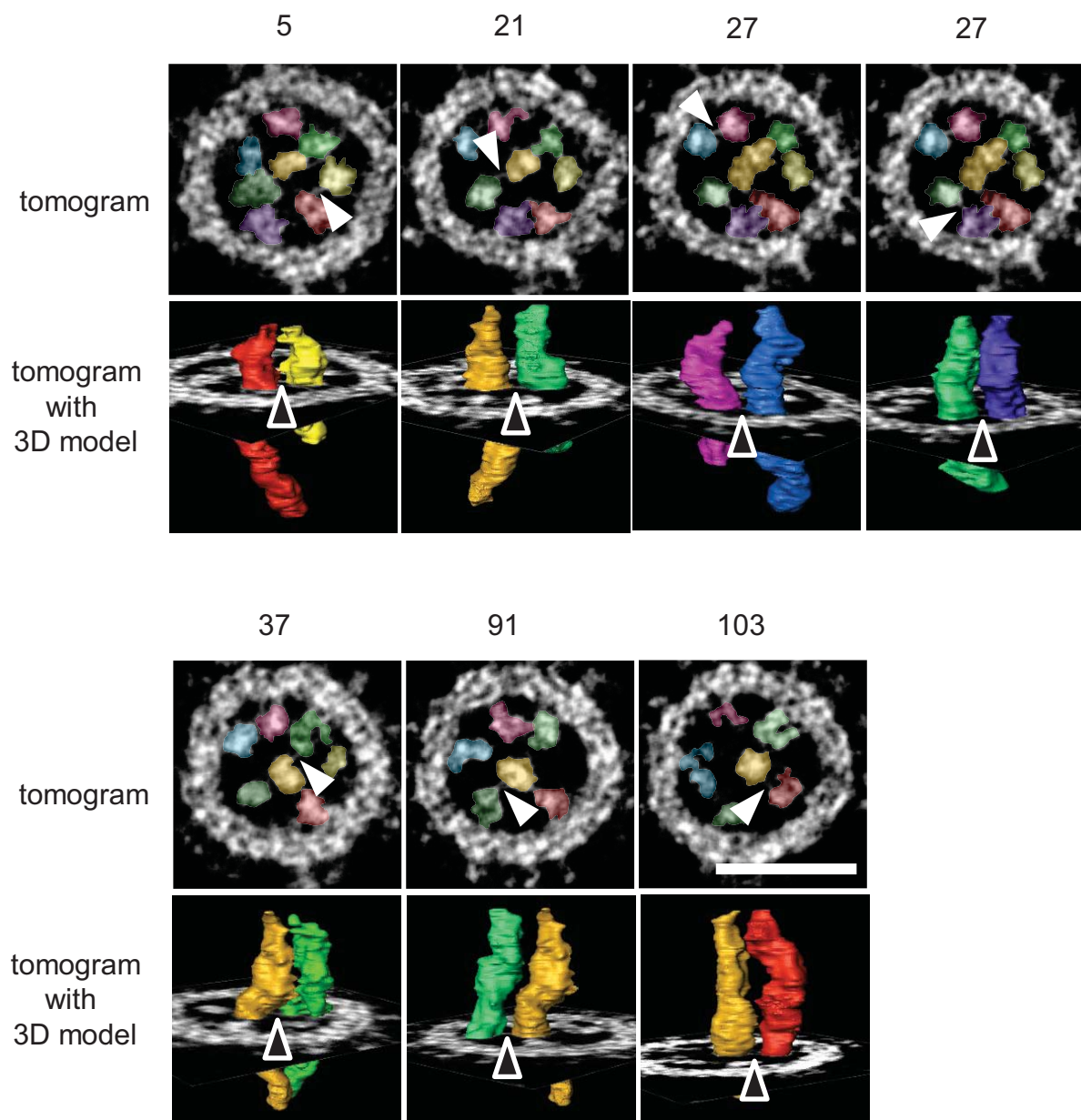
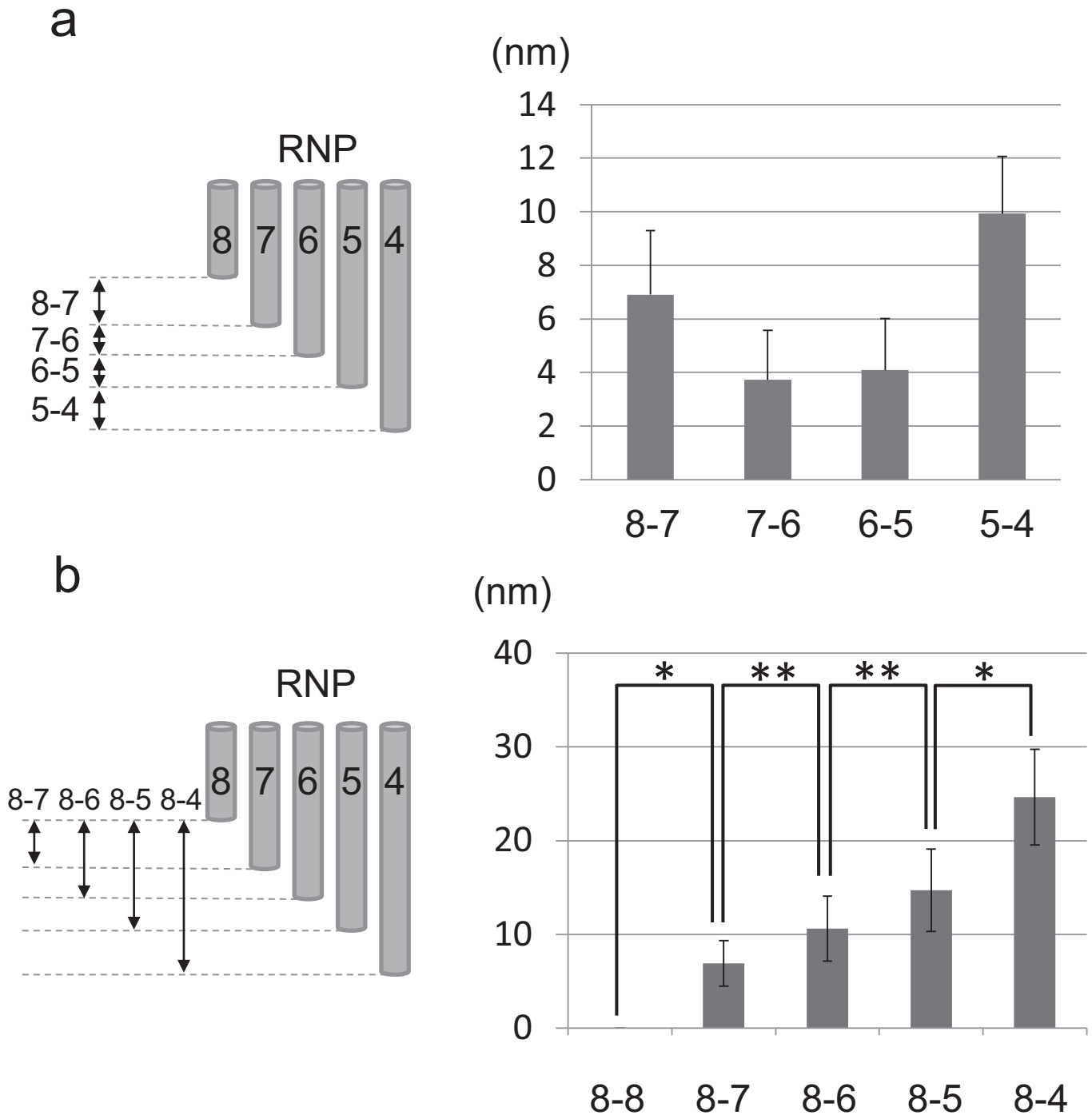


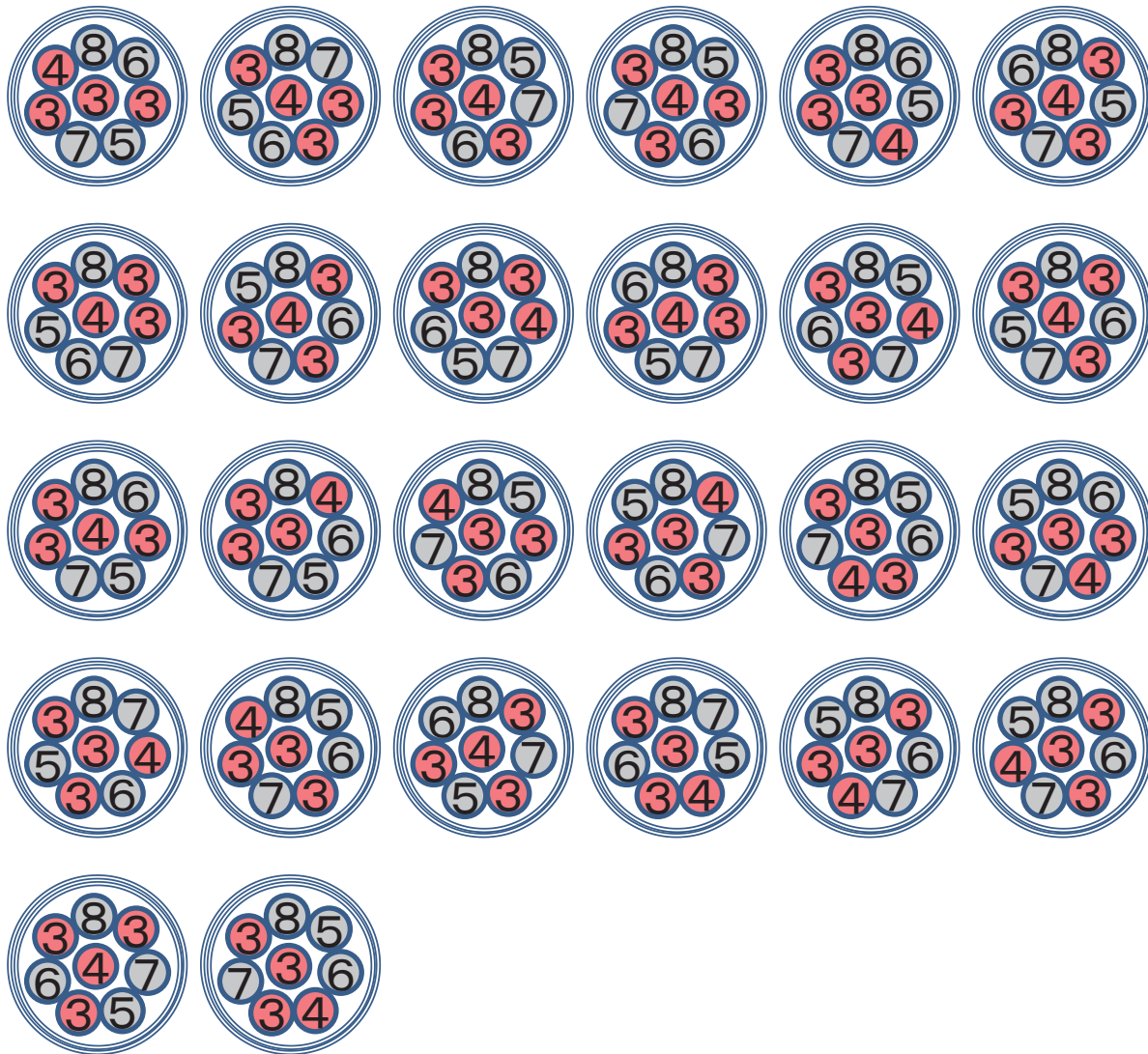
Supplementary Figure S1. A two-dimensional STEM image of progeny virions. The virion enclosed in the white box was reconstructed in three dimensions and its 3D structure is shown in Figure. 1. Bar, 200nm



