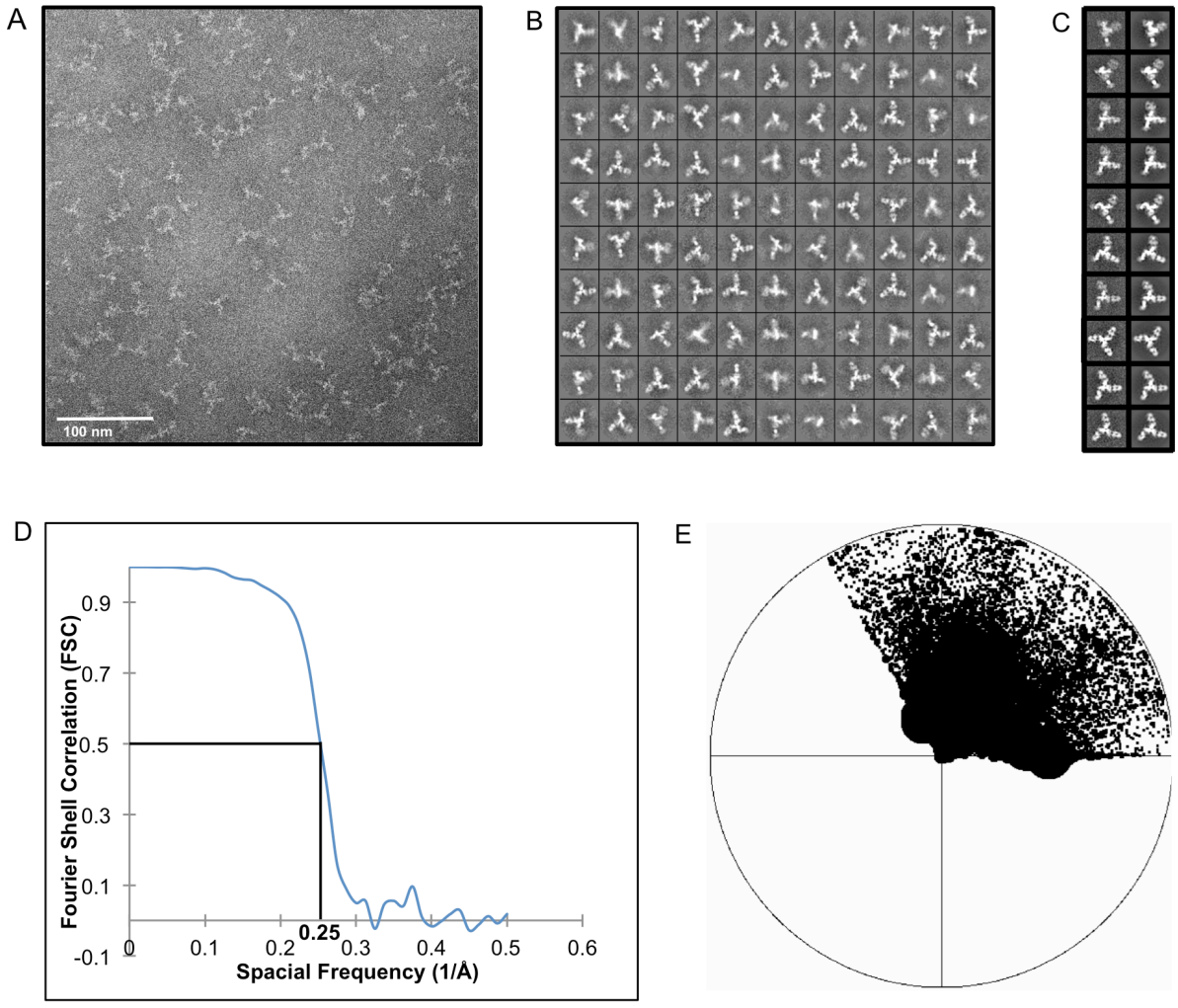
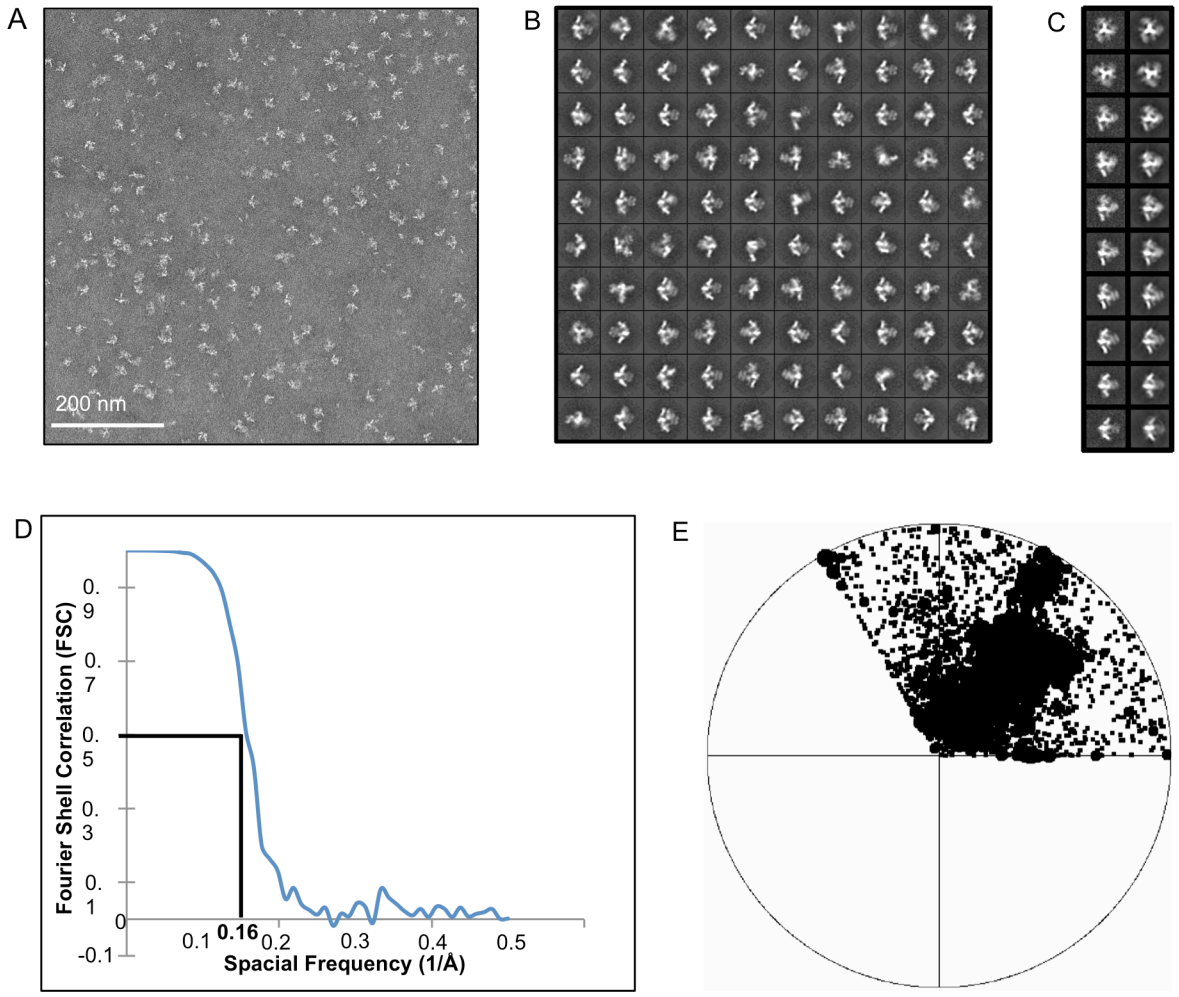
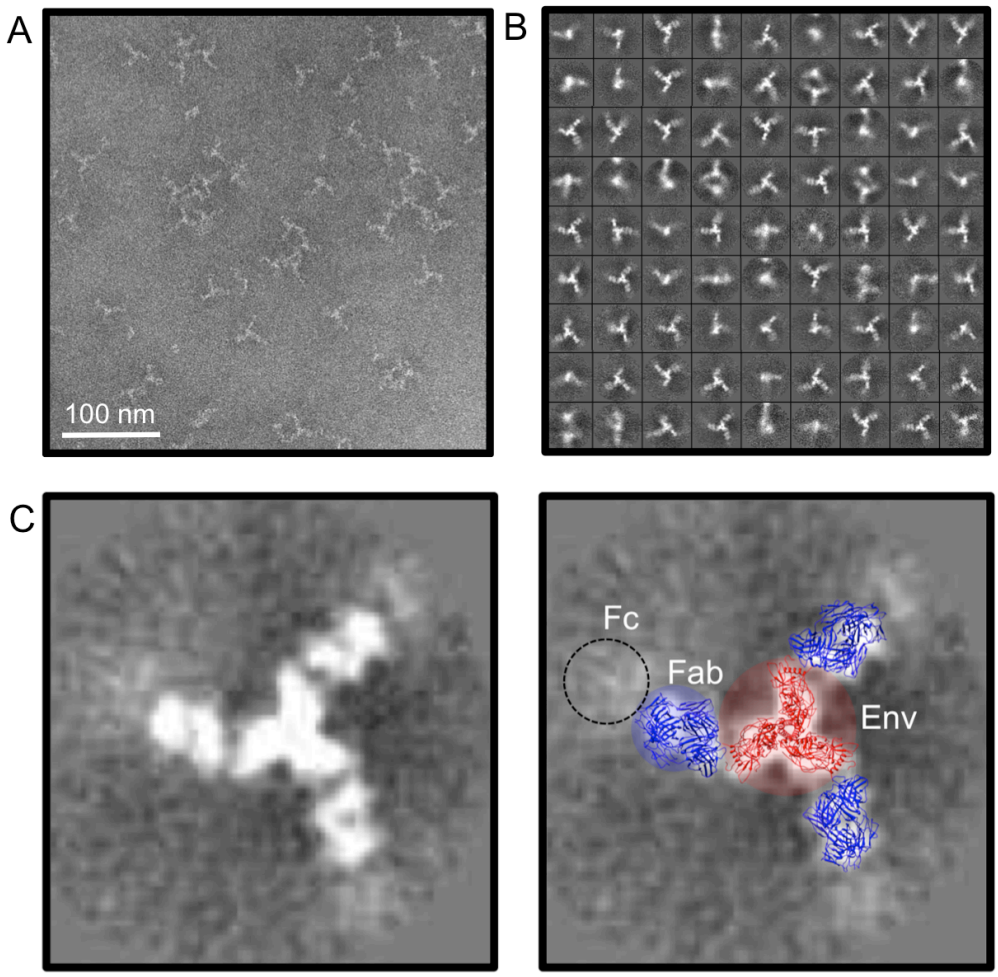


Supplementary Figure 1. Negative stain EM data of the 2G12 Fab$_2$:BG505 SOSIP.664 Env trimer sample. A. Representative raw negative stain images. B. Two-dimensional (2D) class averages. C. Projection matching showing the 3D model (left) and 2D class average (right). D. The ~17 Å resolution of the reconstruction was determined using a Fourier shell correlation (FSC) cutoff of 0.5. E. Euler angle distribution plot of particles used in the reconstruction.



Supplementary Figure 2. Negative stain EM data of the 2G12 Fab$_2$:sCD4:BG505 SOSIP.664 Env sample. A. Representative negative stain image. B. Two-dimensional (2D) class averages. C. Projection matching showing the 3D model (left) and 2D class average (right). D. The ~26 Å resolution of the reconstruction was determined using a Fourier shell correlation (FSC) cutoff of 0.5. E. Euler angle distribution plot of particles used in the reconstruction.



Supplementary Figure 3. Negative-stain EM of 2G12 IgG:Env SOSIP BG505.664 complex. 2G12 IgG was added to Env SOSIP BG505.664 in molar excess, purified by size exclusion chromatography and imaged by negative stain EM. A. Representative negative stain image. B. Two-dimensional (2D) class averages C. The image on the left represents a class average of ~50 individual particles which were aligned in a reference-free manner. On the right, a 3D model is overlaid on the 2D projections that correspond to a top view of these particles. The Env trimer is highlighted in red and the 2G12 Fab_2 is highlighted in blue. The Fc regions are highly flexible and therefore manifest as a diffuse density emanating form the 2G12 Fabs.