

**Supplementary Fig. 1.** Zoomed image of the full length or C terminal fragment of Cidea localized to lipid droplets in 3T3-L1 adipocytes. EGFP-Cidea or EGFP-Ct were expressed in day 5 adipocytes for 24 hours, the cells were then fixed, and the neutral lipid was labeled with oil red O. The top two panels show Z sections in green and red together to visualize the Cidea localization to lipid droplets and the bottom two panels show green only to visualize the cellular distribution of Cidea. All images are 100X.

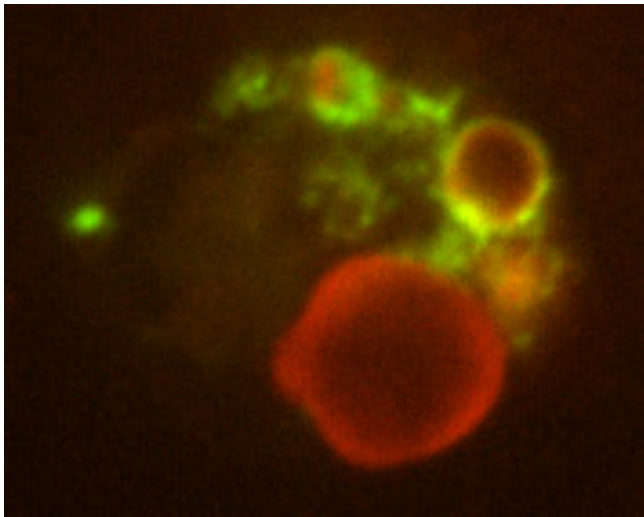
**Supplementary Fig. 2.** The C terminus of Cidea (116-219 amino acids) is necessary and sufficient for lipid droplet localization in 3T3-L1 adipocytes when fused to HA. The HA-Cidea constructs were expressed in day 5 adipocytes for 24 hours, the cells were then fixed, and the neutral lipid was labeled with oil red O. The left panel shows a confocal Z section in either green and red together to visualize the Cidea localization to lipid droplets or in green only to visualize the cellular distribution of Cidea. All images are 100X.

**Supplementary Fig. 3.** Cidea changes lipid droplet morphology in COS-7 cells, but does not tightly associate with lipid droplets. A. EGFP only or the EGFP-Cidea constructs were expressed in COS-7 for 24 hours in the presence of 400 $\mu$ M oleate, the cells were then fixed, and the neutral lipid was labeled with oil red O. The first and third panels show green and red together to visualize Cidea localization to lipid droplets and the second and fourth show green only to visualize the cellular distribution of Cidea. Shown are two different cells for each construct. All images are 100X confocal Z sections.

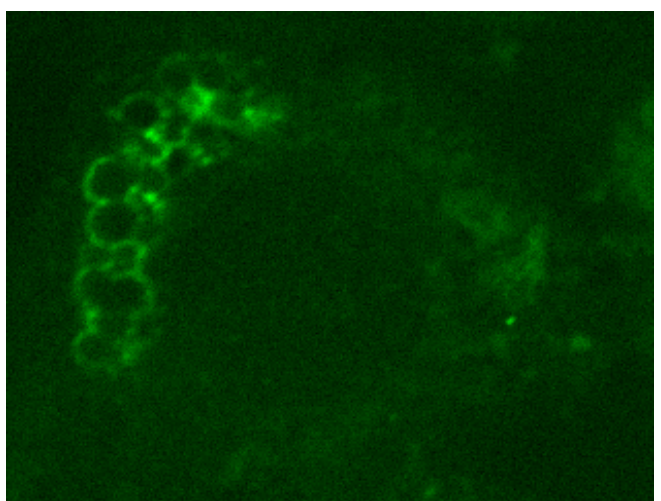
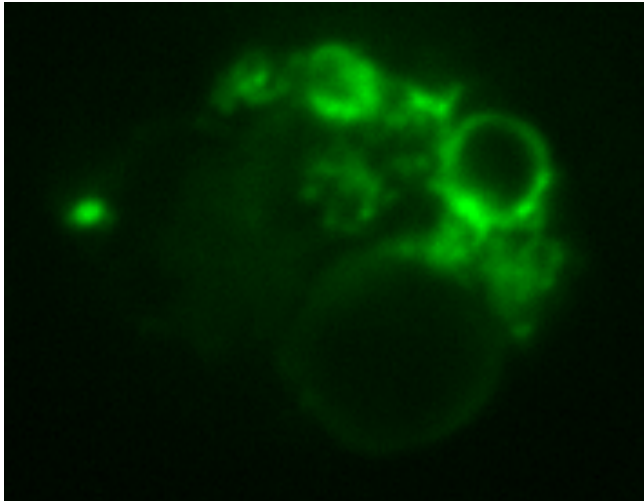
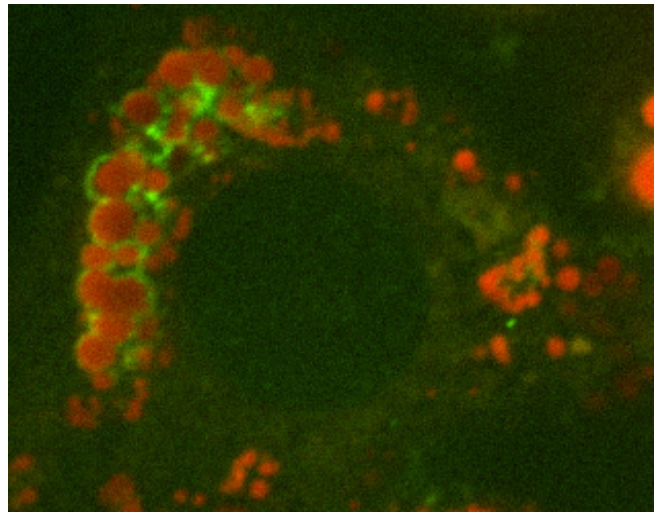
**Supplementary Fig. 4.** Cidea changes lipid droplet morphology in COS-7 cells when fused to HA. HA-Cidea constructs were expressed in COS-7 for 24 hours in the presence of 400 $\mu$ M oleate, the cells were then fixed, and the neutral lipid was labeled with oil red O. The images for each construct are from three different cells. All images are 100X.