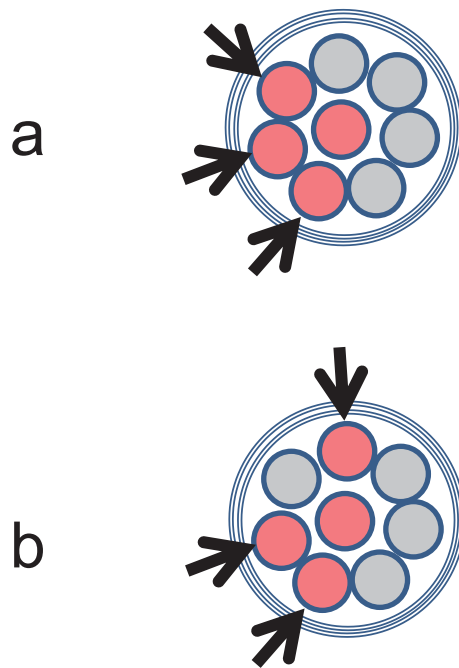
Supplementary Figure S2. Short string-like structures observed in a virion. In addition to the string-like structures shown in Figure 2, some string-like structures were found in the same virion. Tomograms (0.5-nm thick) are shown in the upper row. 3D models of two RNPs connected by a string-like structure are shown in the lower row. Virtual slice numbers of the 0.5nm-thick tomograms are given above the tomograms. The color scheme of the RNPs is the same as that shown in Figure 1b. Bar, 50 nm.



