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Supplemental Information

**Chaperonin TRiC/CCT Recognizes Fusion Oncoprotein AML1-ETO
through Subunit-Specific Interactions**

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Extended Experimental Procedures

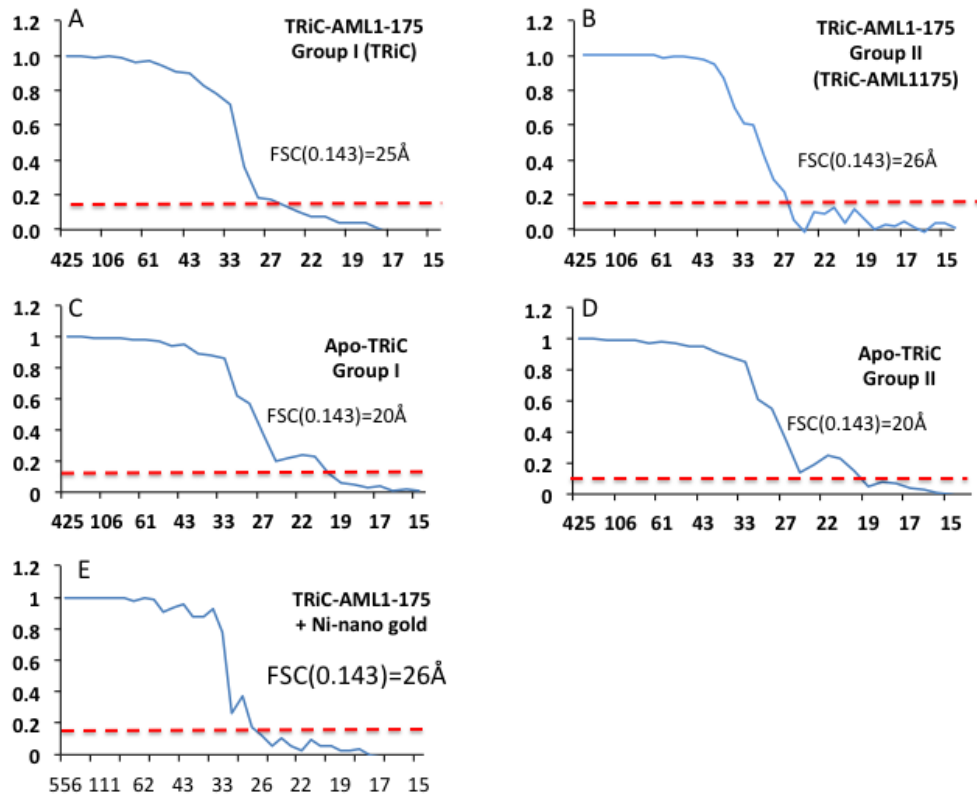
Map interpretation.

Rigid-body docking of the X-ray crystal structure of the TRiC in the open state (1) into the cryo-EM map was carried out in UCSF Chimera (2). Correlation analysis was performed in eight-fold pseudo-symmetric point to identify best z-score between the crystal structure and our cryo-EM maps. Isolation of the AML1-175 map density was done by difference mapping in Chimera followed by semi-automatic segmentation with Segger (3).

