Supplementary Information

2-Aminopyridine Nucleobase Improves Triple Helical Recognition of RNA and DNA when Used Instead of Pseudoisocytosine in Peptide Nucleic Acids

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Table S1. Deconvolution of LCMS analysis of synthesized PNAs.

	Mass$_{(calc)}$	**Mass $_{(M+6, M+5...)}$**
PNA1	2349	471, 588, 784, 1176
PNA2	2381	477, 596, 795, 1191
PNA3	2451	491, 614, 818, 1173
PNA4	2366	474, 593, 790, 1184
PNA5	3413	684, 854, 1139, 1708
PNA6	3516	704, 880, 1173, 1759
PNA7	3833	768, 959, 1279, 1918
PNA8	3816	764, 955, 1273, 1909
PNA9	3833	768, 959, 1279, 1918
PNA10	5008	836, 1002, 1253, 1670
PNA11	6944	1131, 1319, 1583, 1979
PNA12	6893	1124, 1311, 1573, 1966

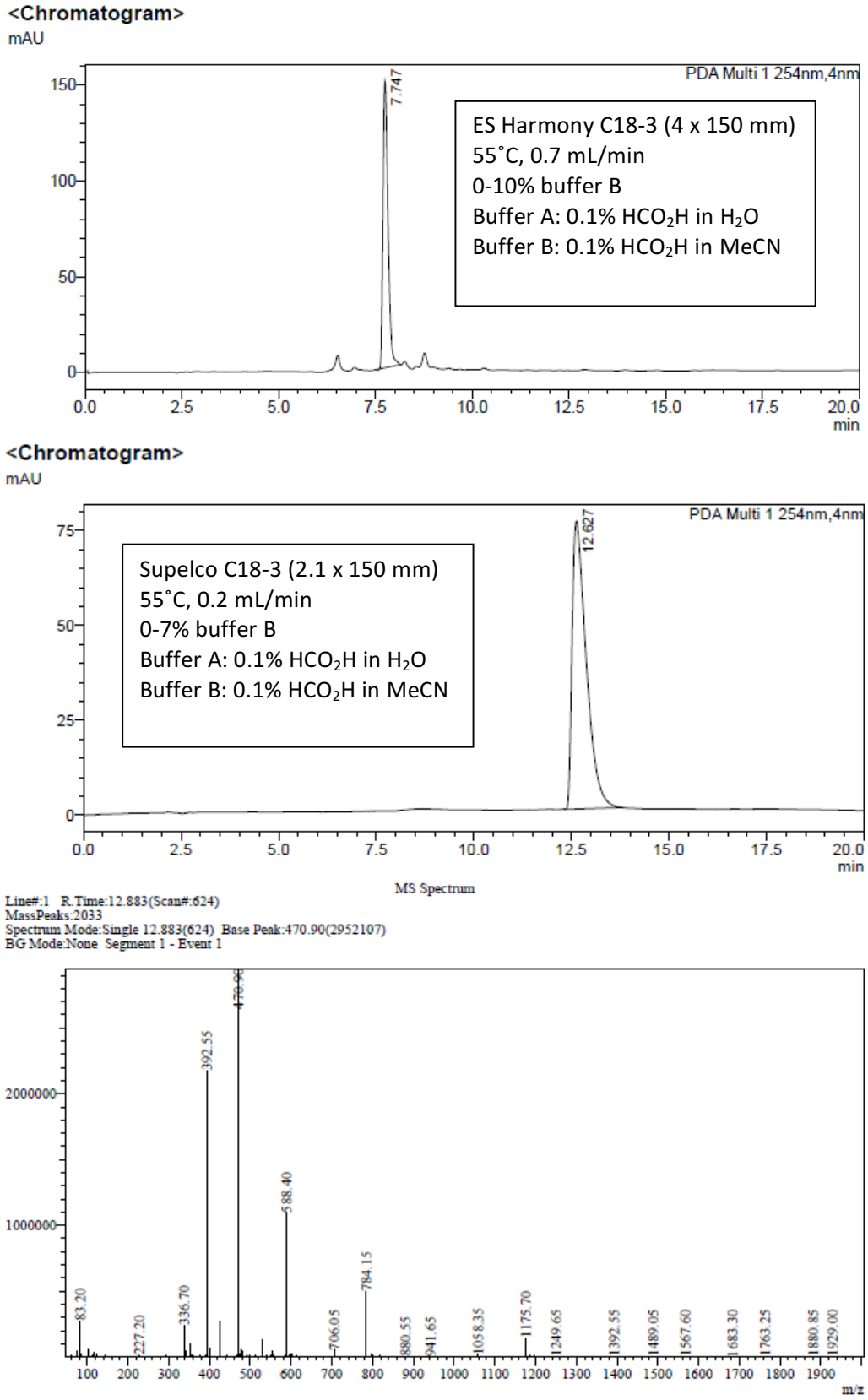

Figure S1. Crude (top) and purified (middle) chromatograms and mass spectrum (bottom) for **PNA1**.

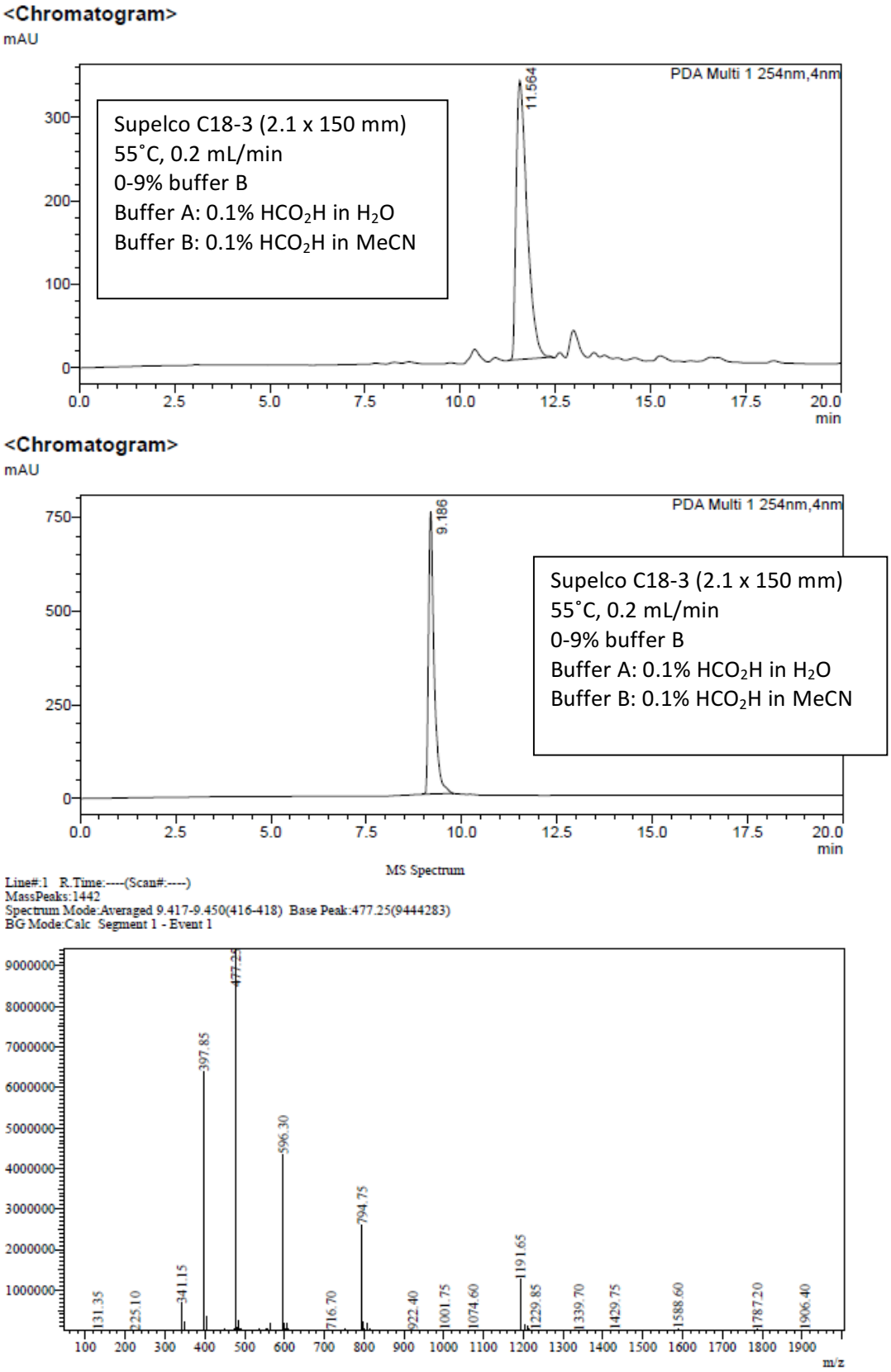

Figure S2. Crude (top) and purified (middle) chromatograms and mass spectrum (bottom) for **PNA2**.

