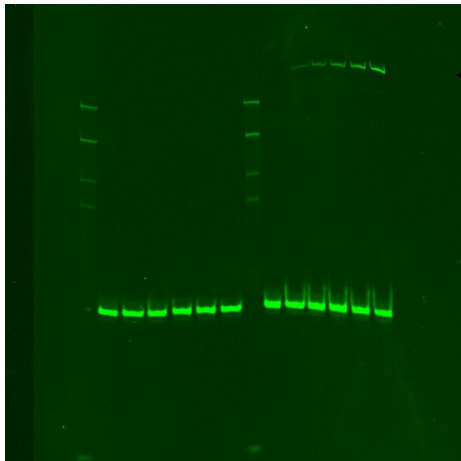
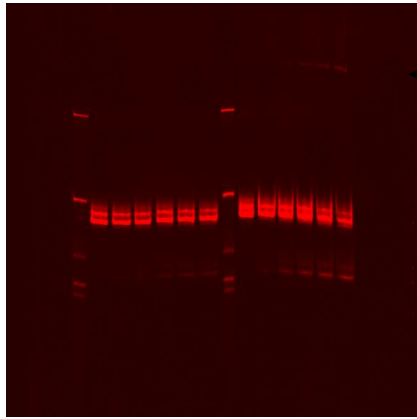


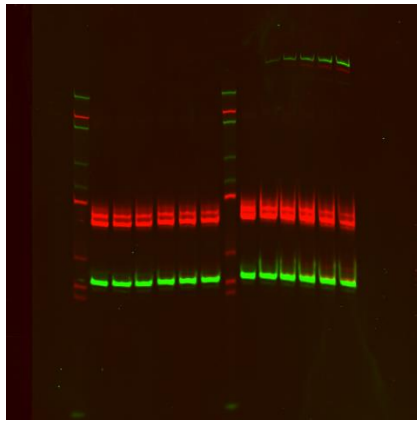
Fig 4a Cy5

← Integration band of already processed non PAM side (L-R side integration)

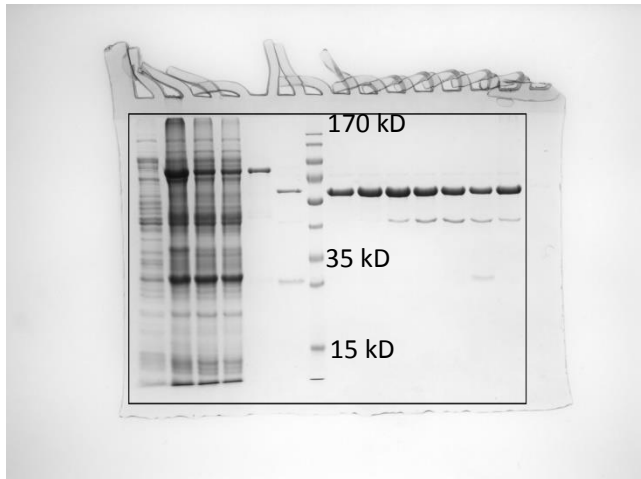


Integration band of already PAM side  
(R-S side integration)

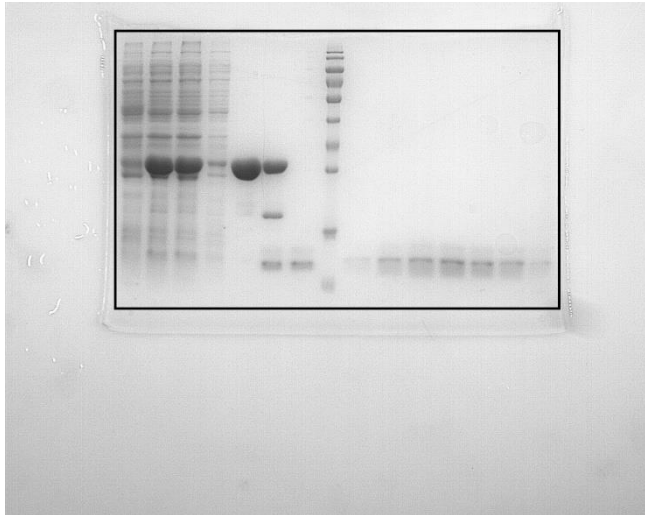
Fig 4a Merge



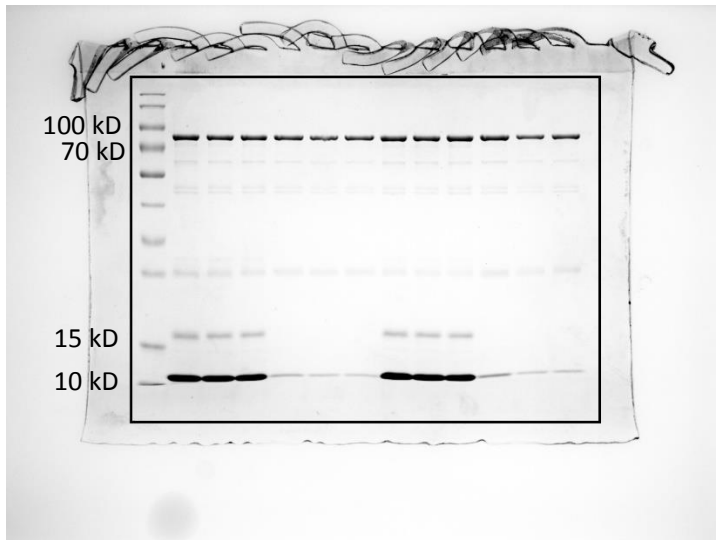
Supplementary Figure 2 | Uncropped gel images from gel experiments in Extended Data  
Extended Data Fig 1b



