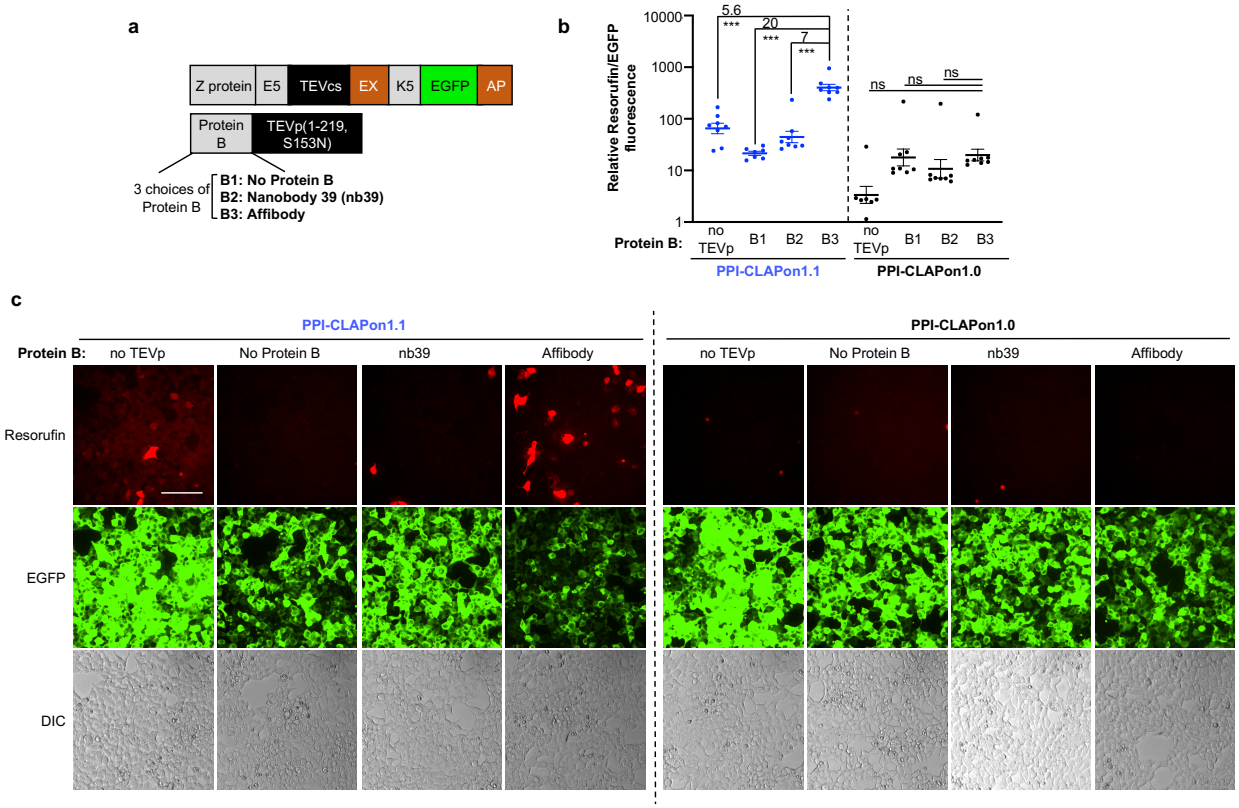
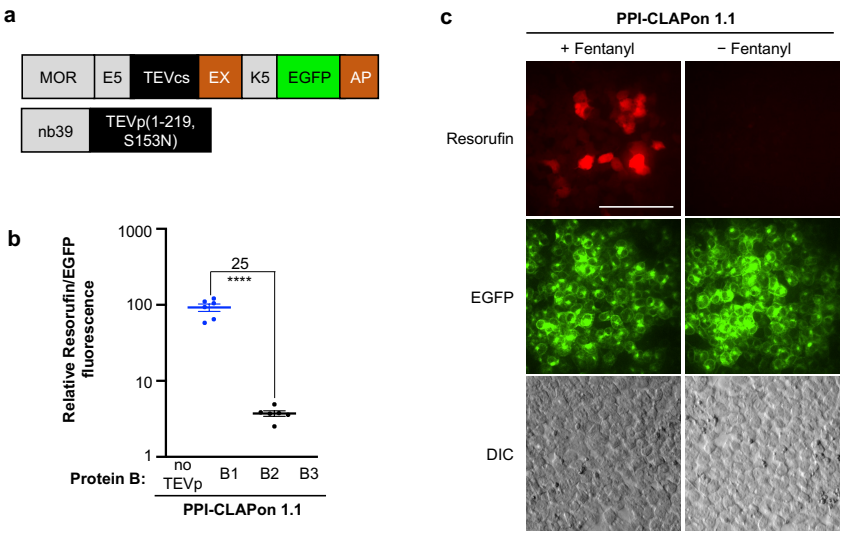
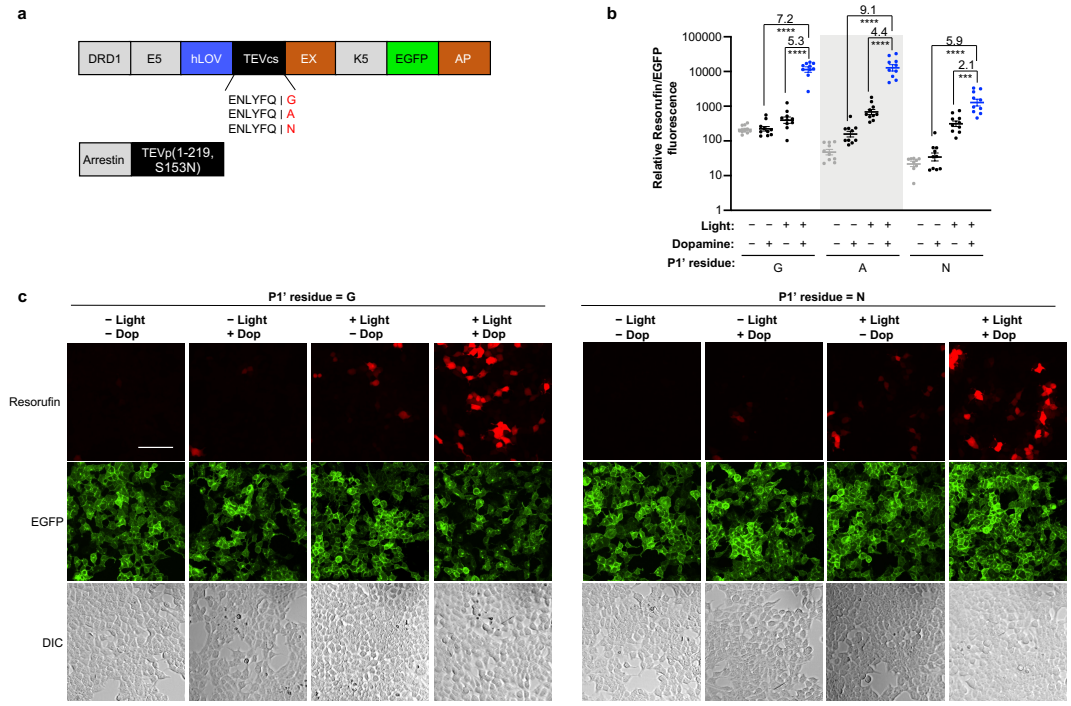


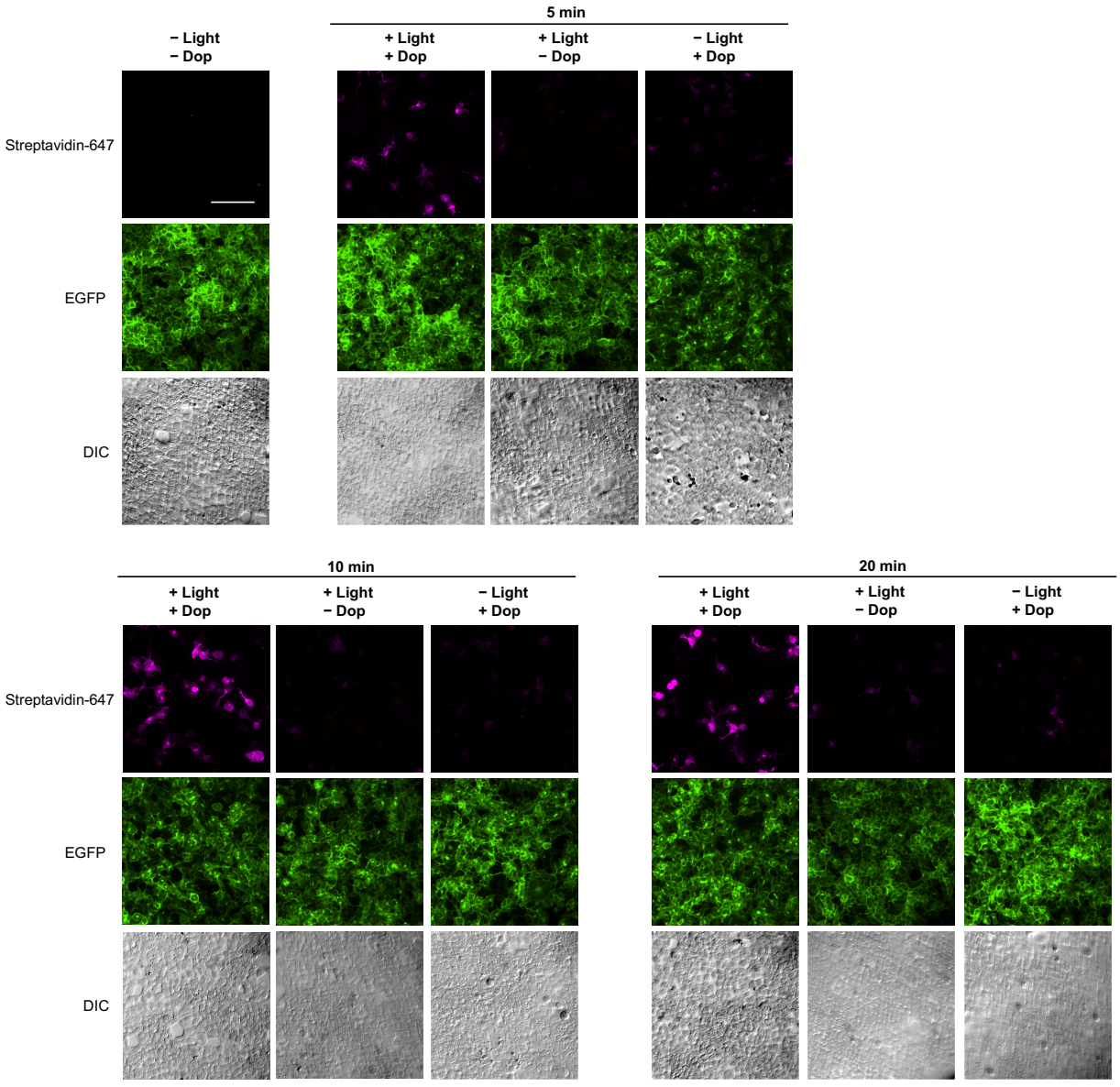
Appendix Figure A-8 Comparing PPI-CLAPon1.0 and PPI-CLAPon1.1 for detecting the affibody and Z protein interaction. (a) Schematics of DNA constructs of PPI-CLAPon1.0 and PPI-CLAPon1.1 for detecting the PPI between the Z protein and affibody. Protein B is either omitted, or nanobody 39 or affibody. (b) Dot plot analysis and (c) representative fluorescence images of PPI-CLAPon1.0 and PPI-CLAPon1.1 for detecting the affibody and Z protein interaction. no TEVp, TEVp virus omitted. Values above the dots represent SBRs which were calculated by dividing the means of the conditions indicated. Error bars, standard error of the mean. The mean is represented by the thicker horizontal bar. Stars represent significance after an unpaired two-tailed Student's t-test. n = 7-8. ***p value <0.001; ns, p value >0.05. Scale bar, 100 μm.