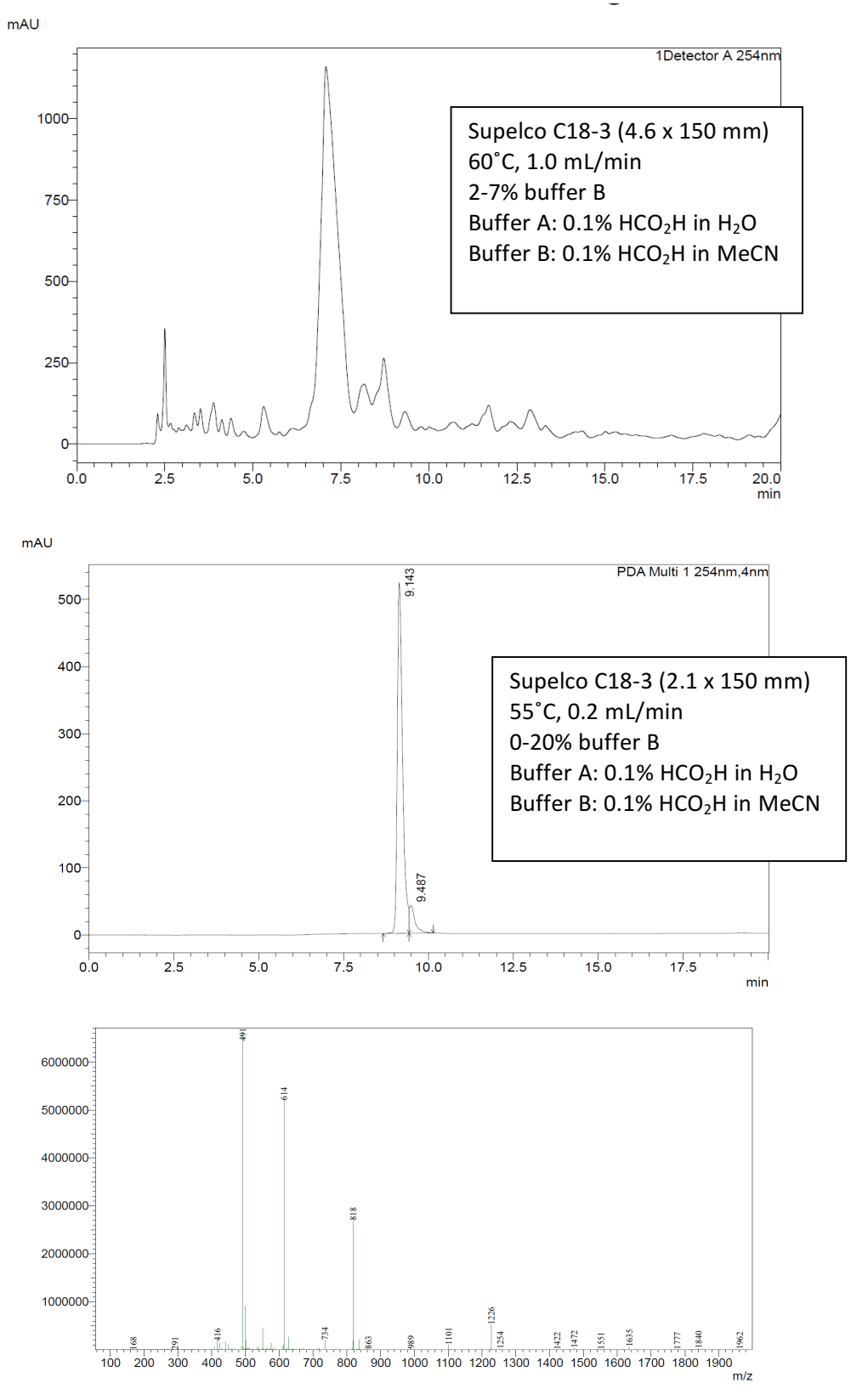

Figure S3. Crude (top) and purified (middle) chromatograms and mass spectrum (bottom) for **PNA3**.

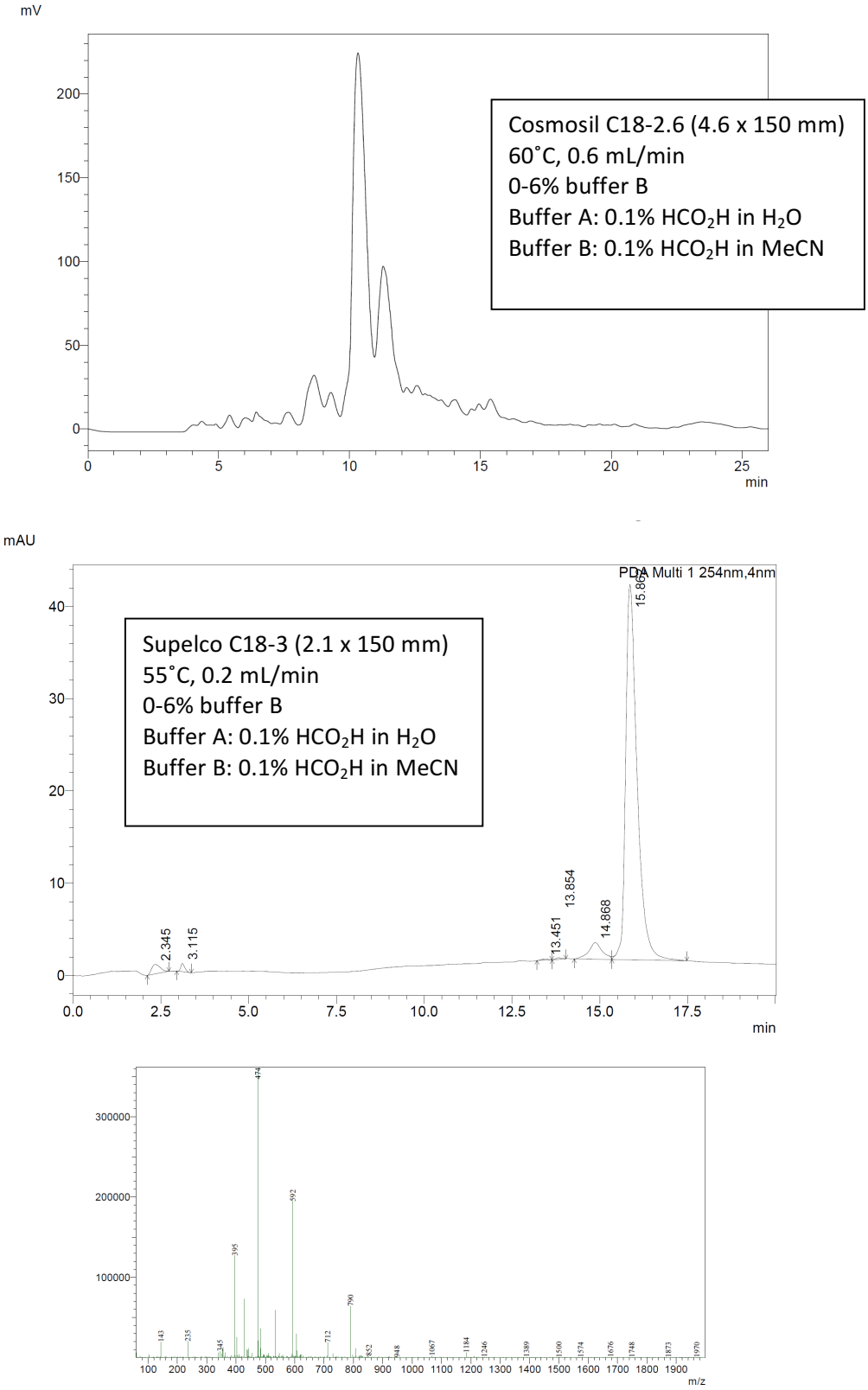

Figure S4. Crude (top) and purified (middle) chromatograms and mass spectrum (bottom) for **PNA4**.