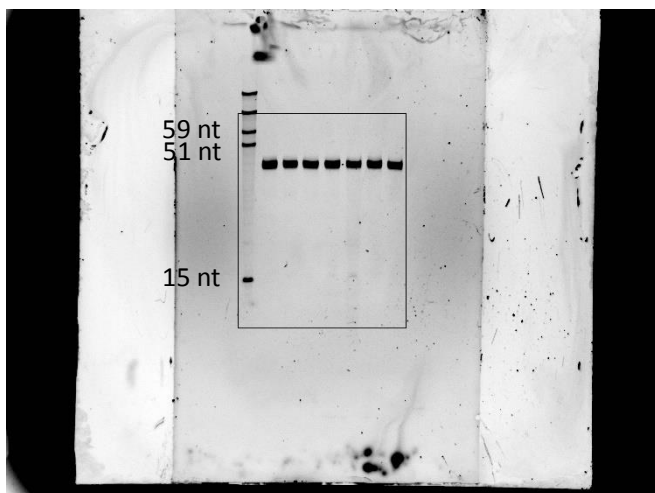
Extended Data Fig 1e



Extended Data Fig 1g

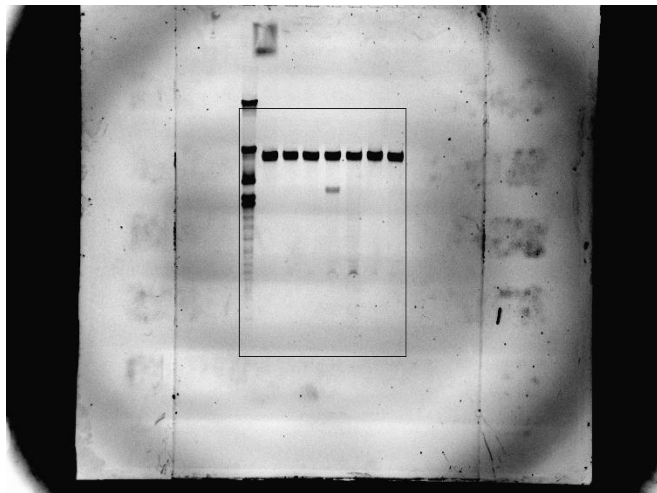


Extended Fig 1h Cy3



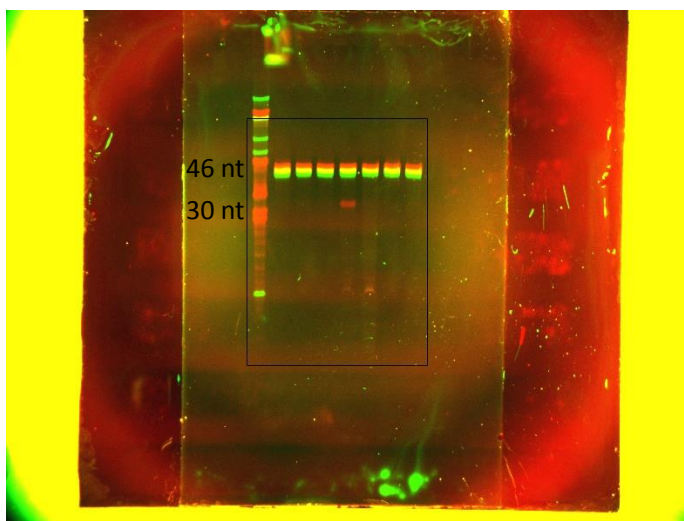
Extended Fig 1h Cy5

Cy3: Non PAM side, no any processing in any condition.



Cy5: PAM side, only process in Mn<sup>2+</sup> condition.

