
DNA-guided CRISPR–Cas12 for cellular RNA targeting

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Supplementary Information

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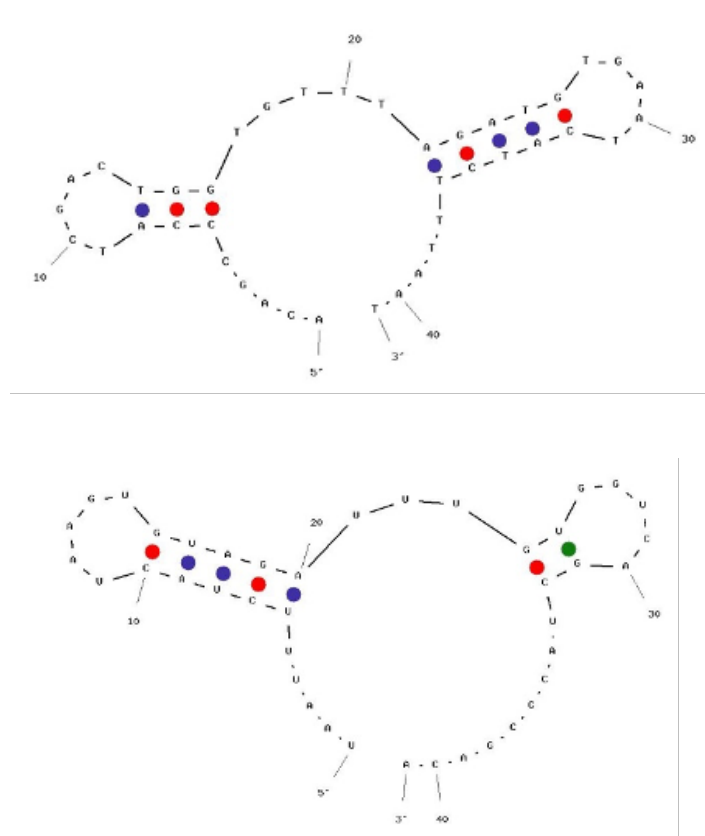