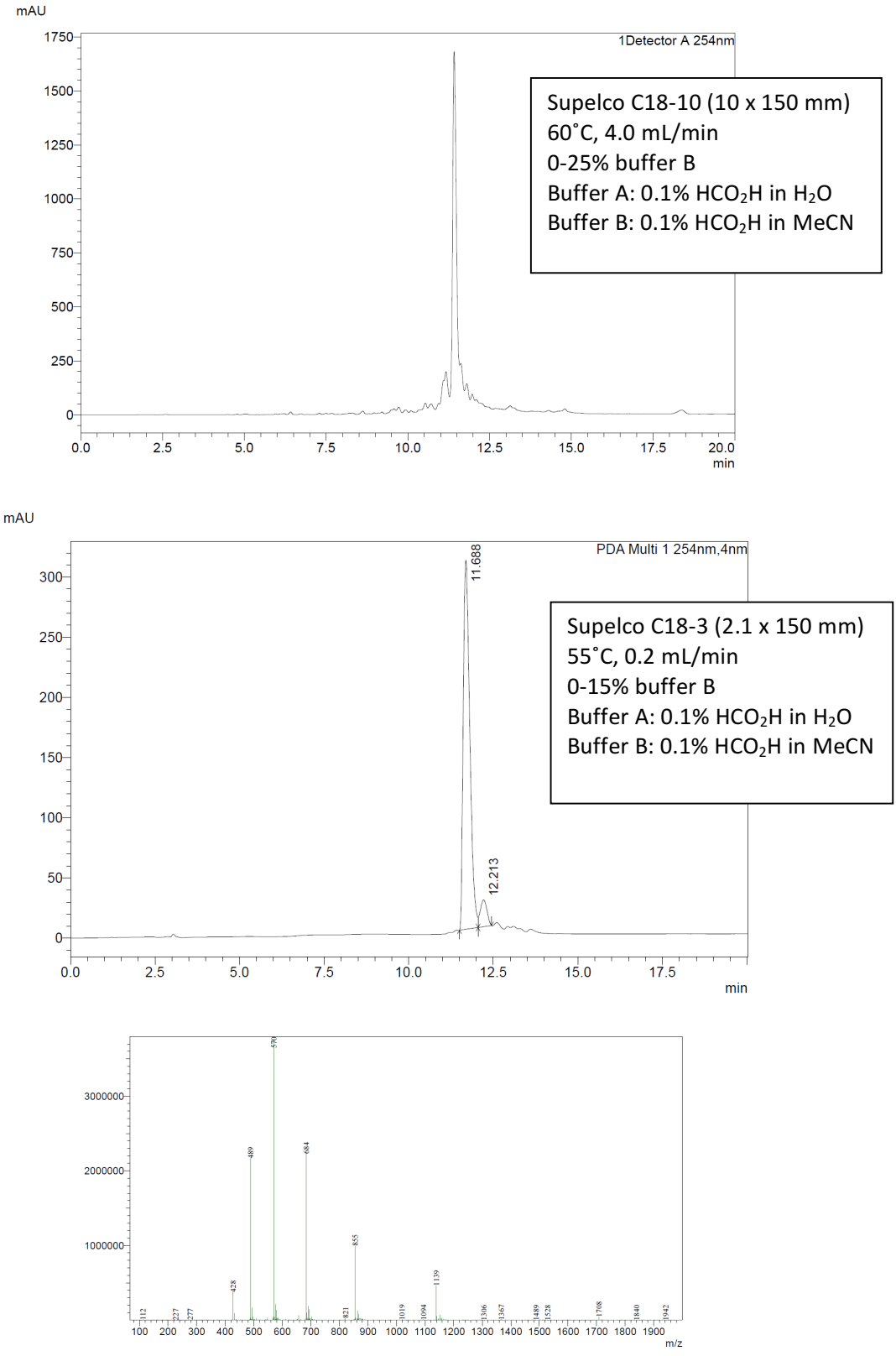

Figure S5. Crude (top) and purified (middle) chromatograms and mass spectrum (bottom) for **PNA5**.

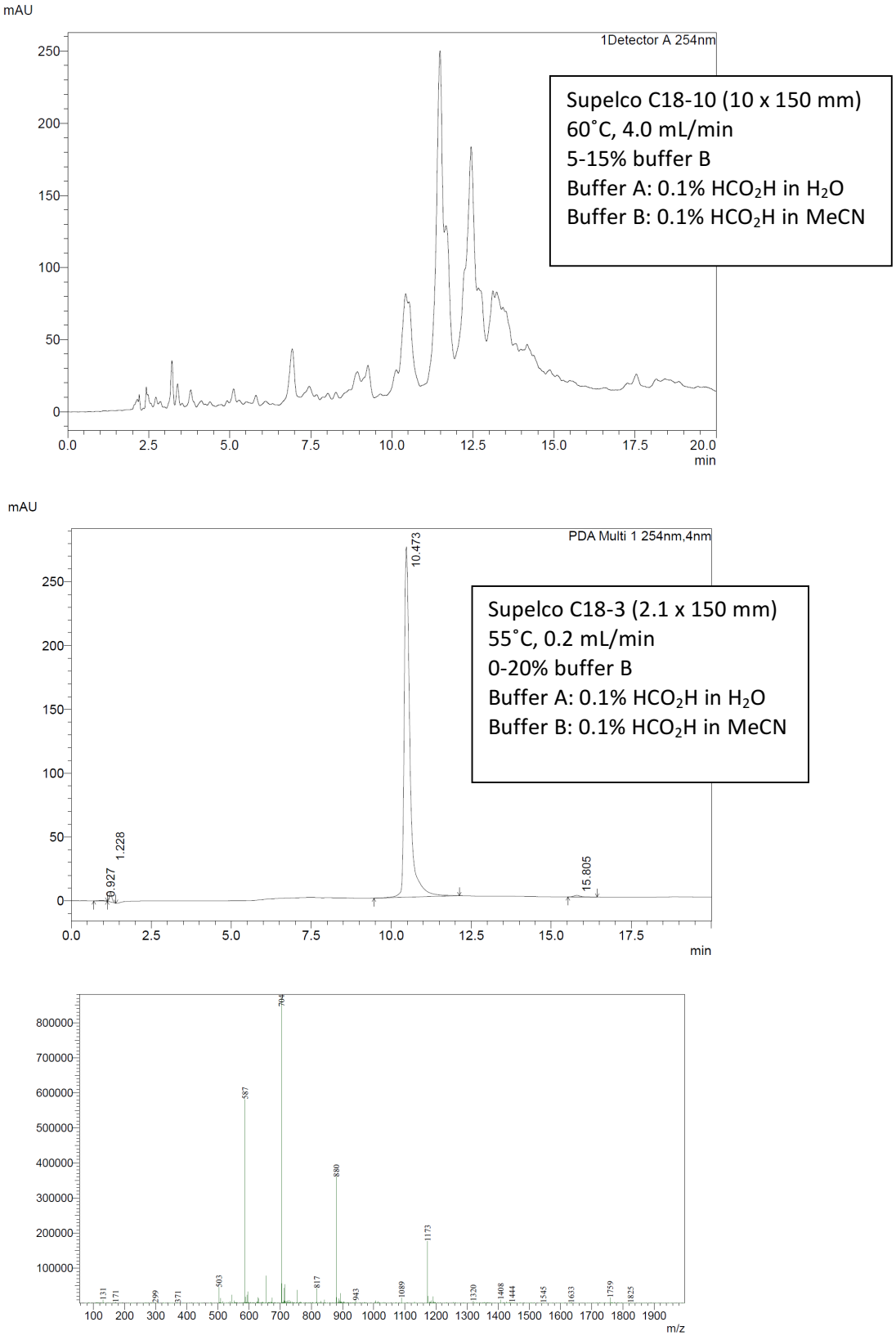

Figure S6. Crude (top) and purified (middle) chromatograms and mass spectrum (bottom) for **PNA6**.