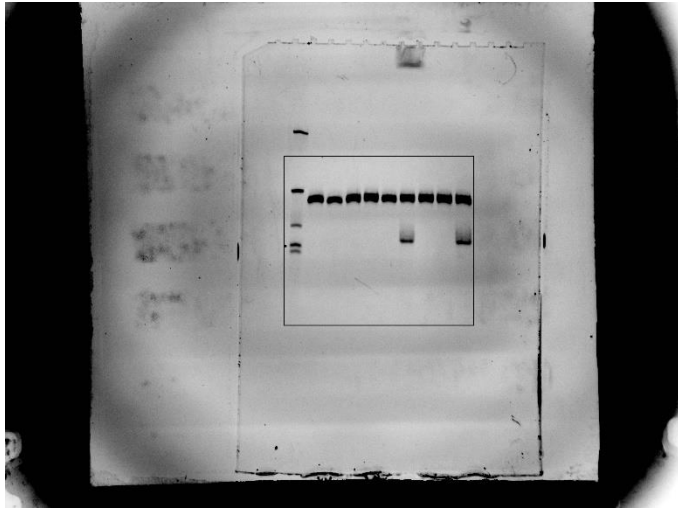
Extended Fig 1h Merge



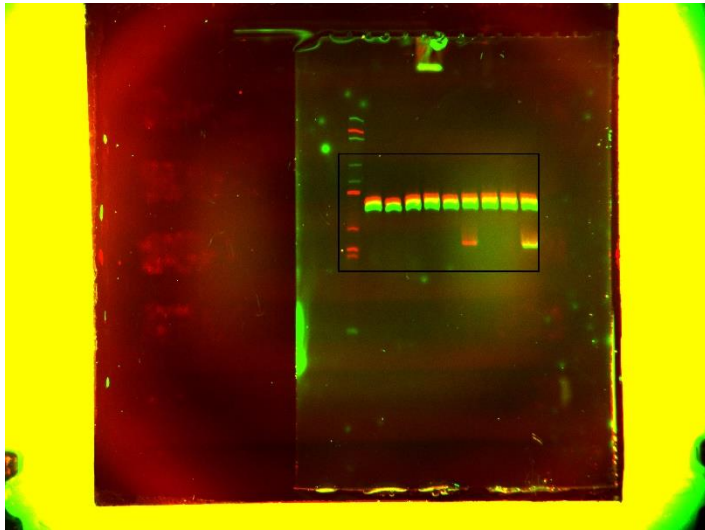
Extended Fig 1i Cy3



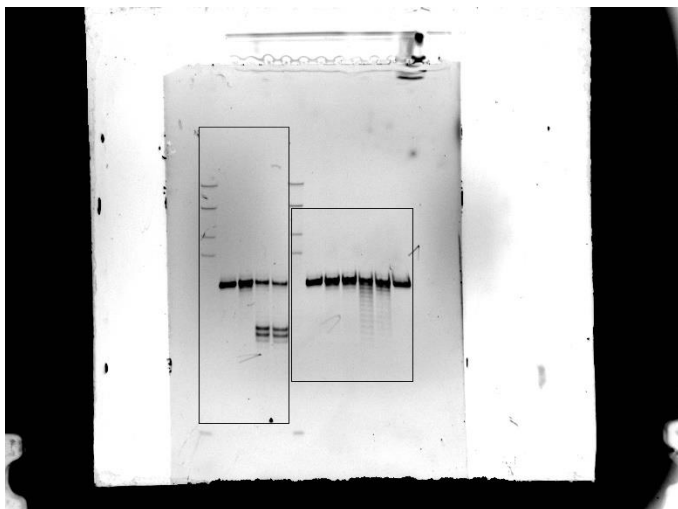
Extended Fig 1i Cy5



Extended Fig 1i merge

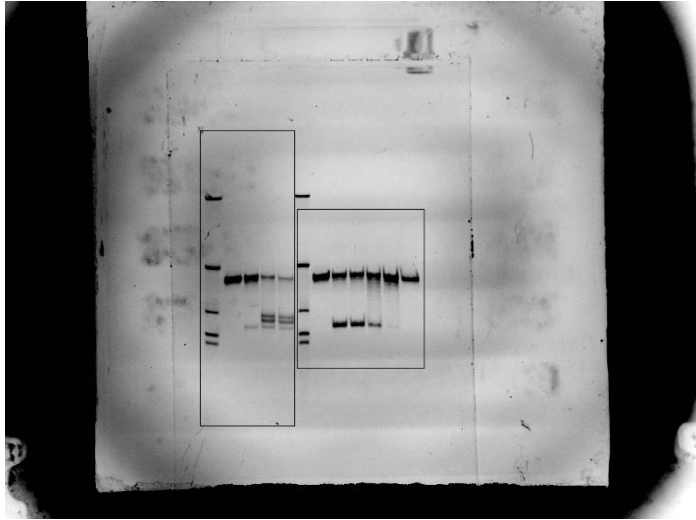


Extended Fig 1k Cy3

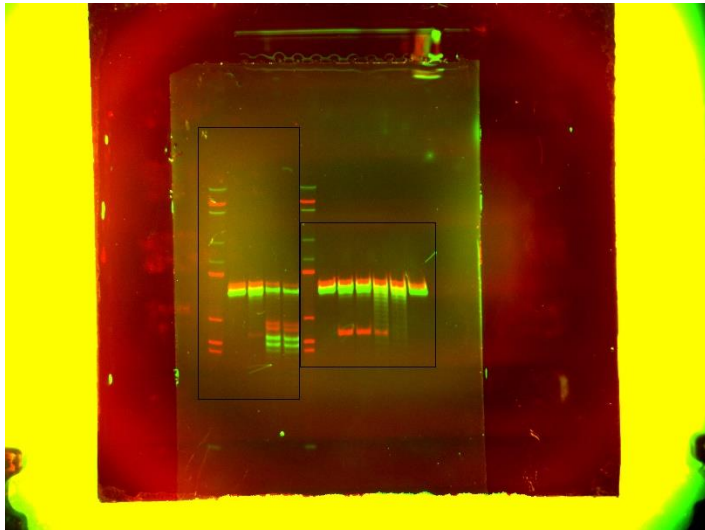


Extended Fig 1k Cy5

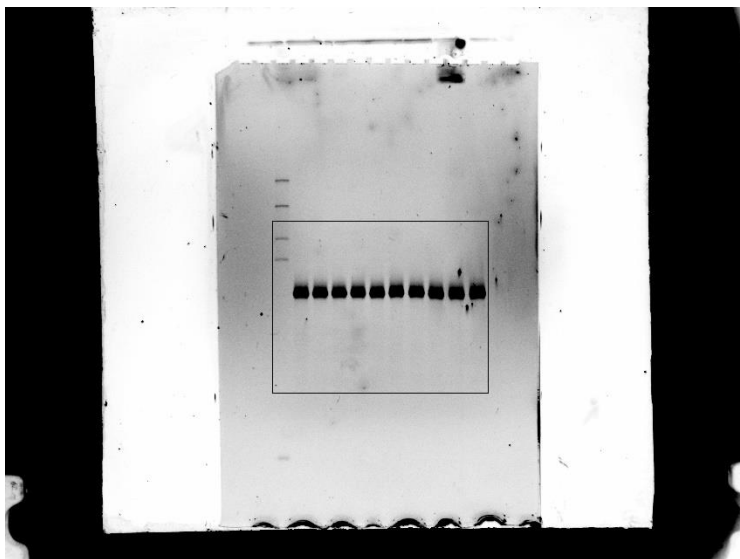




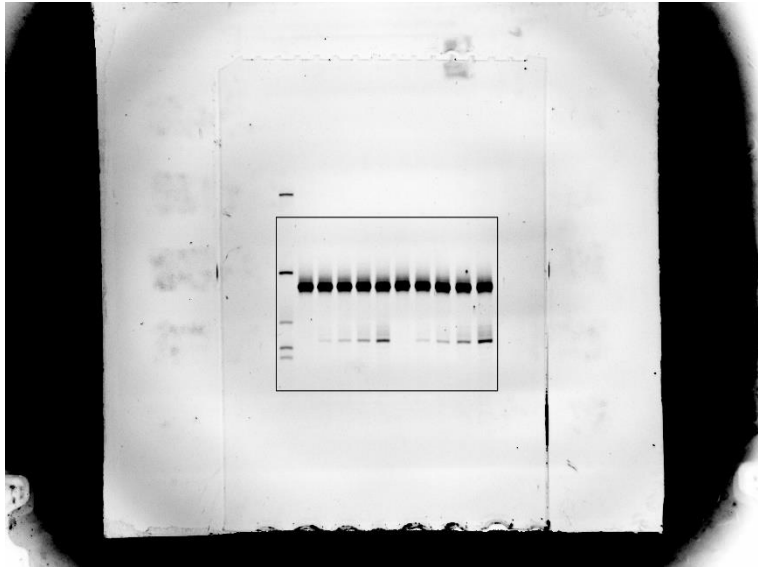