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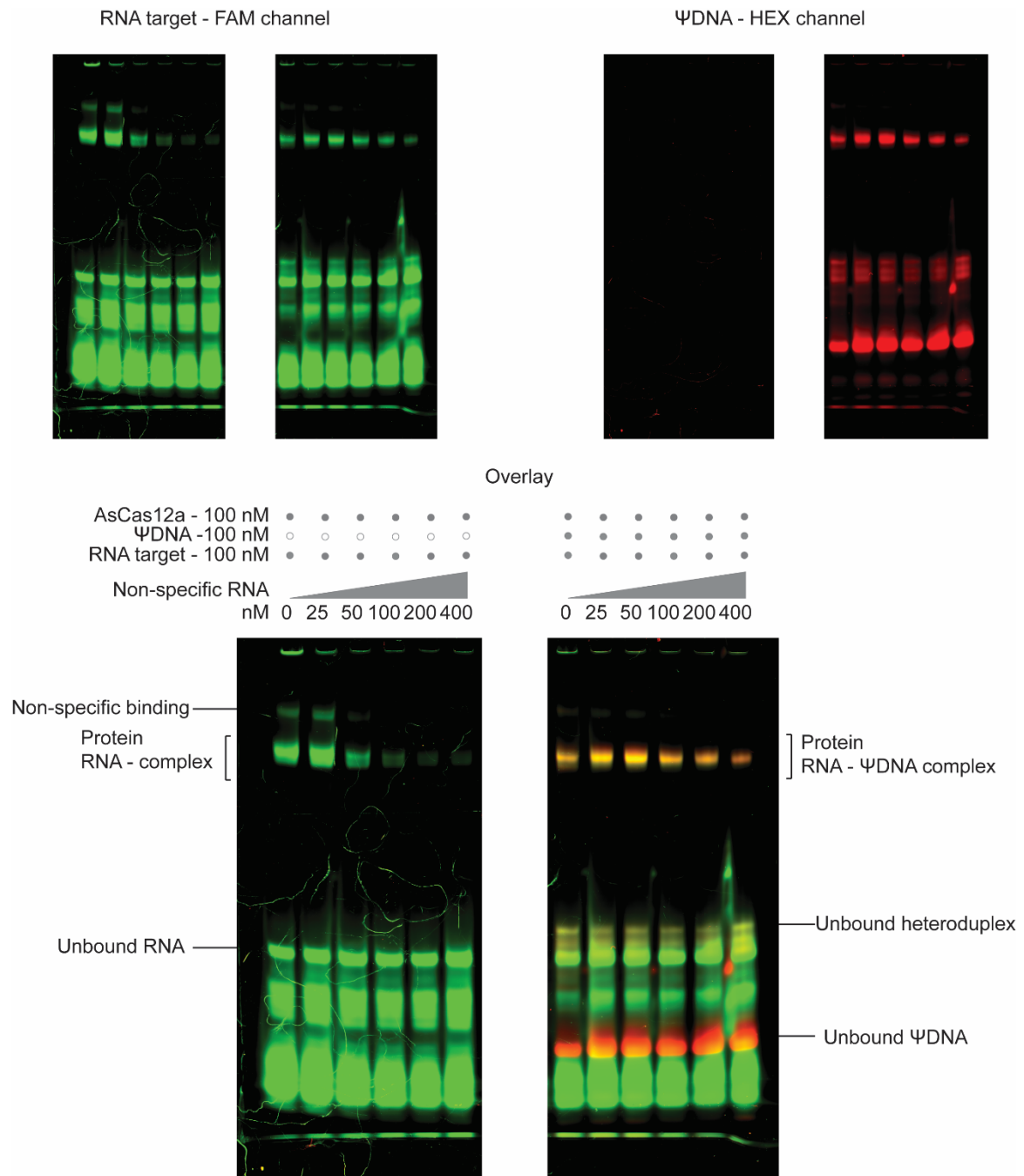
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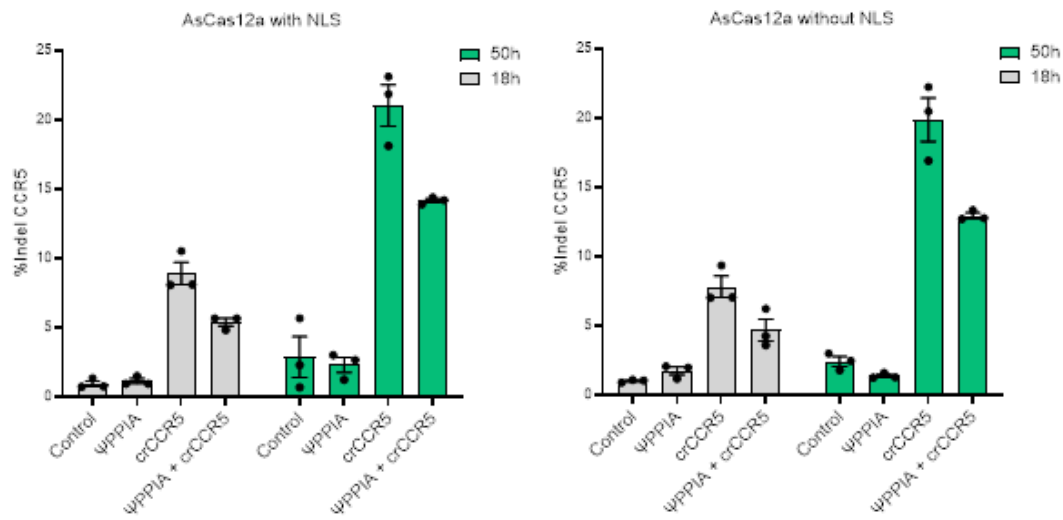
Supplementary Fig. 5 | Uncropped PLA images corresponding to Fig. 4g