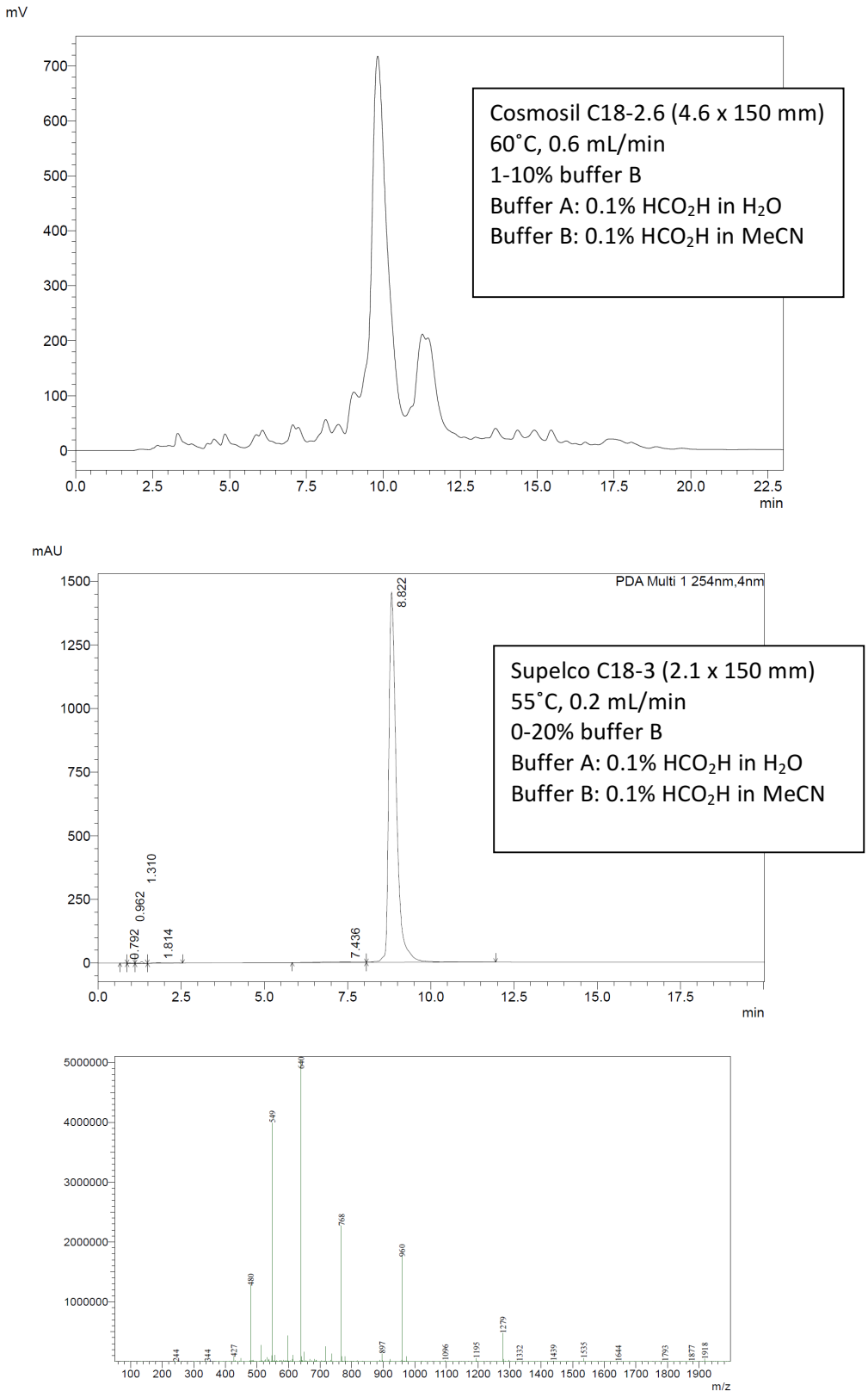

Figure S7. Crude (top) and purified (middle) chromatograms and mass spectrum (bottom) for **PNA7**.

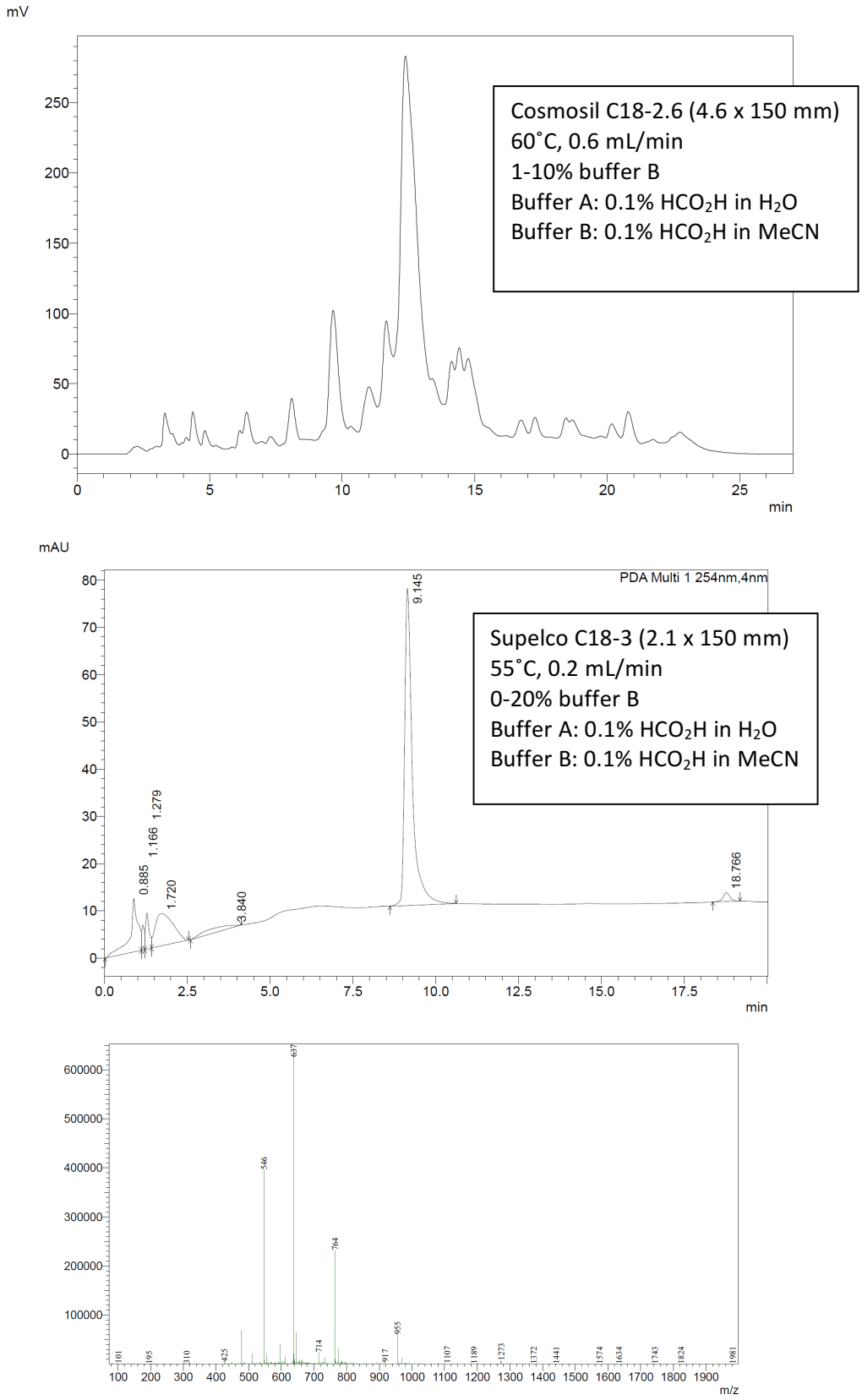

Figure S9. Crude (top) and purified (middle) chromatograms and mass spectrum (bottom) for **PNA8**.

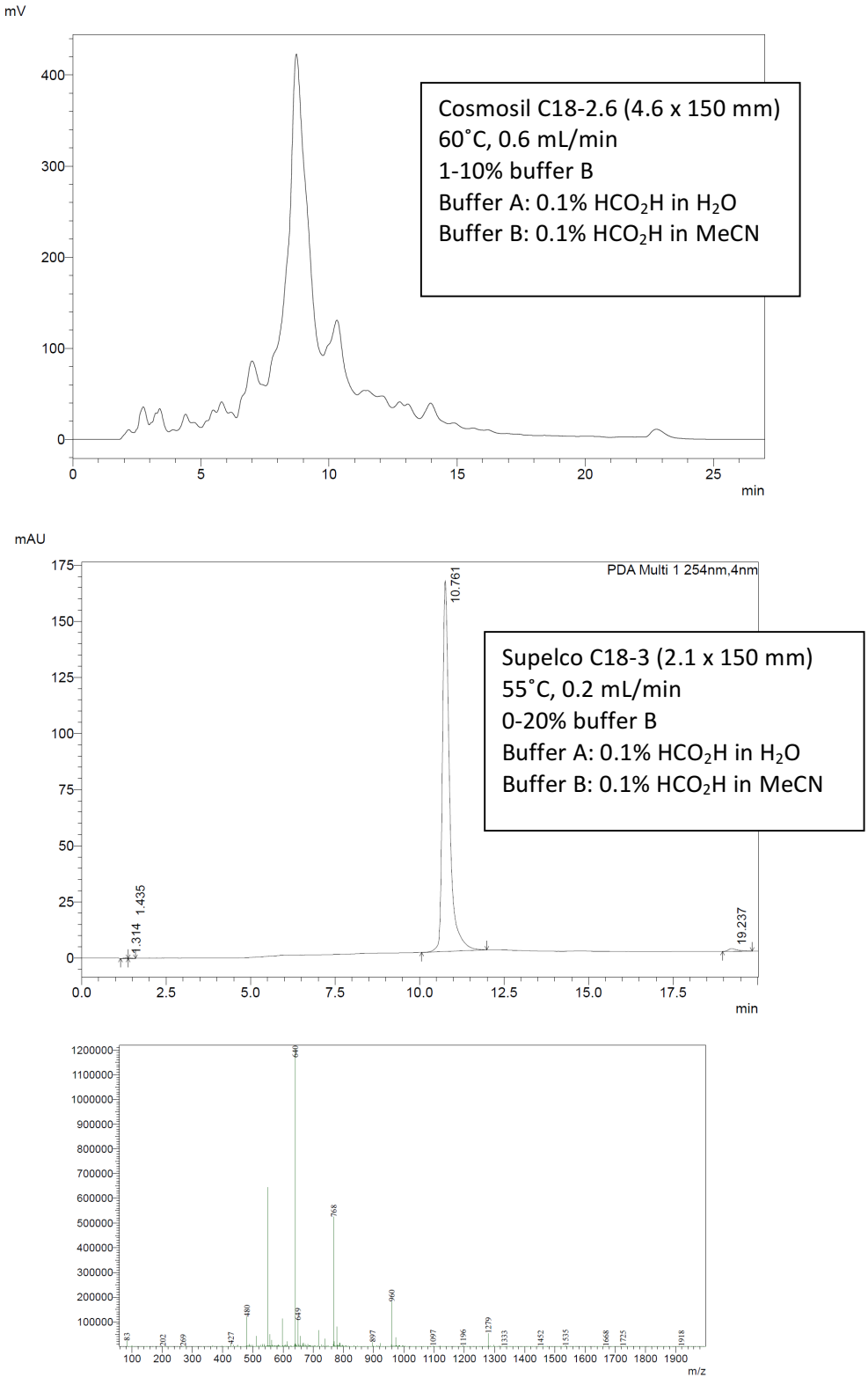

Figure S8. Crude (top) and purified (middle) chromatograms and mass spectrum (bottom) for **PNA9**.