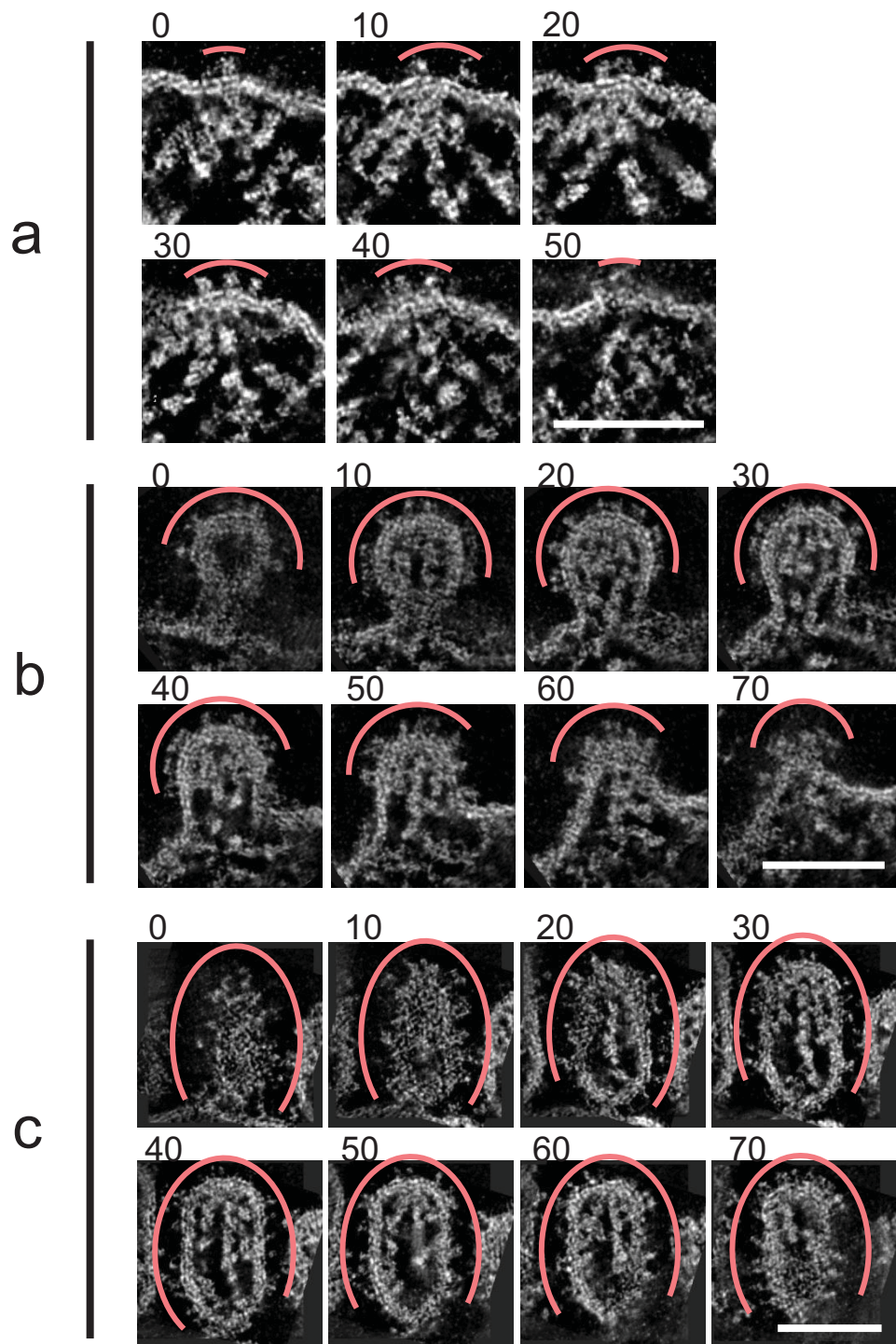
Supplementary Figure S3. Differences in length between RNPs within virions. **a**, Differences in length between the RNPs numbered 8 and 7, 7 and 6, 6 and 5, and 5 and 4 (left panel) were measured (right panel). **b**, Differences in length between the RNPs numbered 8 and 7, 6, 5, or 4 (left panel) are shown (right panel). Statistical analyses were carried out using a Tukey test. *: $P < 0.0001$, **: $P < 0.001$. The values represent means \pm standard deviations ($n = 30$).



