Supplementary Material

Supplementary Figure 1 - Kelly et al., 2010



Supplementary Figure 1. Class averages of 60S ribosomal subunits. (a-c) 20 class averages of negatively stained 60S ribosomal subunits recruited to the Affinity Grid by antibodies against Flag tag (a), Myc tag (b) and rpl26 (c). The side length of the individual panels is 43 nm.





Supplementary Figure 2. 3D reconstruction of vitrified RNAP II. (a) 100 class averages of RNAP II particles. The side length of the individual panels is 43 nm. (b) The FSC curve indicates that the density map has a resolution of 25 Å according to the FSC = 0.5 criterion ¹. (c) Angular distribution plot indicating ice-embedded RNAP II adopts randomly distributed orientations. (d) Comparison of raw particle images (top row) and class averages (middle row) with re-projections from the 3D reconstruction of RNAP II (bottom row). The side length of the individual panels is 43 nm. (e) Density map of human RNAP II (gray surface) with the docked crystal structure of yeast RNAP II ² before (left panel) and after (right panel) manually moving the atomic model of Rpb4/7 into the density map. Scale bar is 5 nm.

References

- 1. Bottcher, B., Wynne, S. A. & Crowther, R. A. (1997). Determination of the fold of the core protein of hepatitis B virus by electron cryomicroscopy. *Nature* **386**, 88-91.
- 2. Kettenberger, H., Armache, K. J. & Cramer, P. (2004). Complete RNA polymerase II elongation complex structure and its interactions with NTP and TFIIS. *Mol. Cell* **16**, 955-965.