# Supplementary Figure 1

**EGFP-Cidea**



**EGFP-Ct**

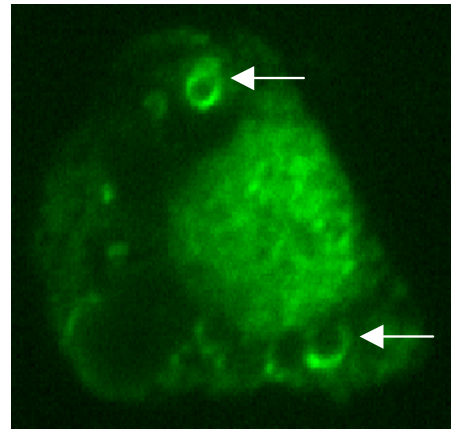
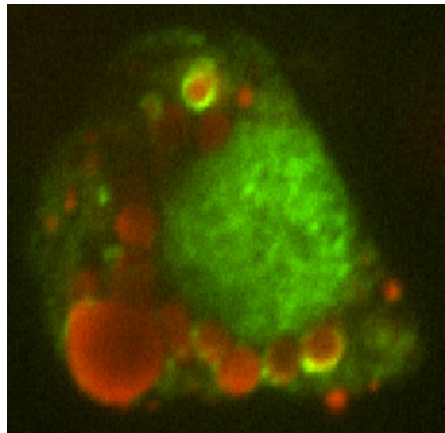


# Supplementary Figure 2

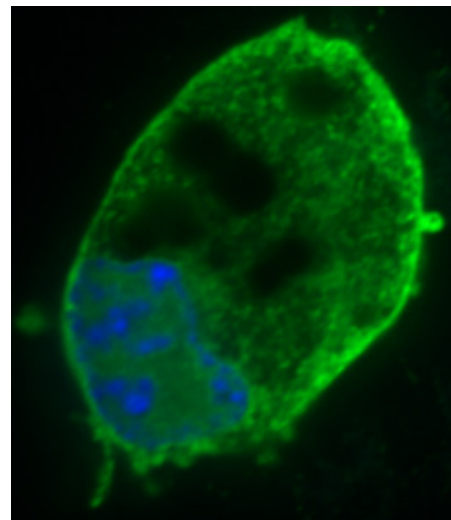
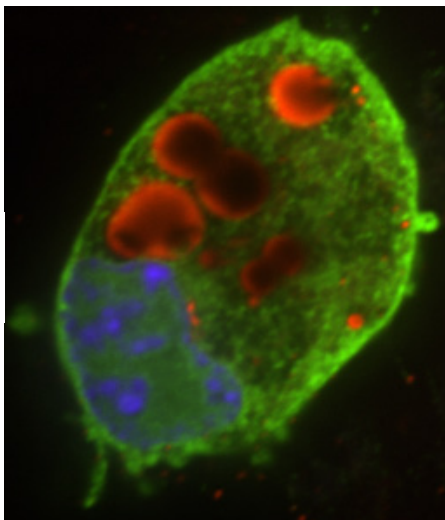
## Z section HA Domains

