



Complex formation of an RNA aptamer with a part of HIV-1 Tat through induction of base triples in living human cells proved by in-cell NMR

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Supporting information

Figure S1. *In vitro* ¹H NMR spectra of TA (150 μM) at different molar ratios of [TA]:[Arginine] in transport buffer (TB) at 10°C. Imino proton region is shown.

Figure S2. *In vitro* ¹H NMR spectra of TA (150 μM) at different molar ratios of [TA]:[Argininamide] in transport buffer (TB) at 10°C. Imino proton region is shown.

Figure S3. *In vitro* ¹H NMR spectra of TA (150 μM) at different molar ratios of [TA]:[RG peptide] in magnesium ion-excluded TB at 10°C. Imino proton region is shown.

Figure S4. UV-melting curves for the TA-RG peptide complex. The melting curve for the TA-RG peptide complex in TB (orange) and magnesium ion-excluded TB (black).

Figure S5. Intracellular distribution of FAM-labeled TA and TAMRA-labeled RG peptide. Confocal fluorescence microscopy images of HeLa cells treated by electroporation with the complex of FAM-labeled TA and TAMRA-labeled RG peptide. The cell nuclei were stained with Hoechst 33342. Fluorescence images for FAM-labeled TA (a), TAMRA-labeled RG peptide (b), and Hoechst 33342 (c). Bar = 30 μm.

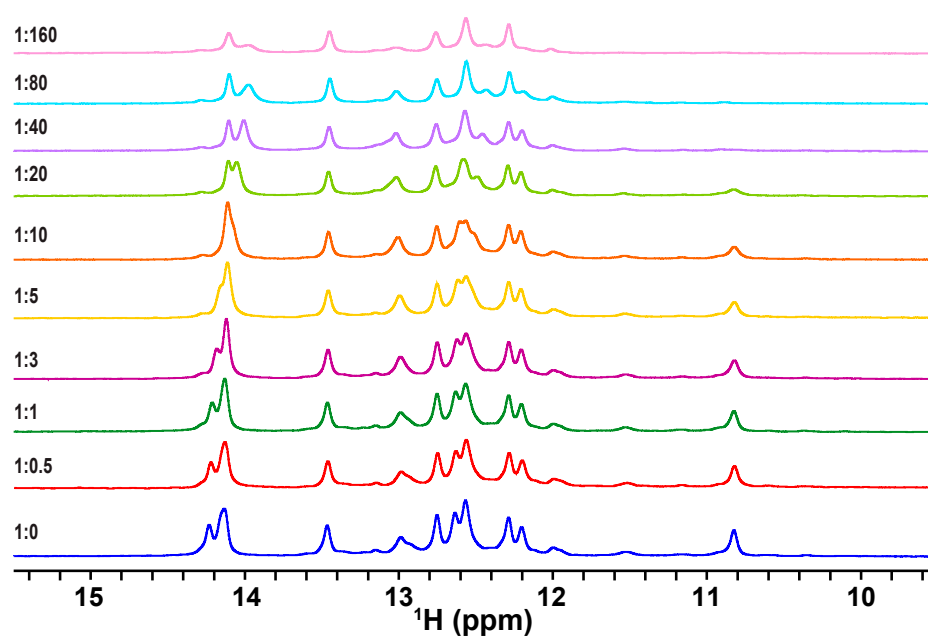


Figure S1. *In vitro* ^1H NMR spectra of TA (150 μM) at different molar ratios of [TA]:[Arginine] in transport buffer (TB) at 10°C. Imino proton region is shown.

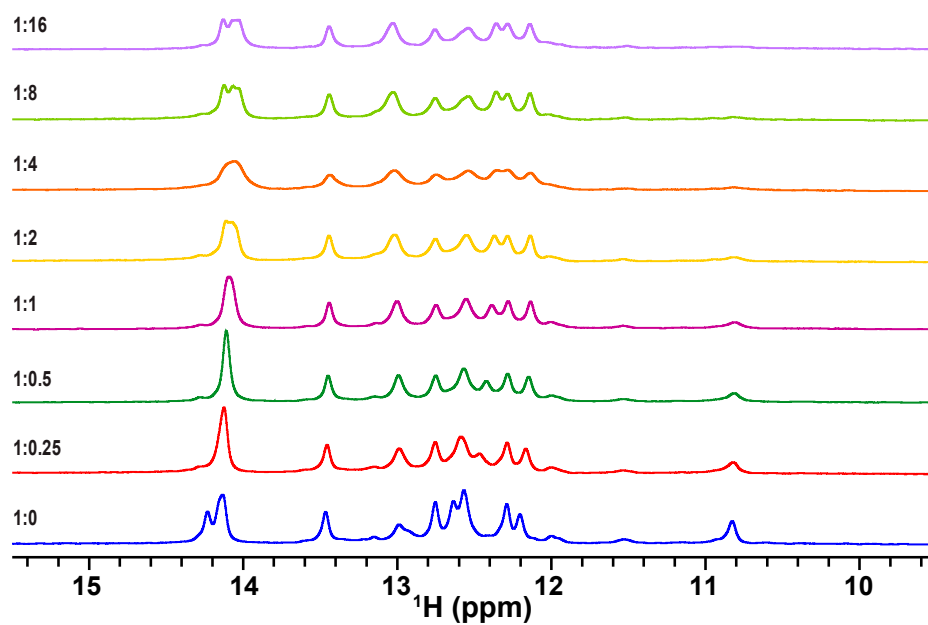


Figure S2. *In vitro* ^1H NMR spectra of TA (150 μM) at different molar ratios of [TA]:[Argininamide] in transport buffer (TB) at 10°C. Imino proton region is shown.

