**Supplementary Figure 6** Some *Stra8*-deficient oocyte-like cells exhibit spindle assembly defects resulting from absence of meiotic prophase.

Deconvolved, projected Z-stacks of images of *in vitro*-matured *Stra8*-deficient oocyte-like cells that underwent GVB but failed to extrude a polar body. Cells were immunofluorescently labeled with anti-tubulin antibody (green) and anti-centromere antibody (ACA) (red). Chromosomes stained with DAPI (blue). In these oocytes the spindles are abnormally elongated with chromatids scattered along the spindle. Scale bars represent 20 μm.