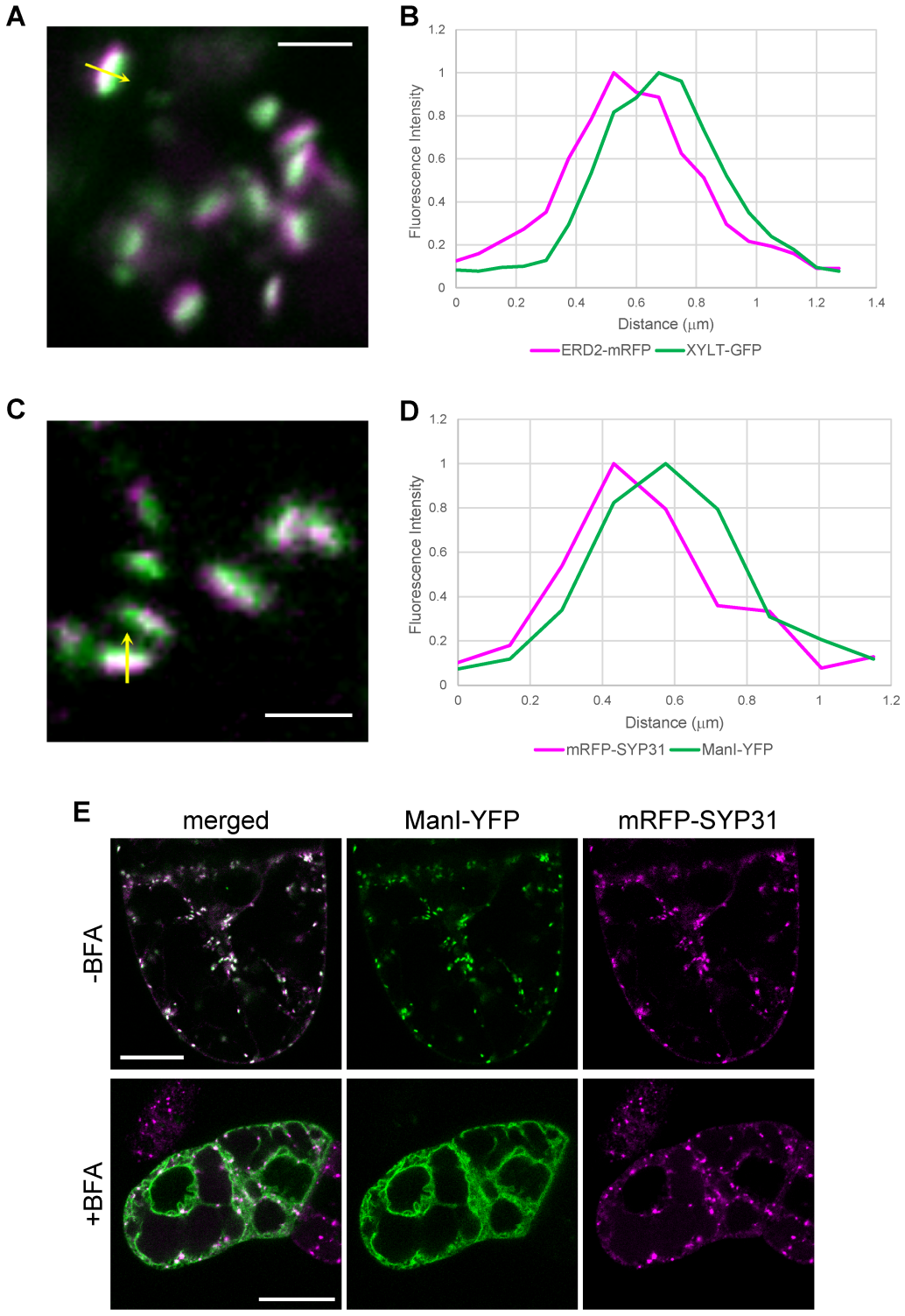
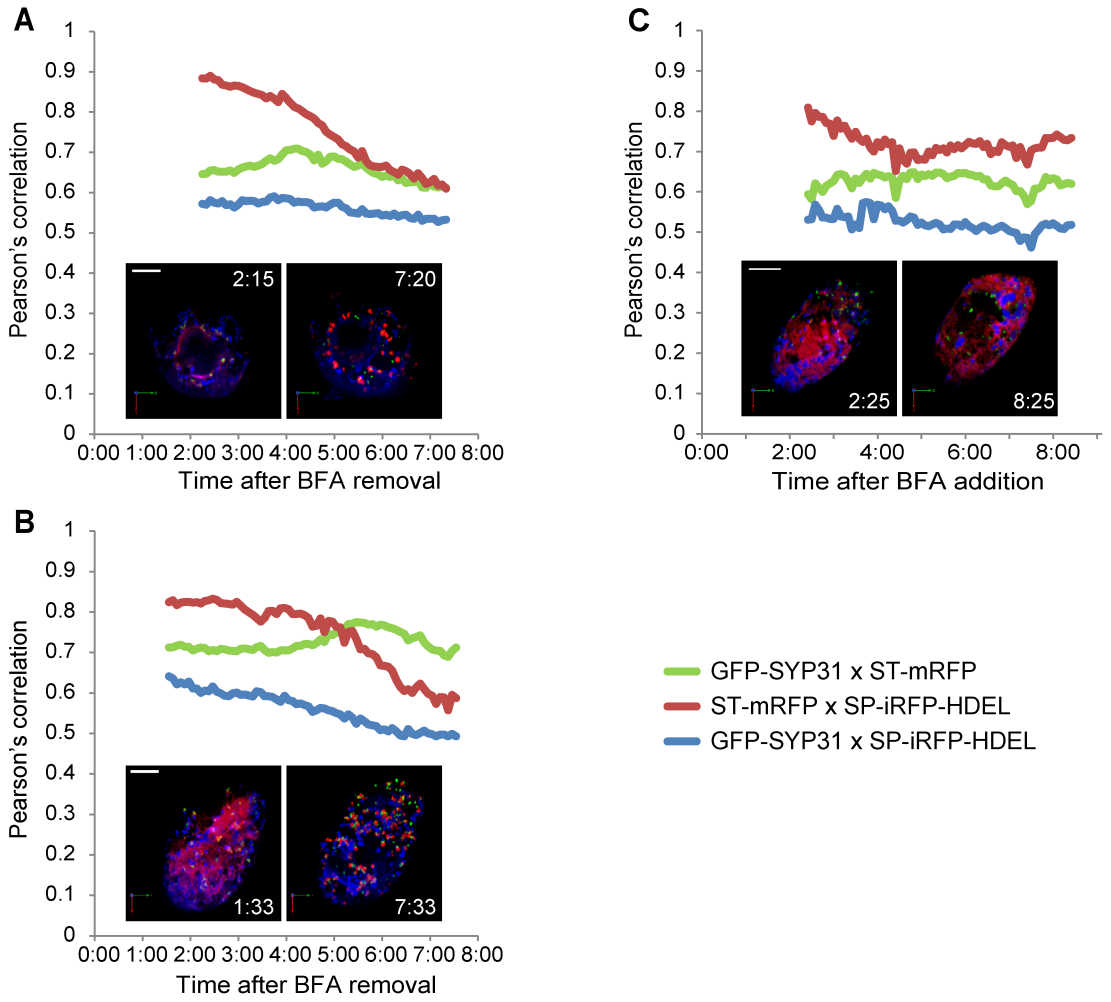