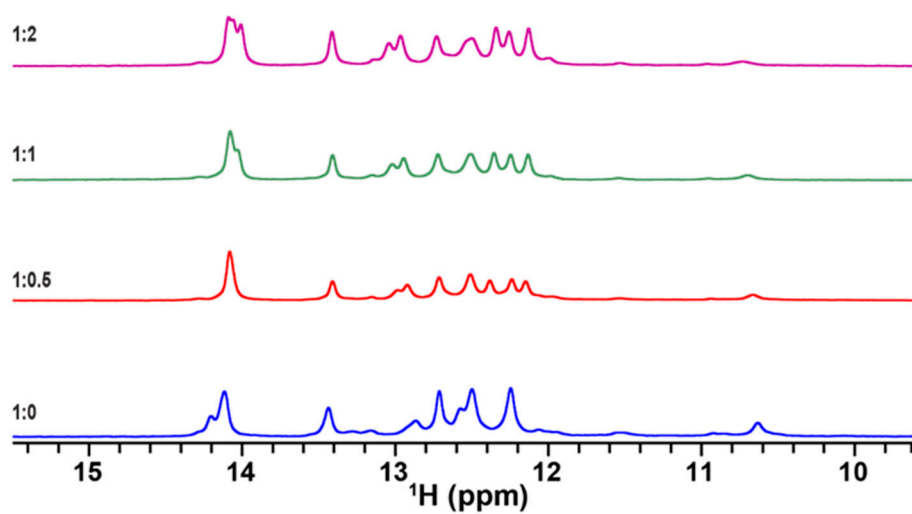


Figure S3. *In vitro* ^1H NMR spectra of TA (150 μM) at different molar ratios of [TA]:[RG peptide] in magnesium ion-excluded TB at 10°C. Imino proton region is shown.

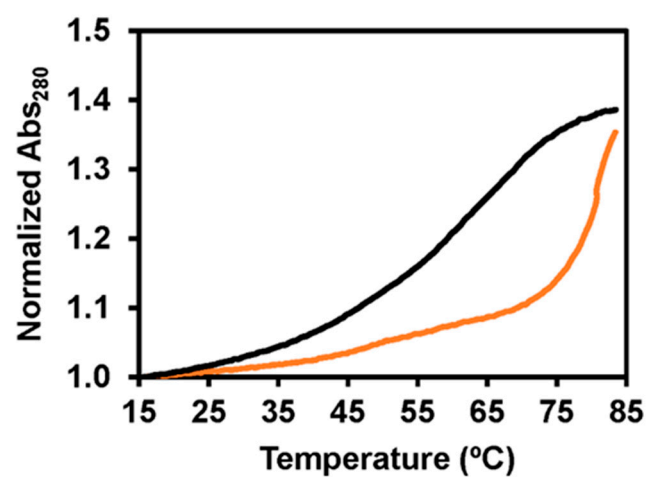


Figure S4. UV-melting curves for the TA-RG peptide complex. The melting curve for the TA-RG peptide complex in TB (orange) and magnesium ion-excluded TB (black).

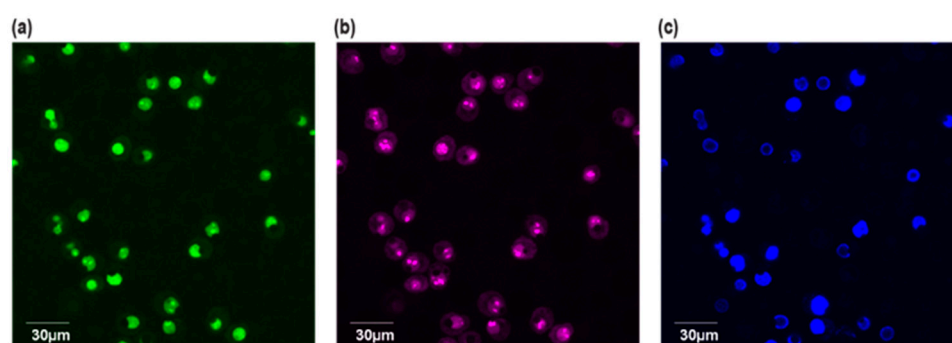


Figure S5. Intracellular distribution of FAM-labeled TA and TAMRA-labeled RG peptide. Confocal fluorescence microscopy images of HeLa cells treated by electroporation with the complex of FAM-labeled TA and TAMRA-labeled RG peptide. The cell nuclei were stained with Hoechst 33342. Fluorescence images for FAM-labeled TA (a), TAMRA-labeled RG peptide (b), and Hoechst 33342 (c). Bar = 30 μm.