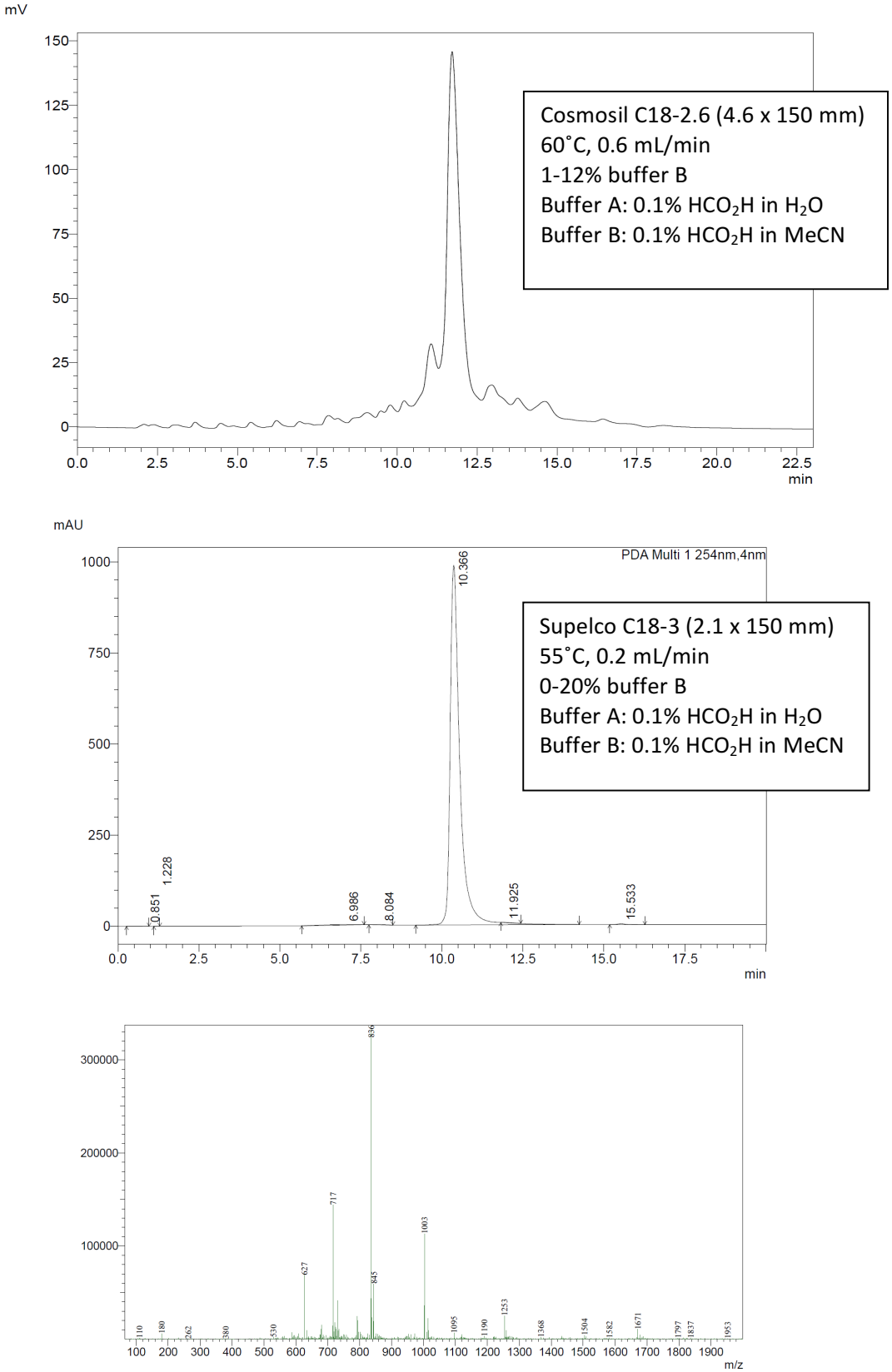

Figure S10. Crude (top) and purified (middle) chromatograms and mass spectrum (bottom) for **PNA10**.

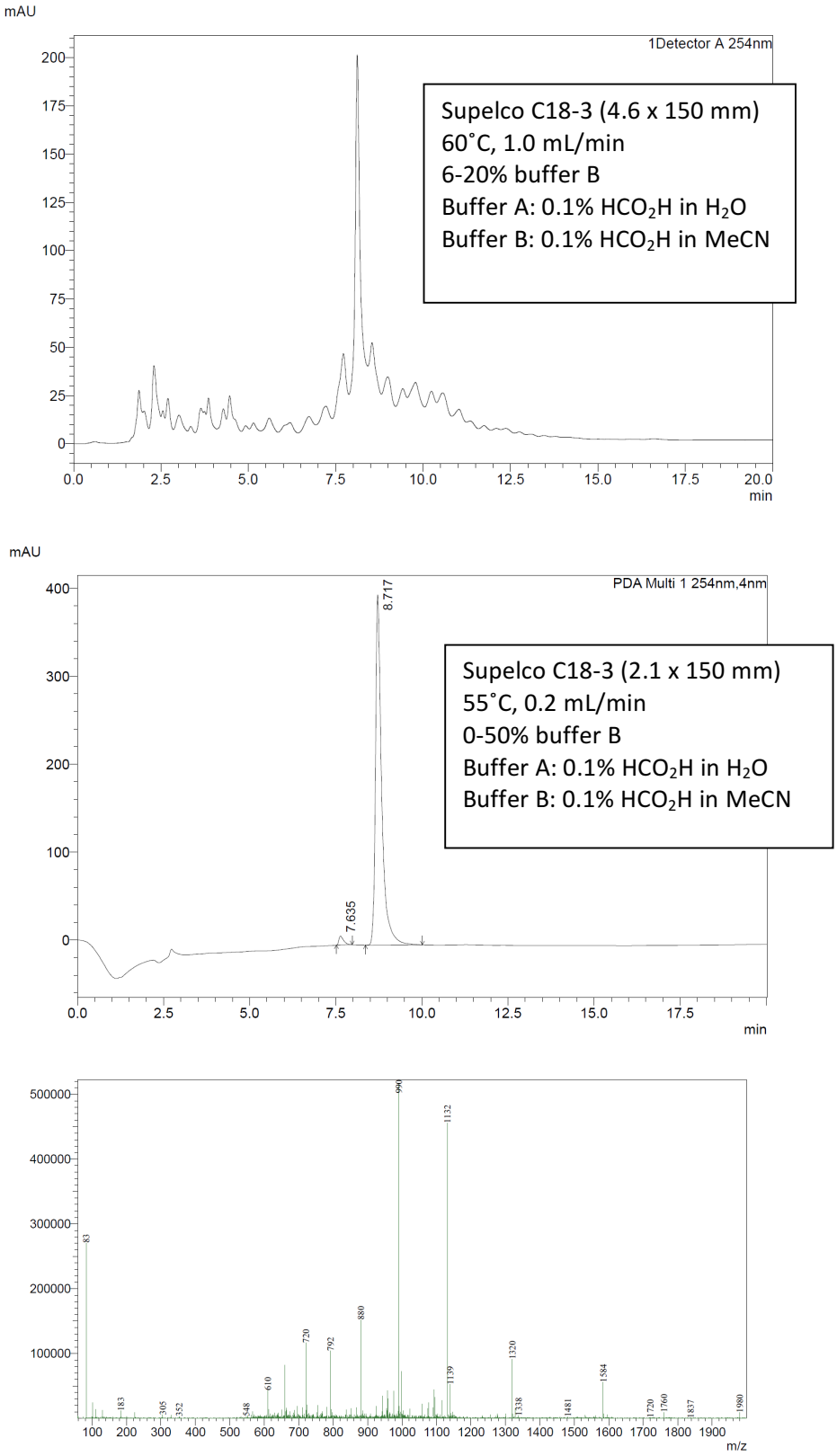

Figure S11. Crude (top) and purified (middle) chromatograms and mass spectrum (bottom) for **PNA11**.