Extended Fig 1k Merge



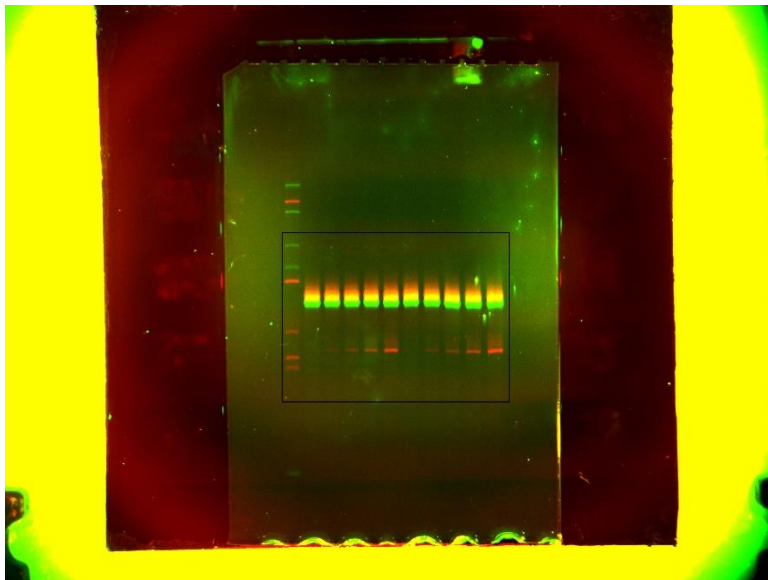
Extended Fig 2e Cy3



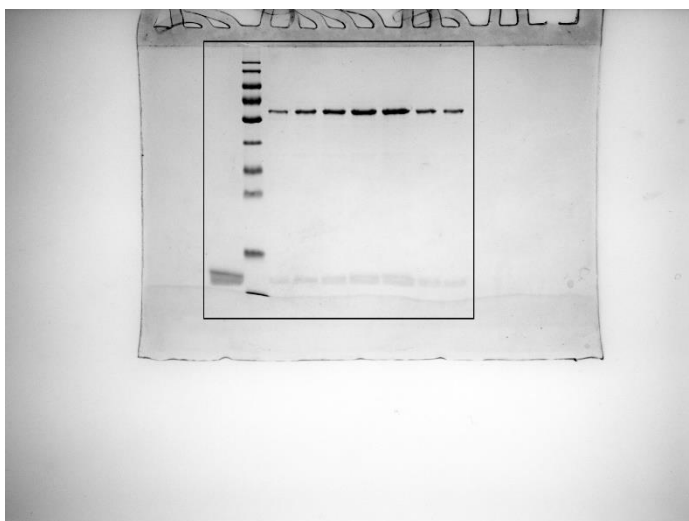
Extended Fig 2e Cy5



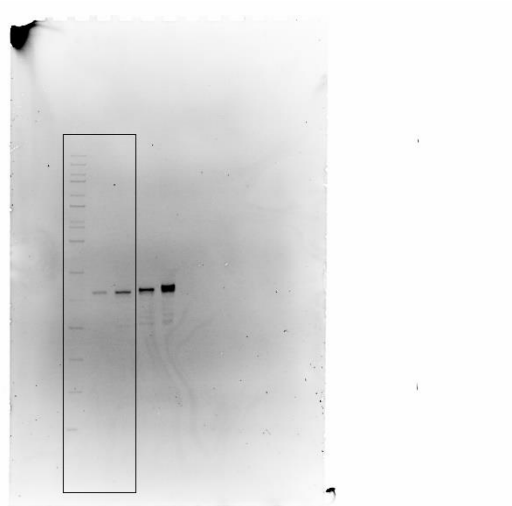
Extended Fig 2e merge



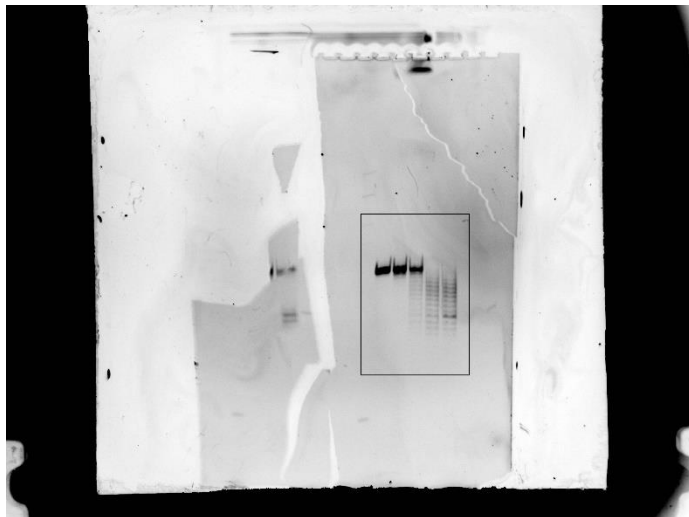
Extended Fig 4b



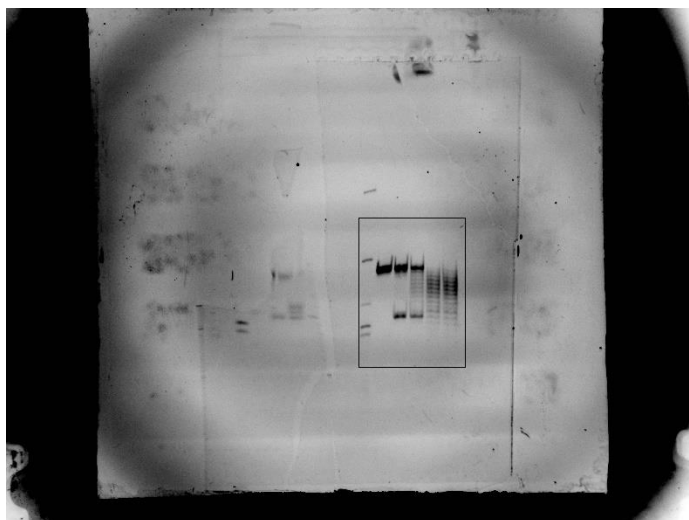
Extended Fig 4d



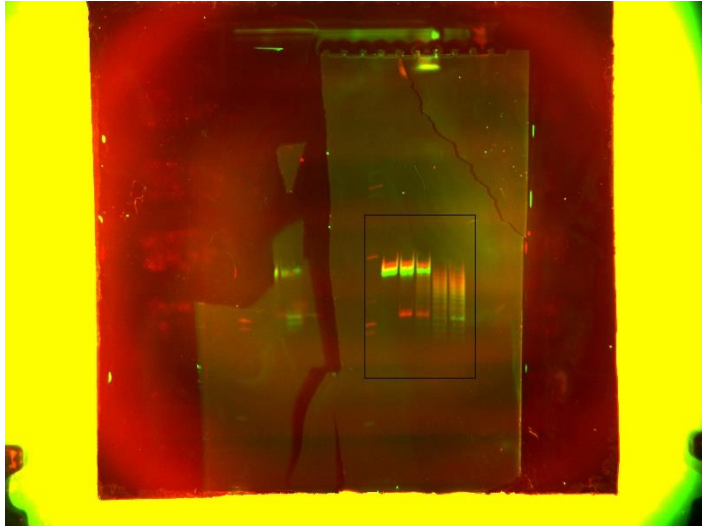
Extended Fig 4f Cy3



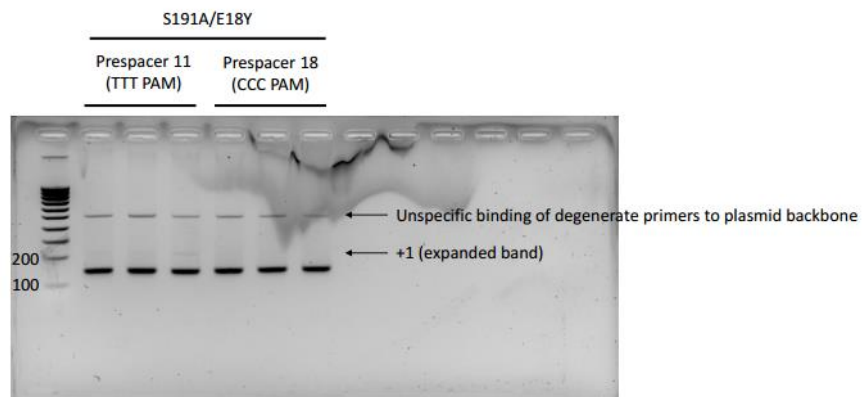