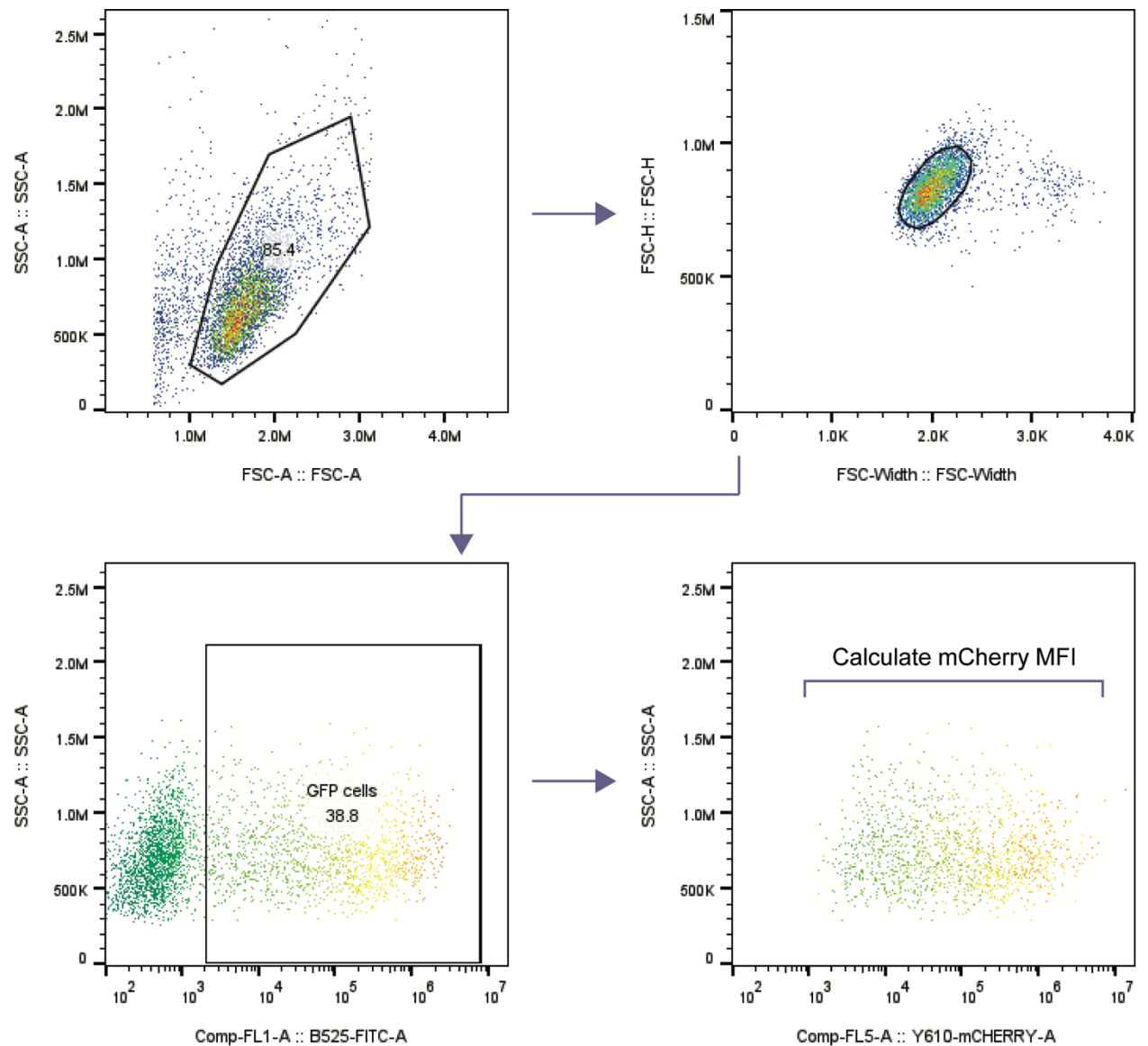
Supplementary Fig. 1. Predicted ΨDNA secondary structure by UNAFold. The prediction is made by UNAFold on IDT website. Spacer region of this ΨDNA is first 20 nucleotides from 5' end.