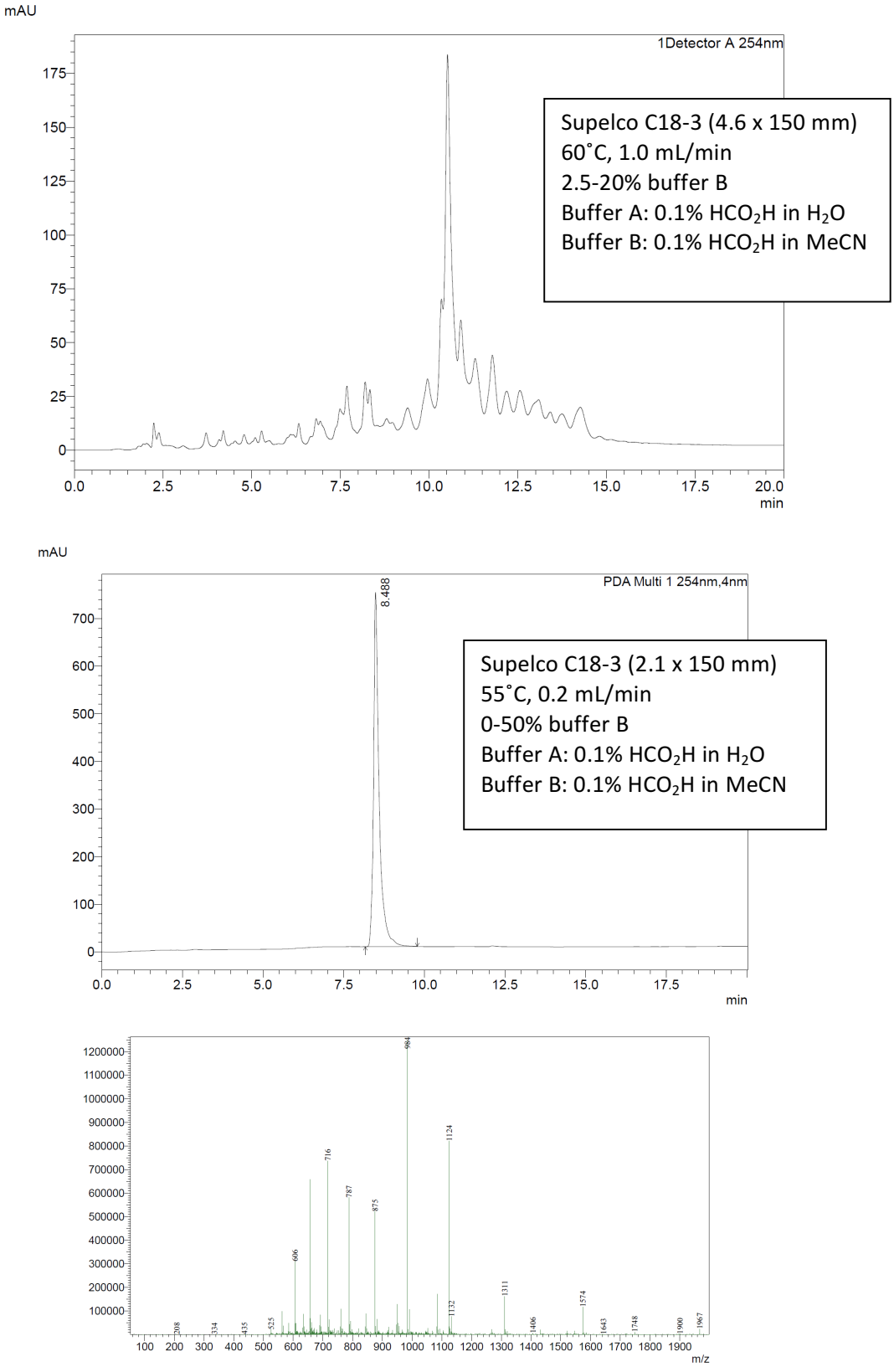

Figure S12. Crude (top) and purified (middle) chromatograms and mass spectrum (bottom) for **PNA12**.

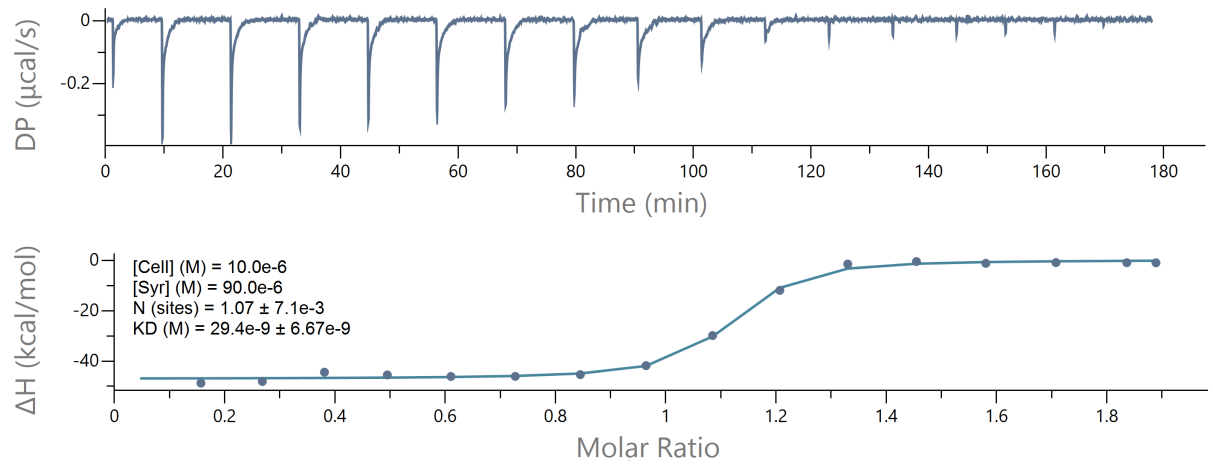

Figure S13. Representative ITC result of **PNA1** against **rHRP1**.

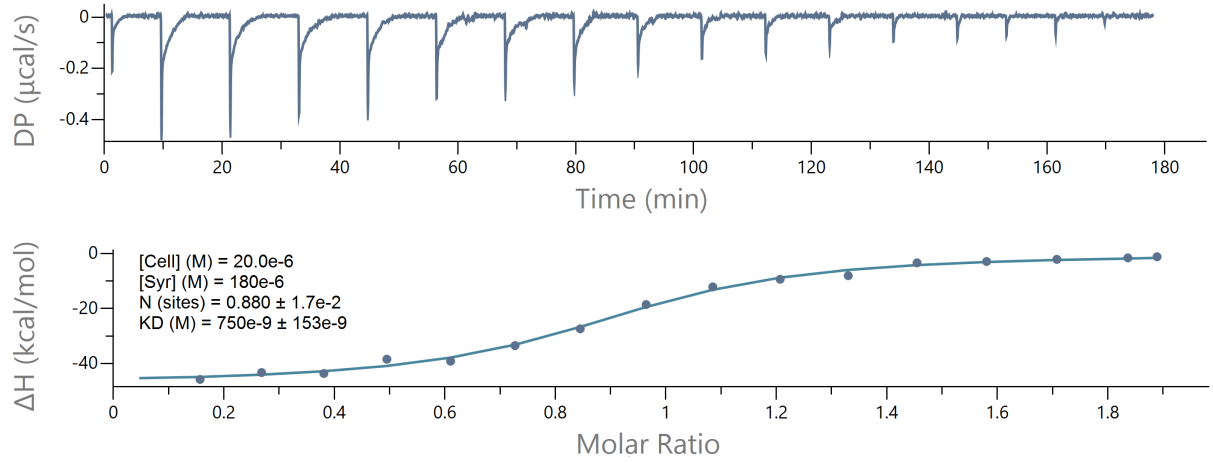

Figure S14. Representative ITC result of **PNA1** against **rHRP2**.

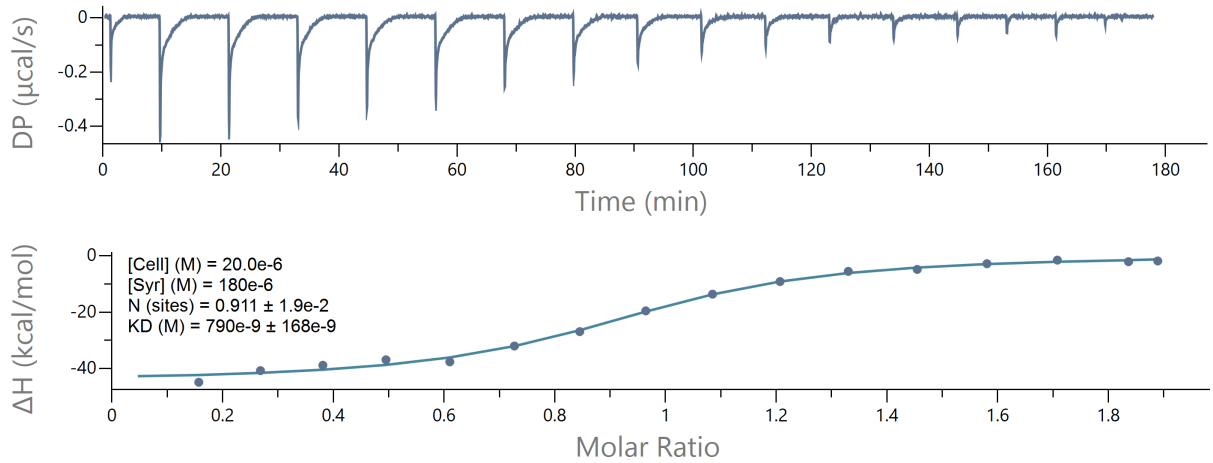

Figure S15. Representative ITC result of **PNA1** against **rHRP3**.