Extended Fig 4f Cy5



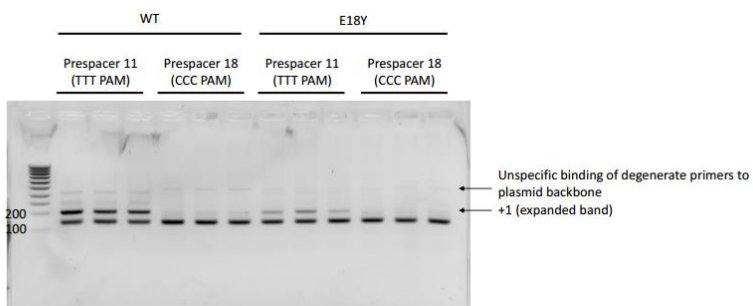
Extended Fig 4f merge



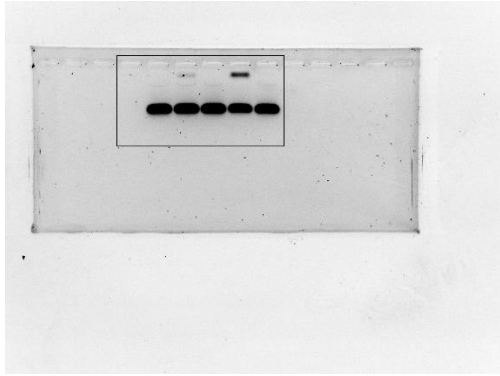
Extended Fig 4g double mutation



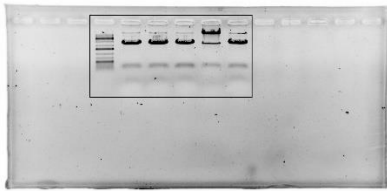
Extended Fig 4g single mutation



Extended Fig 7c Cy5



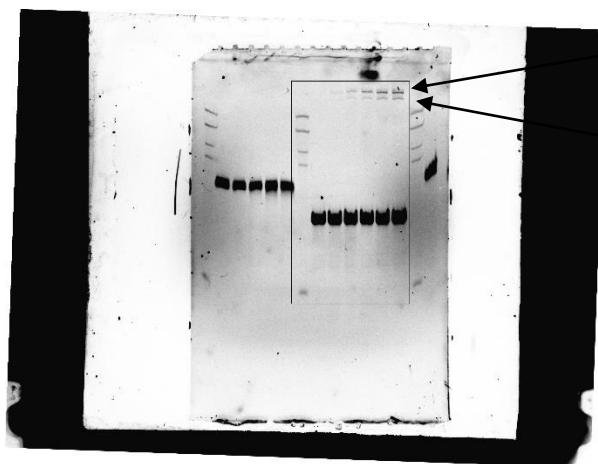
Extended Fig 7c EtBr staining



Extended Fig 7c merge



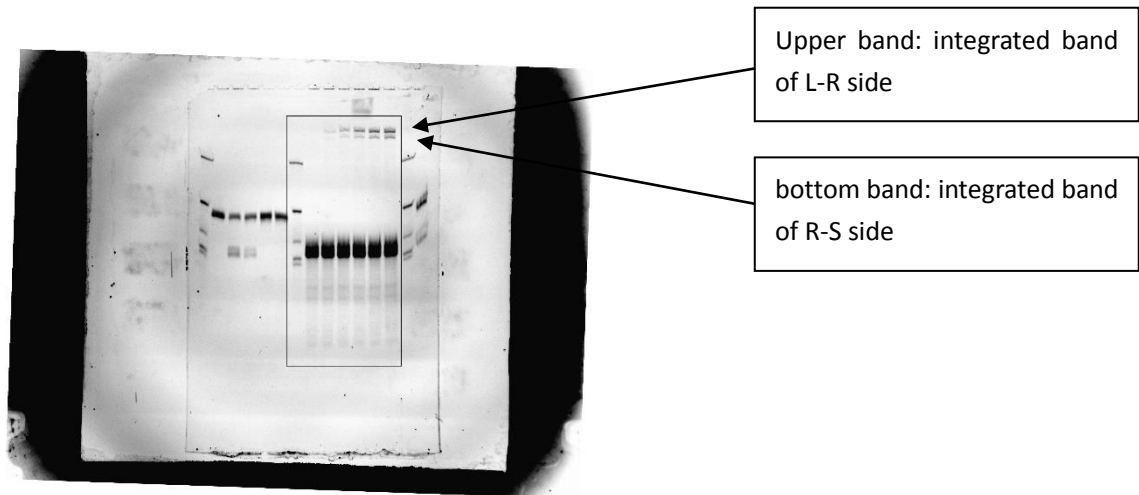
Extended Fig 7f Cy3