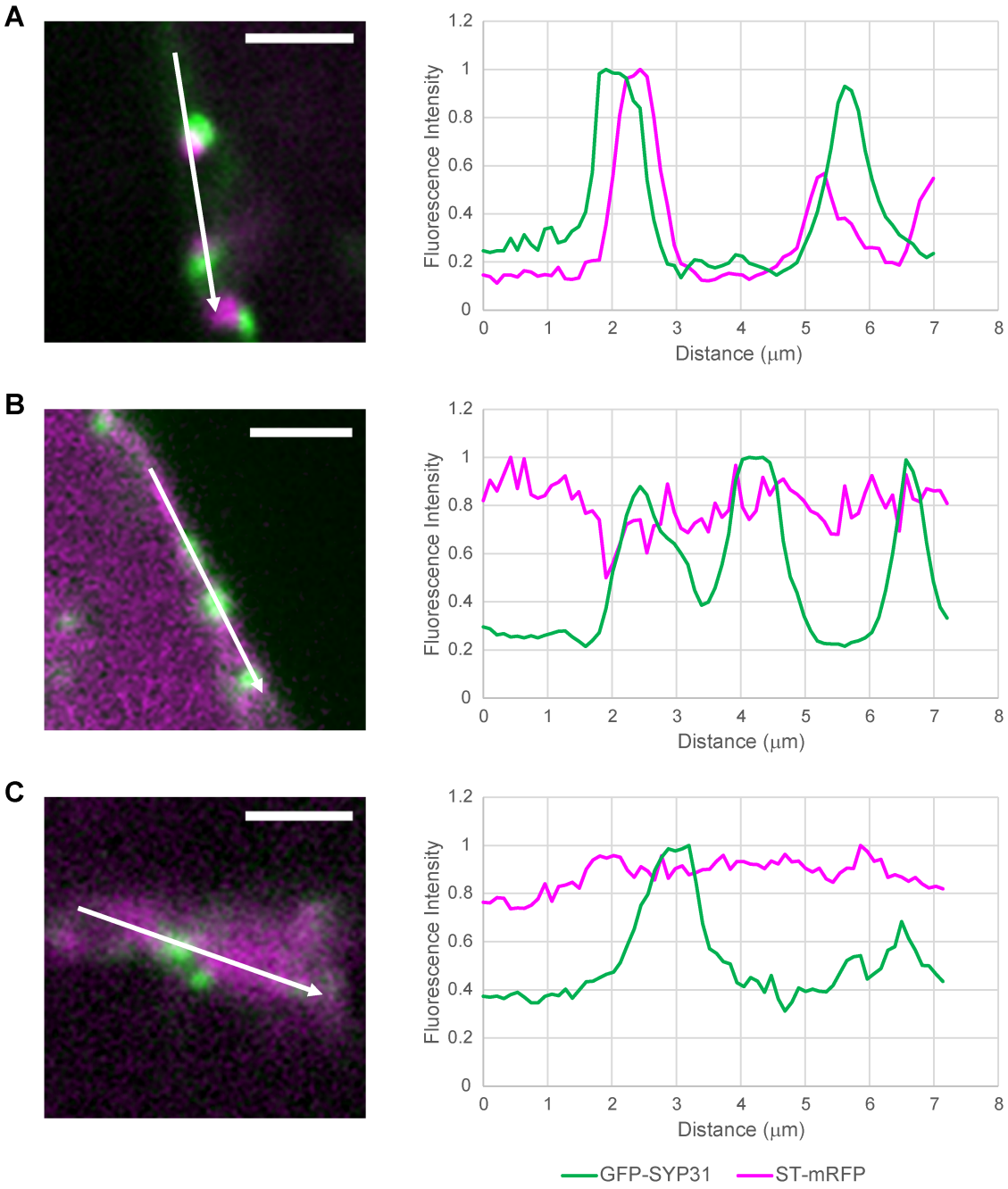
Supplementary Figure 1. Intra-Golgi localization of Golgi markers.