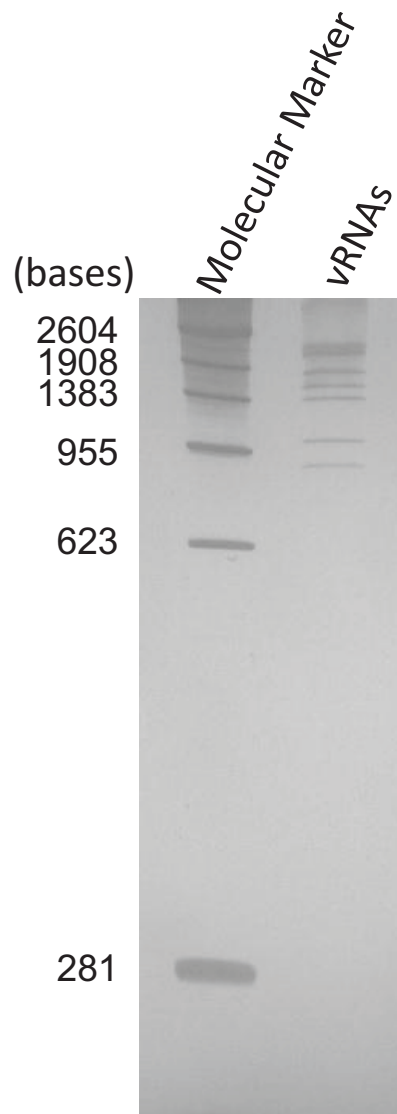
Supplementary Figure S4. Order of the eight RNPs within virions on the basis of length The schemes show the order of the eight RNPs, which are numbered from 3 to 8 in descending order of length (i.e., 3, 3, 3, 4, 5, 6, 7, and 8). For clarity, the four longer RNPs (i.e., numbers 3, 3, 3, and 4) are colored red and the four shorter RNPs (i.e., numbers 5, 6, 7, and 8) are colored gray.



Supplementary Figure S5. Theoretical arrangements of the long three RNPs in the seven peripheral positions. Because a long RNP is always found at the center (Supplementary Fig. S3), the remaining three long RNPs are located in the seven peripheral positions. Theoretically, these remaining three long RNPs can sequentially line up (**a**) or not (**b**). The four long RNPs (i.e., numbers 3, 3, 3, and 4) are colored red, and the four short RNPs (i.e., numbers 5, 6, 7, and 8) are colored gray.



Supplementary Figure S6. Consecutive tomograms of a longitudinally sectioned virion. **a**, pre-virion at the initial stage of budding, **b**, pre-virion at the middle stage of budding, **c**, mature virion; shown are consecutive 0.5-nm-thick tomograms at 5.0-nm intervals. Red lines indicate the membrane region containing viral spike proteins. Virtual slice numbers of the 0.5nm-thick tomograms are given above the tomograms. Bars, 100 nm.



Supplementary Figure S7. Polyacrylamide gel electrophoresis of vRNAs isolated from virions. A total of 50 ng of viral RNA, isolated from virions, was run on a 4% polyacrylamide gel containing 7M urea, and stained by use of silver staining.