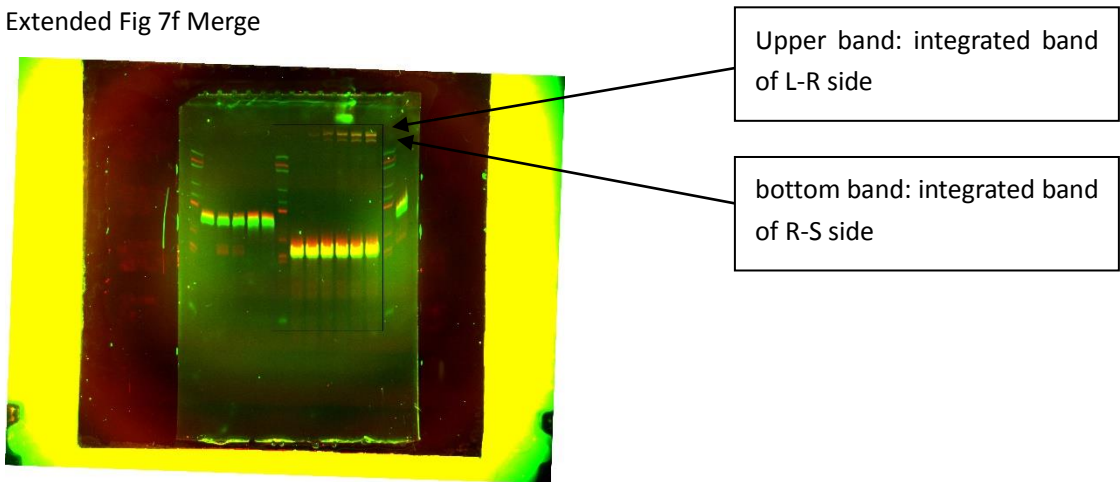
Upper band: integrated band of L-R side

bottom band: integrated band of R-S side

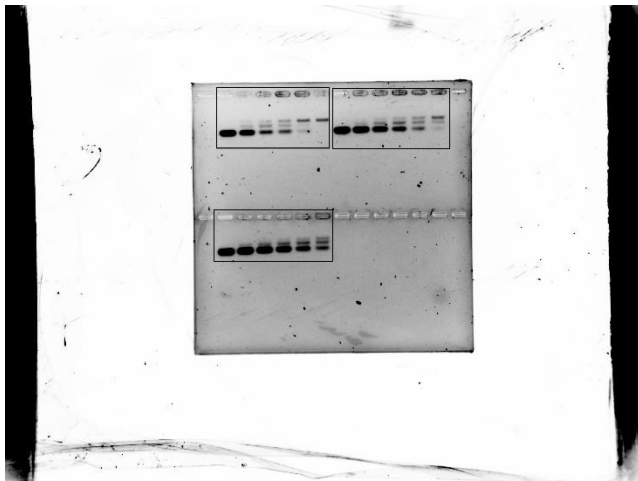
Extended Fig 7f Cy5



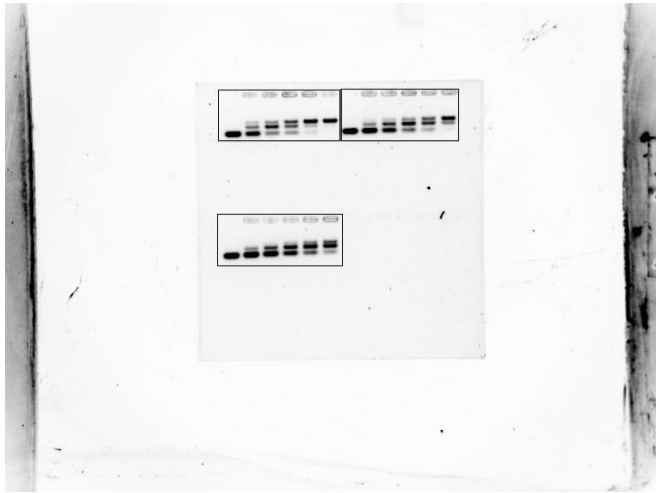
Extended Fig 7f Merge



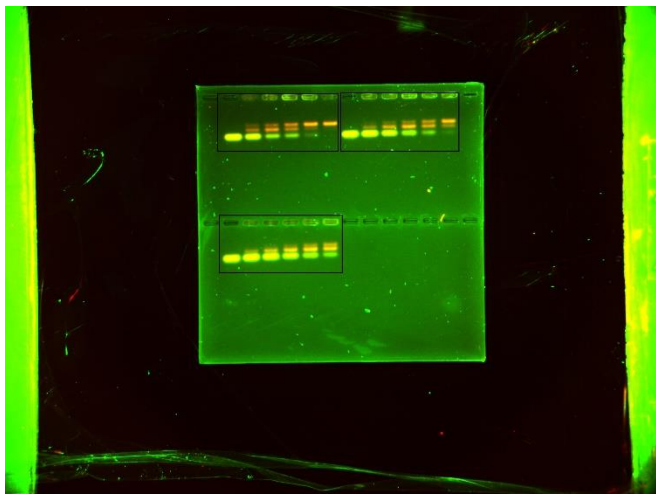
Extended Fig 7g Cy3



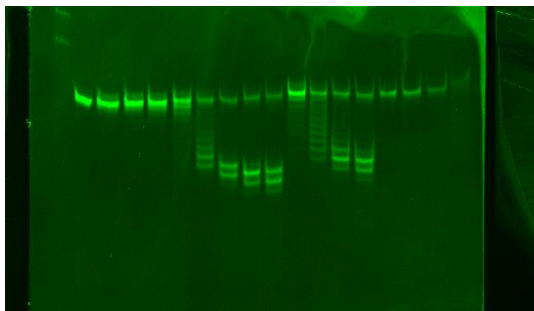
Extended Fig 7g Cy5



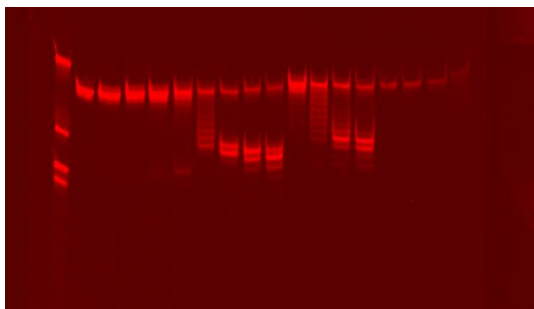