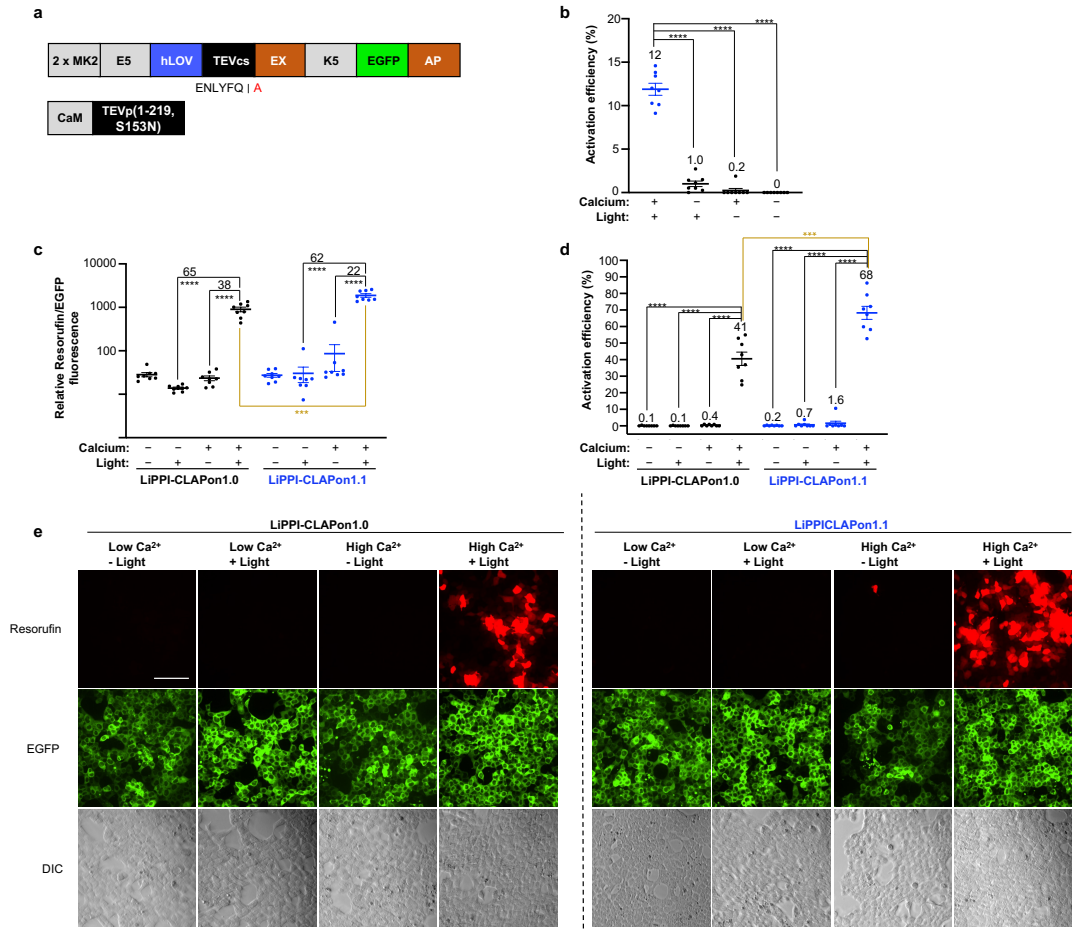
Appendix Figure A-9 Detecting the interaction between MOR and nb39 using PPI-CLAPon1.1. (a) Schematics of the DNA constructs of PPI-CLAPon1.1 for detecting the MOR and nb39 interaction. (b) Dot plot analysis and (c) representative fluorescence images of PPI-CLAPon1.1 for detecting the MOR and nb39 interaction. Values above the dots represent SBRs which were calculated by dividing the means of the conditions indicated. Error bars, standard error of the mean. The mean is represented by the thicker horizontal bar. Stars represent significance after an unpaired two-tailed Student's t-test. n = 6. ****p value <0.0001. Scale bar, 100 μm.



Appendix Figure A-10 Optimizing LiPPI-CLAPon1.0 with various TEVcs. (a) Schematics of DNA constructs of LiPPI-CLAPon1.0 for detecting dopamine-inducible DRD1-arrestin interaction. Three different TEVcs with the fast truncated TEVp were tested. (b) Dot plot analysis