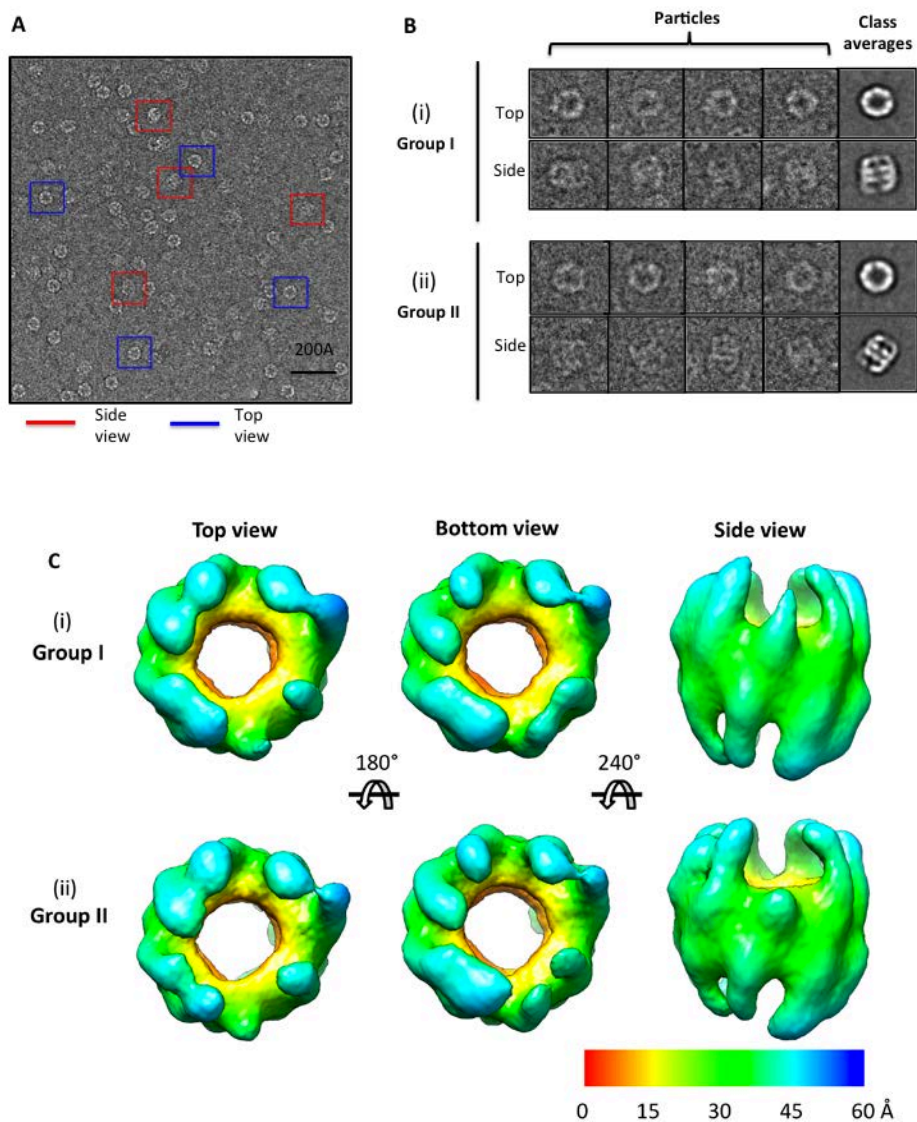
Reference

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2. Goddard, T. D., C. C. Huang, and T. E. Ferrin. 2007. Visualizing density maps with UCSF Chimera. *J Struct Biol* 157:281-287.
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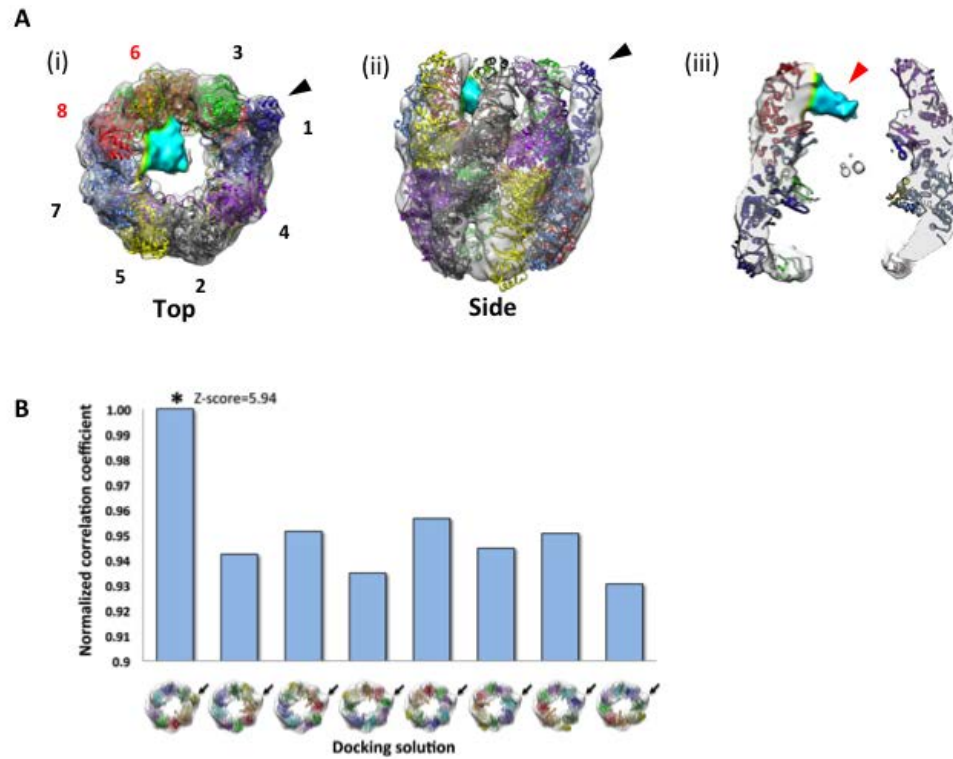
Supplement Figures



Supplement Figure 1. Fourier shell correlation (FSC) plot of the each reconstruction showing resolutions at 0.143 according to gold standard process. (A) Group I of TRiC-AML1-175 (substrate free TRiC) (B) Group II of TRiC-AML1-175 (AML1-175 bound TRiC). (C) Group I of apo-TRiC (D) Group II of apo-TRiC. (E) TRiC-AML1-175 and Ni-gold nano-probe.



Supplement Figure 2. Symmetry-free cryo-EM maps of apo-TRiC. (A) Representative area of a micrograph of a vitrified sample of apo-TRiC complexes. Red squares show end-on views of the molecules, and blue ones show side views. (B) Gallery of selected images and class averages of group I (i) and II (ii) in the respective data set. (C) Top, bottom and side views of the three dimensional reconstruction from two subpopulation, group I and II. The same radial color scheme of distance (Å) from the center of a cylinder is used throughout.



Supplement Figure 3. Superimposition between the cryo-EM map and crystal structure.

(A) Superimposition between the cryo-EM map of AML1-175 bound TRiC and crystal structure (4B2T) in open conformation. (B) Correlation analysis between the crystal structure and our cryo-EM maps was performed in eight-fold pseudo-symmetric point to identify best z-score. Superimposition between the cryo-EM map and crystal structure in eight fold pseudo-symmetric point are shown in bottom. The black arrowheads indicate the protruding subunit in cryo-EM map.