Extended Fig 7g Merge



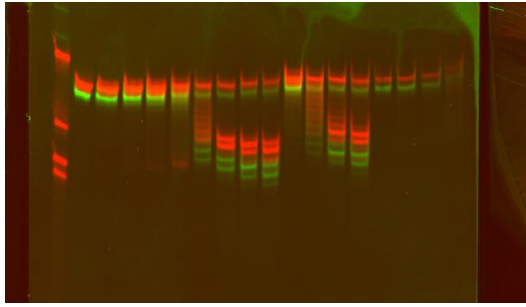
Extended Fig 8a Cy3



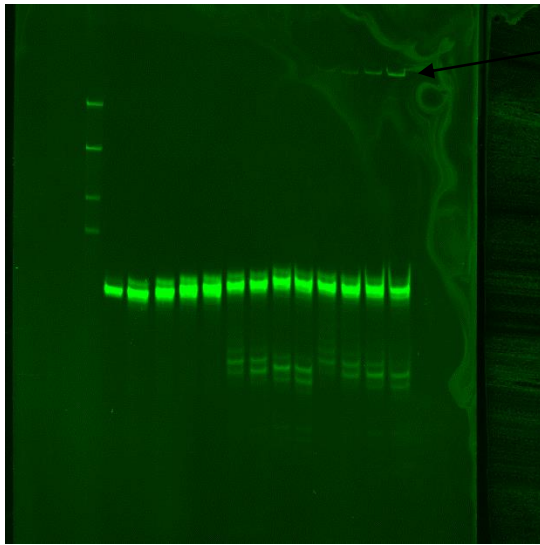
Extended Fig 8a Cy5



Extended Fig 8a Merge

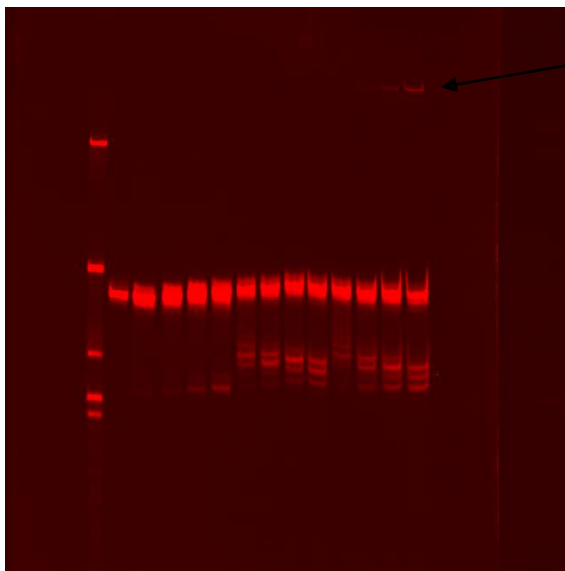


Extended Fig 8b Cy3



band of non-PAM side integrated into L-R side

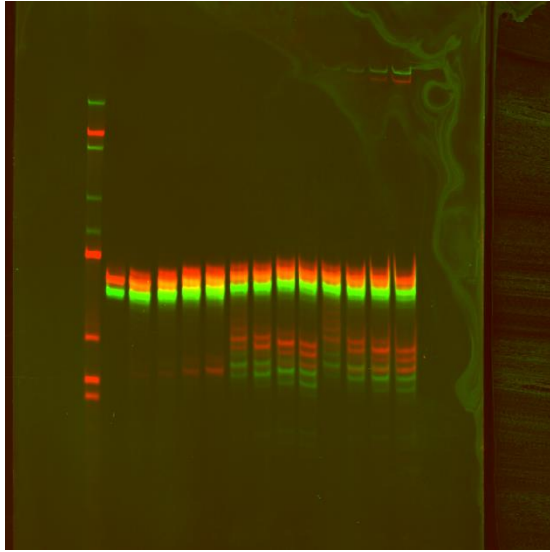
Extended Fig 8b Cy5



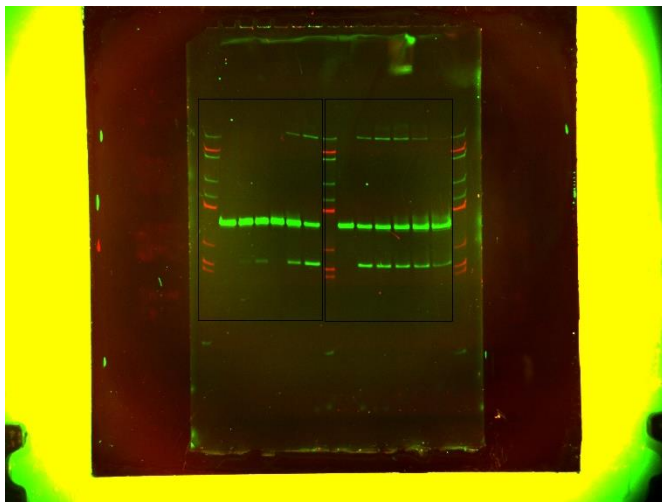
band of PAM side integrated into R-S side