Supplementary Fig. 2. Non-specific RNA binding evaluation in the presence of ΨDNA-AsCas12a. Electrophoretic Mobility Shift Assay (EMSA) showing competition between nonspecific RNA and target RNA. ΨDNA is labeled with HEX, and the target RNA is labeled with FAM. ΨDNA stabilizes AsCas12a binding to the target RNA while in presence of non-specific RNA competitors.

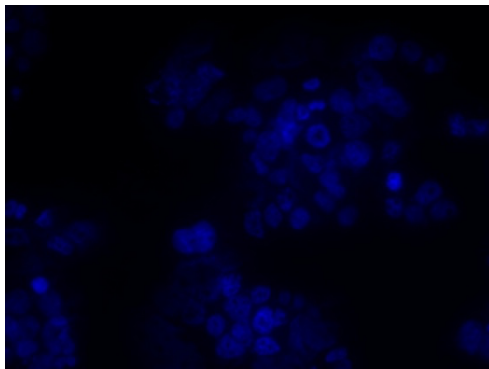
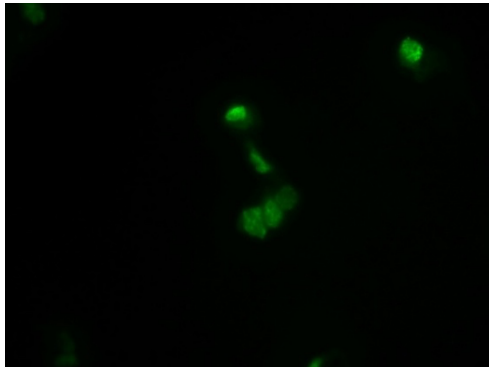
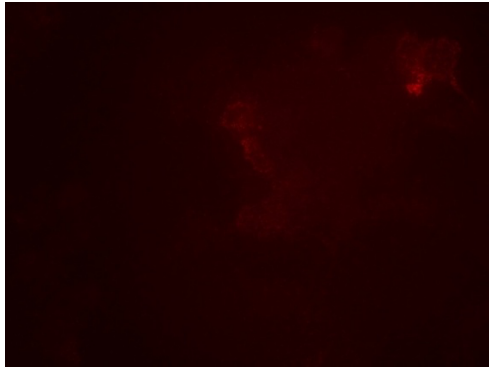


Supplementary Fig. 3. Evaluation of NLS domain in dual DNA-RNA editing construct. Comparison between AsCas12a with and without NLS domain on genome editing efficiency on CCR5 locus from NGS data. No treatment control, ΨDNA only, crRNA only, and both ΨDNA and crRNA transfected groups are shown on the plot with 18 h (gray) or 50 h (green) editing efficiency. Bars represent the mean value $\pm$ standard error of mean (SEM) of (n = 3) biological replicates.

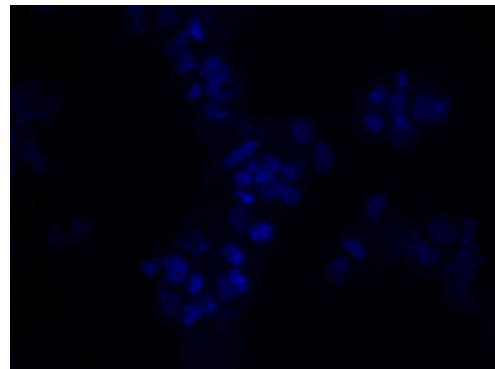
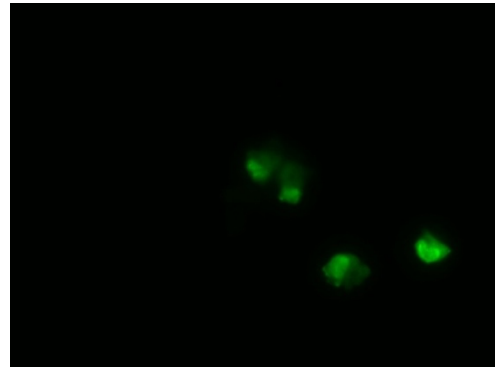


Supplementary Fig. 4. FACS gating strategy for mCherry gene silencing experiments. Gating to determine the MFI of mCherry and GFP for all samples in Fig. 2. First gates exclude cell debris and only select for singlets. Later GFP-positive cells are gated and the MFI of GFP is calculated. Finally, all GFP-positive cells are plotted to find the MFI of mCherry.

AsCas12a-ΨDNA



dRfxCas13d-ΨDNA



Supplementary Fig. 5. Uncropped PLA images corresponding to Fig. 4g. Representative uncropped fluorescence images from the proximity ligation assay (PLA) corresponding to Fig. 4g.