

Descriptions of additional supplementary files

Supplementary Video 1. Tomographic volume of the slice shown in Fig. 1h. Scalebar: 100 nm.

Supplementary Video 2. Video of the 3-dimensional volume local resolution map shown in Fig. 3b. Scale bar is 10 nm

Supplementary Video 3. Sub volume average density map of the ribosomal L7subunit obtained in this study overlaid with the previously obtained structure of isolated human ribosomes (PDB: 4UG0⁵³). Scale bar is 1 nm.

Supplementary Software. RiboDist is a programme developed to enable the calculation of the distance between particles (e.g. ribosomes) and the edges of a volume, such as those found at the edges of a focused ion beam-generated lamella. It enable the particles to be parsed into separate files that can be used for subsequent sub-tomogram averaging.