(A) Confocal image of BY-2 cells expressing XYLT-GFP (green) and ERD2-mRFP (magenta). The image was taken by ZEISS 780 with lambda mode, and GFP and mRFP signals were unmixed based on spectral data of the fluorescent proteins. (B) The fluorescent profile along the arrow in (A). The fluorescent intensity was normalized by the maximum value for each marker. (C) Confocal image of BY-2 cells expressing ManI-YFP (green) and mRFP-SYP31 (magenta). Observation and image processing was performed similarly to (A). (D) The fluorescent profile along the arrow in (C). The fluorescent intensity was normalized by the maximum value for each marker. (E) BFA treatment of the cells expressing ManI-YFP (green) and mRFP-SYP31 (magenta). Without BFA (-BFA) and with 1.5 h of 50 μM BFA treatment (+BFA). Representative images from at least 5 independent cells for each condition. Scale bars, 2 μm (A, C) and 20 μm (E).



Supplementary Figure 2. 3D Pearson's correlation coefficients of Golgi and ER markers during Golgi regeneration.

Time-lapse 3D observations were performed on BY-2 cells expressing GFP-SYP31 (*cis*, green), ST-mRFP (*trans*, red), and SP-iRFP-HDEL (ER, blue) by SCLIM with 5 min intervals, and the change of 3D Pearson's correlation coefficients over time are presented in graphs. (A, B) The cells with BFA treatment followed by its removal. The cells were treated by drugs in the same procedure that was taken for the cells in Figure 3A. The indicated times mean the elapsed time after BFA removal. (C) The cells treated with BFA without removal. The cells were treated with BFA and biliverdin in advance, LatB was added 1.5 h after BFA addition, and cycloheximide was added 30 min after LatB addition. Indicated times mean the elapsed time after BFA addition. Scale bars, 10 µm.



Supplementary Figure 3. Fluorescent profile around GECCO upon induction of NtSAR1 H74L. Confocal images of BY-2 cells expressing GFP-SYP31 (green) and ST-mRFP (magenta) with or without NtSAR1 H74L induction (left), and the fluorescent profile along the arrows (right). The fluorescent intensity was normalized by the maximum value for each marker in each graph. (A) The cell shown in Figure 5A (-DEX). GFP-SYP31 and ST-mRFP were stably expressed without NtSAR1 H74L induction. (B) The cell shown in Figure 5A (+DEX). GFP-SYP31 and ST-mRFP were stably expressed, and NtSAR1 H74L was induced. (C) The cell shown in Figure 5C. GFP-SYP31 and ST-mRFP were induced after induction of NtSAR1 H74L. Scale bars, 3 μm.