Extended Fig 8b Merge

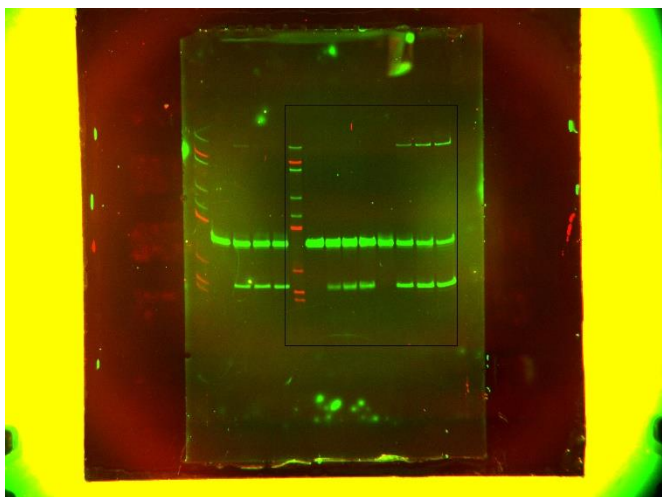




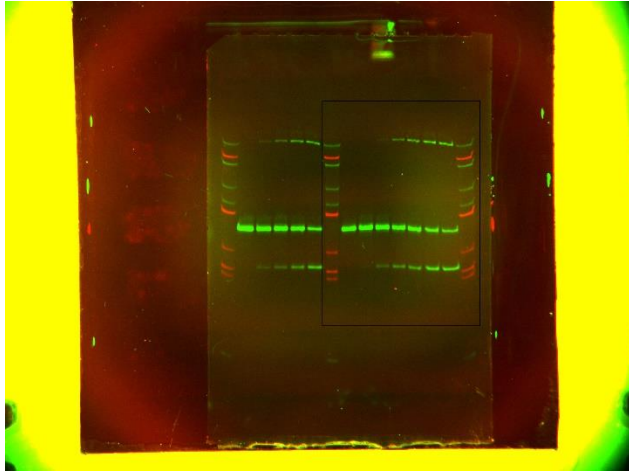
Extended Fig 8c Cy3



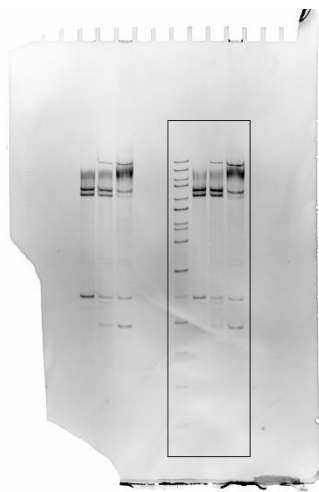
Extended Fig 8d Cy3



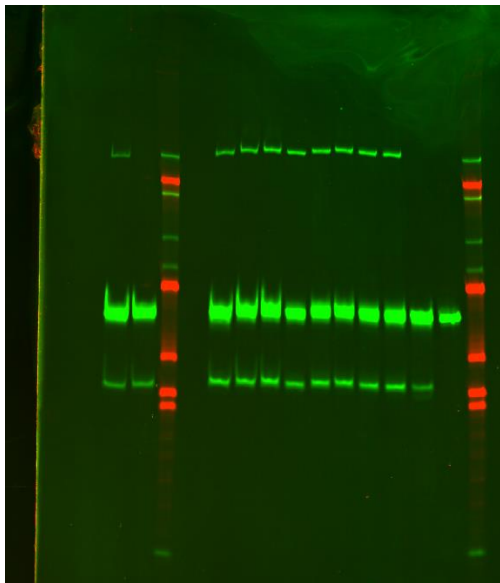
Extended Fig 8d



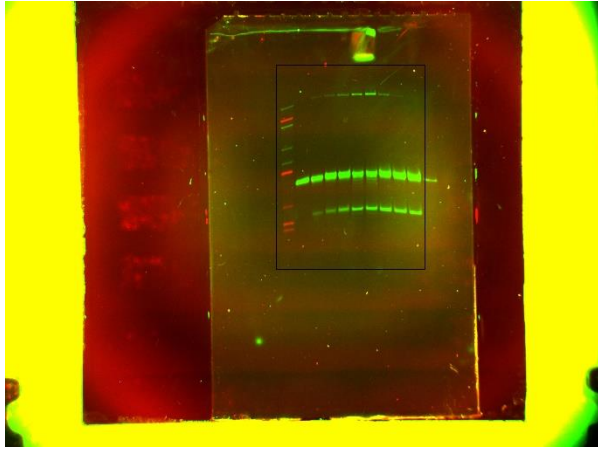
Extended Fig 8f



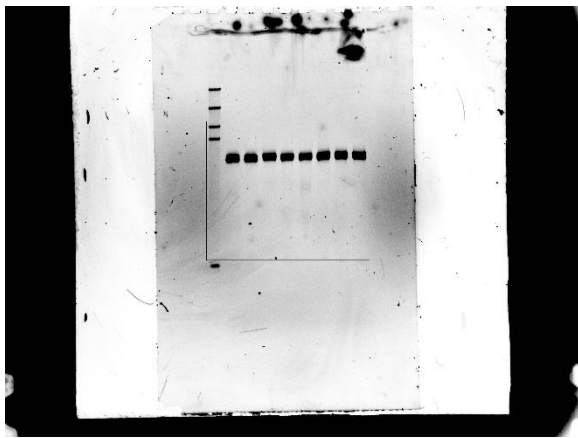
Extended Fig 8h (unflipped)



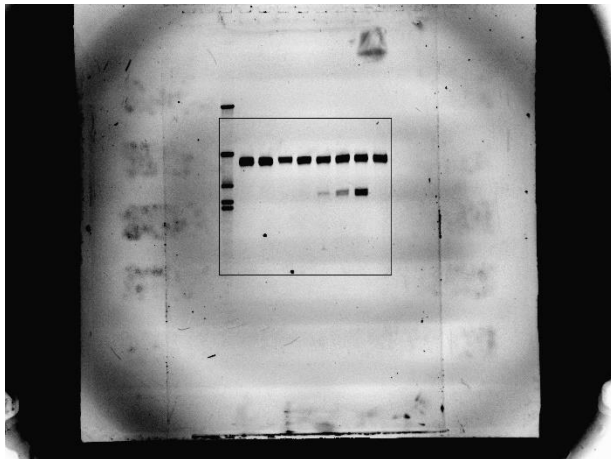
Extended Fig 8i merge



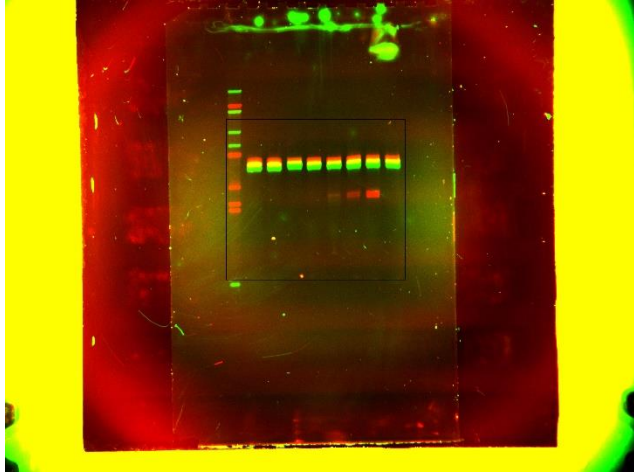
Extended Fig 8j Cy3



Extended Fig 8j Cy5



Extended Fig 8j Merge



Extended Fig 8k

