



Figure 5 - figure supplement 1. Seipin-deficient cells accumulate small, nascent LDs that are close to the ER. (A) Thin-section TEM images of human fibroblasts from control and lipodystrophy patients with seipin loss-of-function mutations. Arrows, mature iLDs; arrowheads, nascent LDs. Close-up images (bottom row) are from different cell areas, representing different levels of proximity to the ER. Bars, 0.5 μm (top) and 0.2 μm (bottom). (B) Thin-section TEM images of control and seipin knockdown *Drosophila* S2 cells. Note the presence of pre-existing larger LDs (white arrows) along with the smaller nascent LDs (arrowheads) in seipin knockdown. Bars, 0.5 μm (top) and 0.2 μm (bottom). (C) A gallery of small, nascent LDs in the proximity of the ER, generated from additional dual-axis (a-c) or single-axis (d-f) electron tomograms of SUM159 seipin knockout cells. The original tomograms are shown in Video-6(b-d).