

## Description of Additional Supplementary Files

**File name:** Supplementary Movie 1

**Description:** Super resolution movie of the ER in a live Cos7 cell transfected with UnaG-Sec61 $\beta$ . The field of view is the same as that shown in Fig. 5a. The movie runs at 2 $\times$  real time with 1-s snapshots. Scale bar: 2  $\mu$ m.