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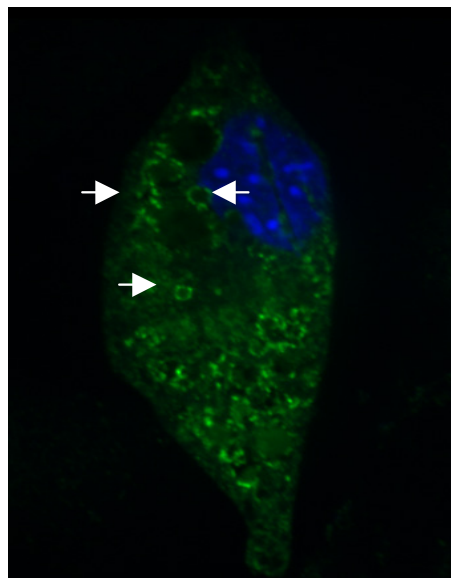
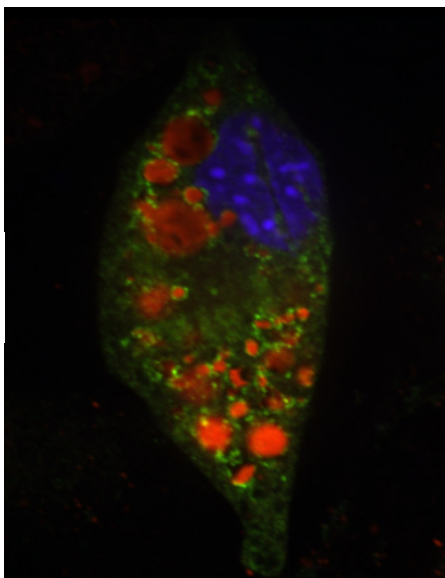
HA- Cidea



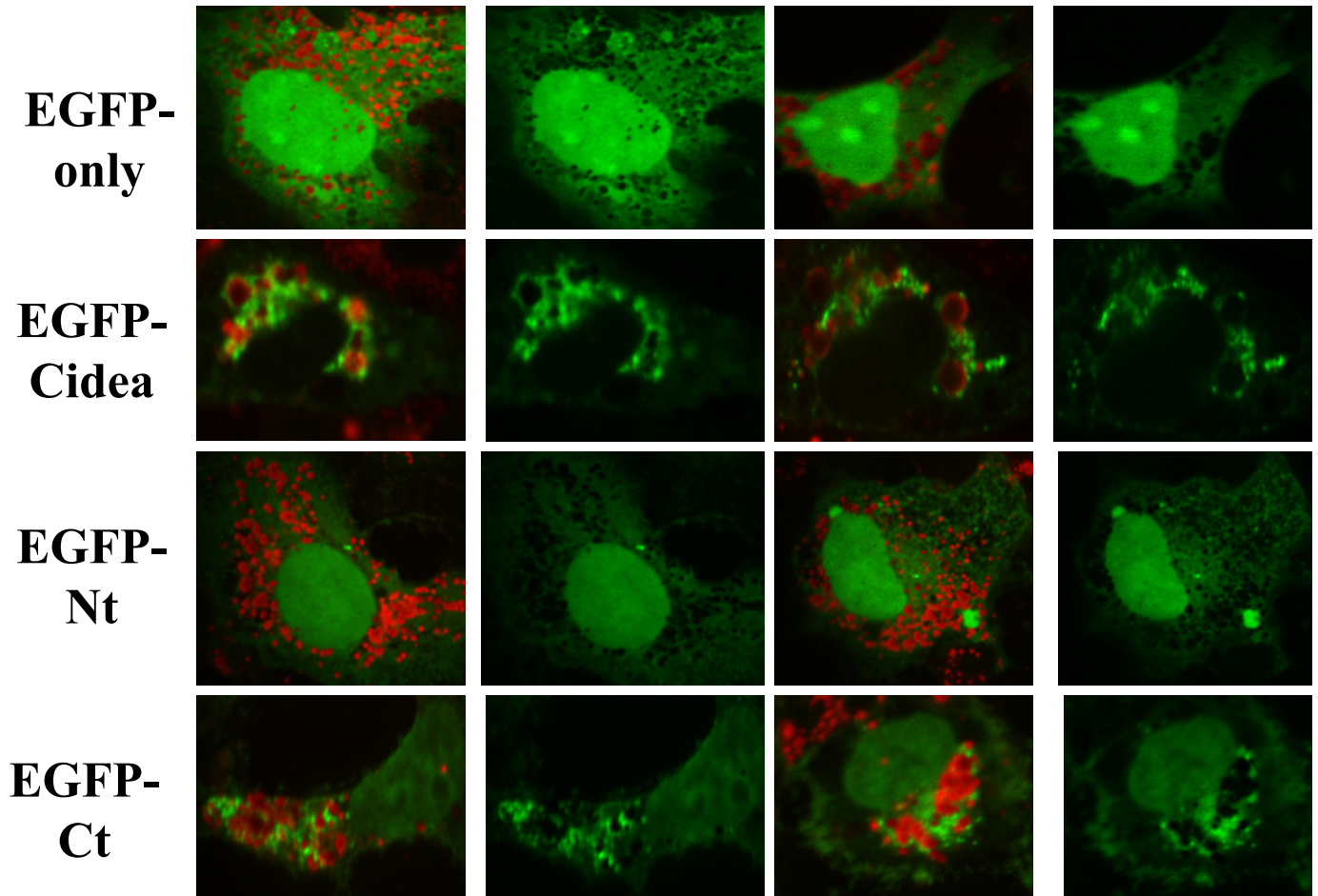
HA- Nt



HA- Ct



# Supplementary Figure 3





# Supplementary Figure 4