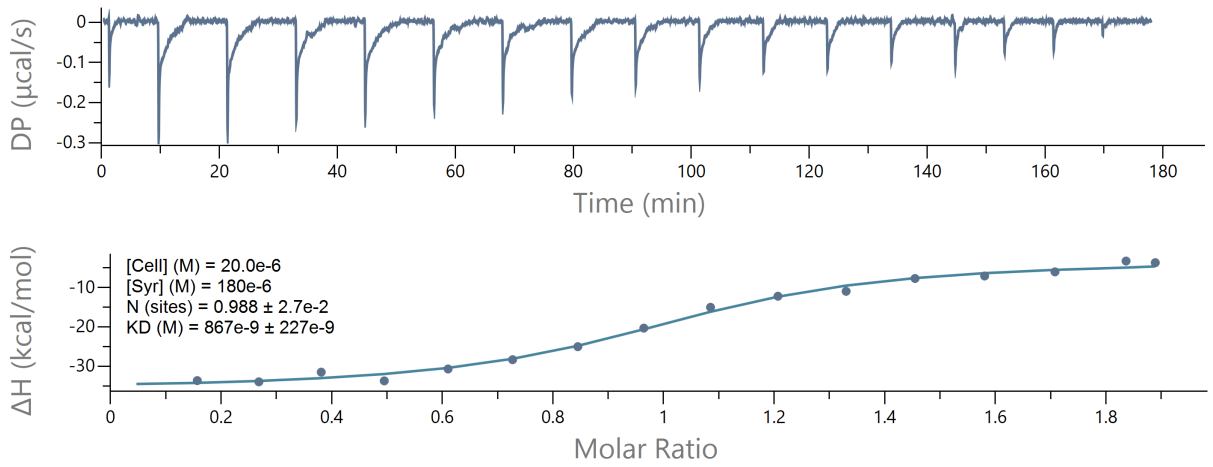

Figure S16. Representative ITC result of **PNA1** against **rHRP4**.

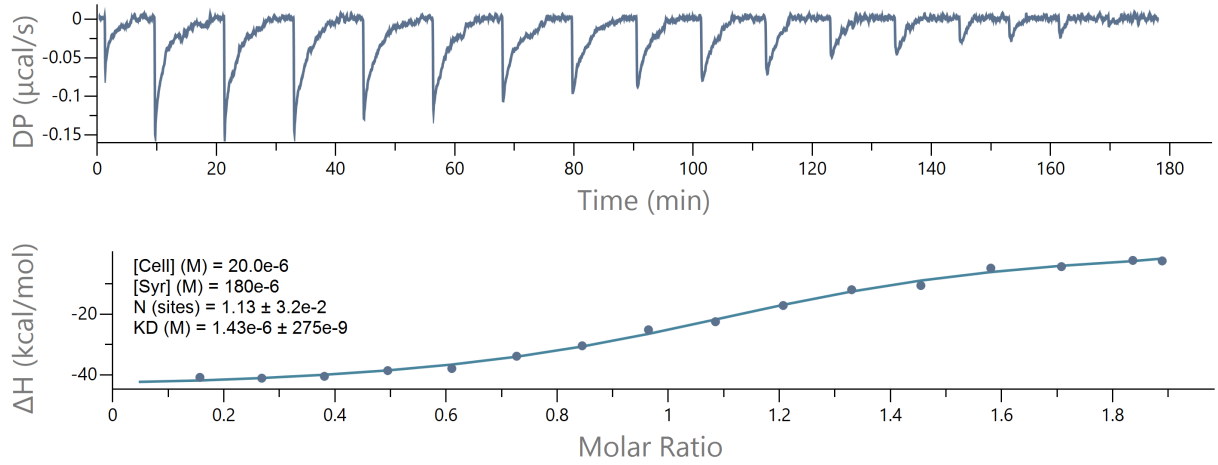

Figure S17. Representative ITC result of **PNA1** against **dHRP1**.

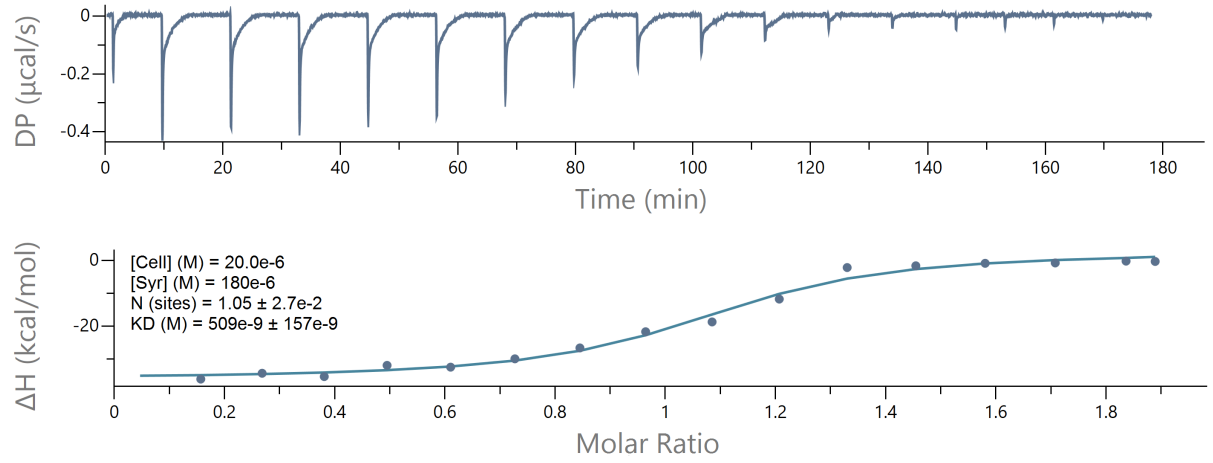

Figure S18. Representative ITC result of **PNA2** against **rHRP**

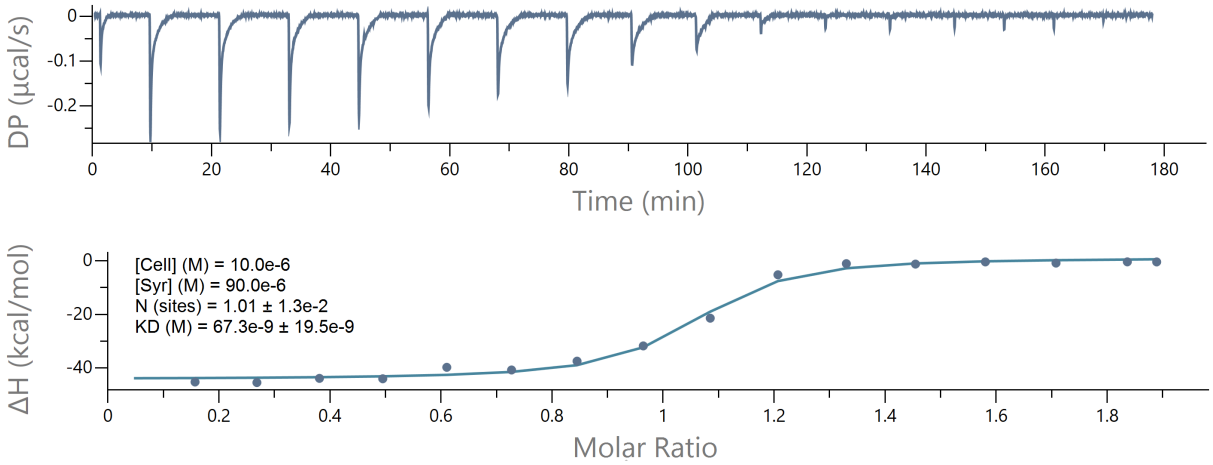

Figure S19. Representative ITC result of **PNA2** against **rHRP2**.