and (c) representative fluorescence images of LiPPI-CLAPon with TEVcs (ENLYFQ | G) and (ENLYFQ | N). Representative fluorescence images with TEVcs (ENLYFQ | A) were shown in Figure 1-3c. Dop, dopamine. Values above the dots represent SBRs, which were calculated by dividing the mean of the conditions indicated. Error bars, standard error of the mean. The mean is represented by the thicker horizontal bar. Stars represent significance after an unpaired two-tailed Student's t-test. n = 9-10. ****p value <0.0001. ***p value <0.001. Scale bar, 100 µm.



Appendix Figure A-11 Representative fluorescence images of LiPPI-CLAPon1.0 characterization, related to Figure 2-3d. Dop, dopamine. Scale bar, 100 μm.



Appendix Figure A-12 Comparing LiPPI-CLAPon1.0 and LiPPI-CLAPon1.1 for detecting CaM and MK2 interaction. (a) Schematics of DNA constructs of LiPPI-CLAPon1.0 and LiPPI-CLAPon1.1 for detecting calcium-dependent CaM and MK2 interaction, with Amplex UltraRed labeling. EGFP, expression maker for caged split APEX construct. (b) Activation efficiency dot plot analysis of LiPPI-CLAPon1.0 for detecting CaM and MK2 interaction stimulated by calcium ± light for 1 min, related to Figure 4a. (c) Mean intensity dot plot analysis, (d) activation efficiency dot plot analysis, and (e) representative fluorescence images of LiPPI-CLAPon1.0 and LiPPI-CLAPon1.1 for detecting CaM and MK2 interaction stimulated by calcium ± light for 5 min. Values above the dots in Appendix Figure 2-12b and S12d represent the means of the activation efficiency in each condition indicated. Values above the dots in Appendix Figure 2-12c represent SBRs which were calculated by dividing the means of the conditions indicated. Error bars, standard error of the mean. The mean is represented by the thicker horizontal bar. Stars represent significance after an unpaired two-tailed Student's t-test. n = 8. ****p value <0.0001; ***p value <0.001. Scale bar, 100 μm.