

Description of Additional Supplementary Files

File Name: Supplementary Data 1

Description: Source data for Fig.6b and Supplementary Fig. 2.

File Name: Supplementary Movie 1

Description: **Digestion of looped RNA with RNase A**

During HS-AFM observation of looped RNA associated with vRNP, RNase A was added to the liquid chamber at a final concentration of 0.5 $\mu\text{g mL}^{-1}$. Scan area: 300×300 nm². Observation period: 120 sec.

File Name: Supplementary Movie 2

Description: **Digestion of looped RNA with RNase III**

RNase III was added at a final concentration of 0.02 U μL^{-1} during HS-AFM observation of looped RNA. Scan area: 300×300 nm². Observation period: 76 sec.

File Name: Supplementary Movie 3

Description: **Binding of anti-dsRNA antibodies to looped RNA**

Binding of anti-dsRNA antibodies to looped RNA was observed by HS-AFM. Scan area: 300×300 nm². Observation period: 9 sec.

File Name: Supplementary Movie 4

Description: **Binding of anti-dsRNA antibodies to structured RNA**

Binding of anti-dsRNA antibodies to structured RNA was observed by HS-AFM. Scan area: 300×300 nm². Observation period: 9 sec.