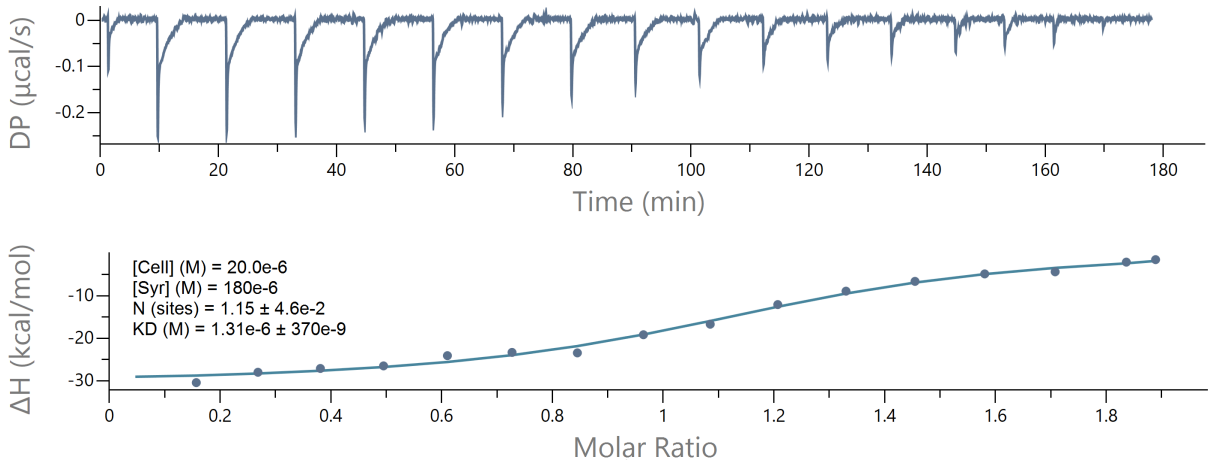

Figure S20. Representative ITC result of **PNA2** against **rHRP3**.

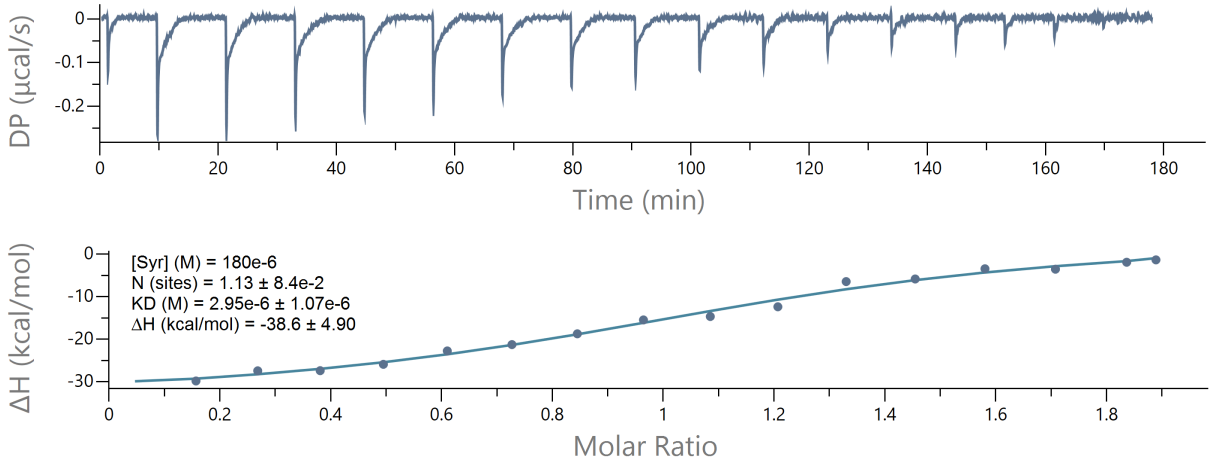

Figure S21. Representative ITC result of **PNA2** against **rHRP4**.

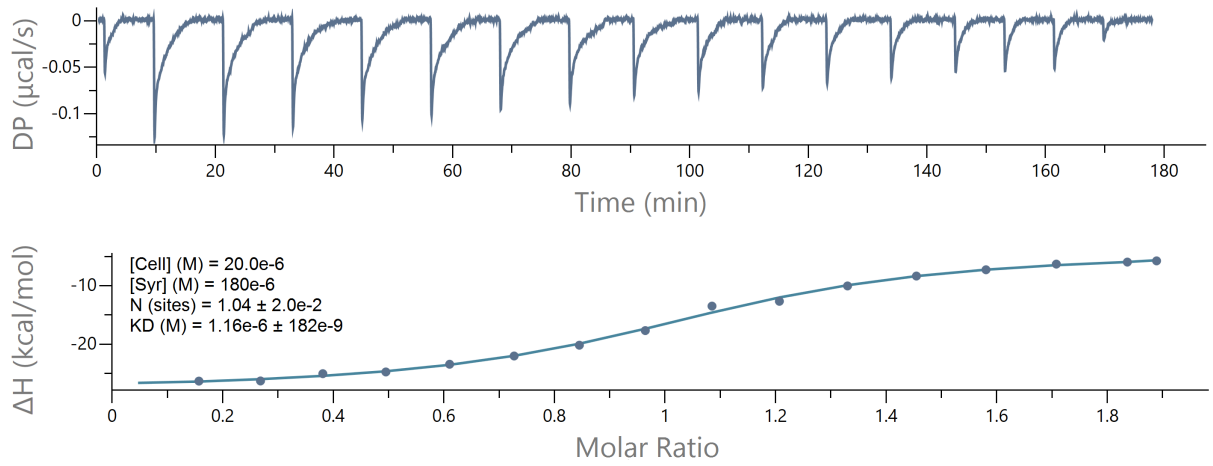

Figure S22. Representative ITC result of **PNA2** against **dHRP2**.

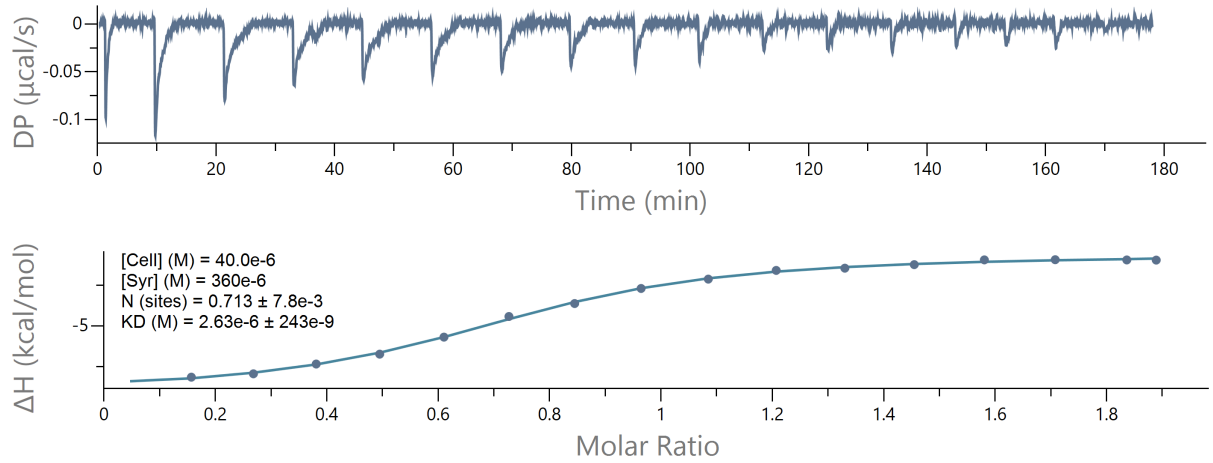

Figure S23. Representative ITC result of **PNA3** against **rHRP1**.

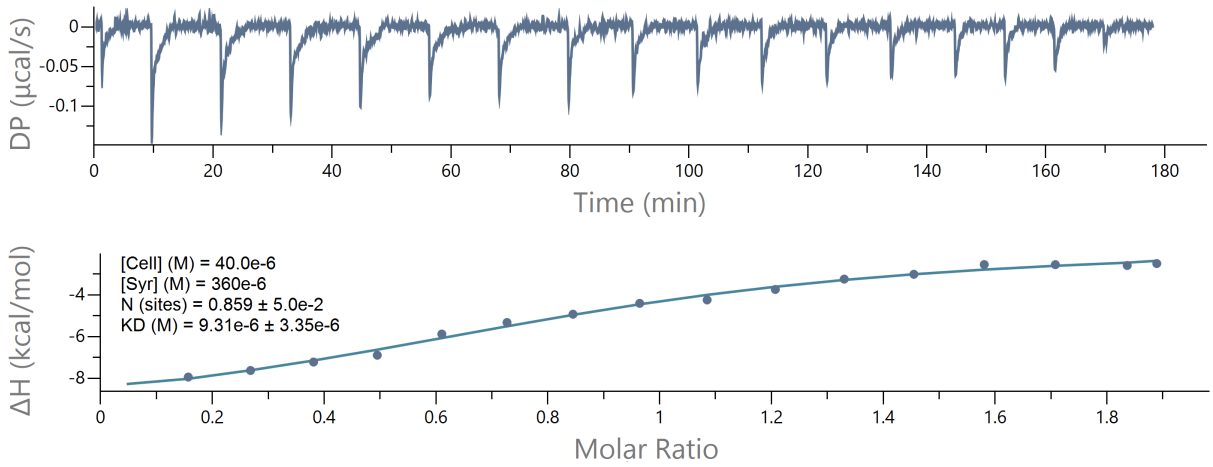

Figure S24. Representative ITC result of **PNA3** against **dHRP1**.

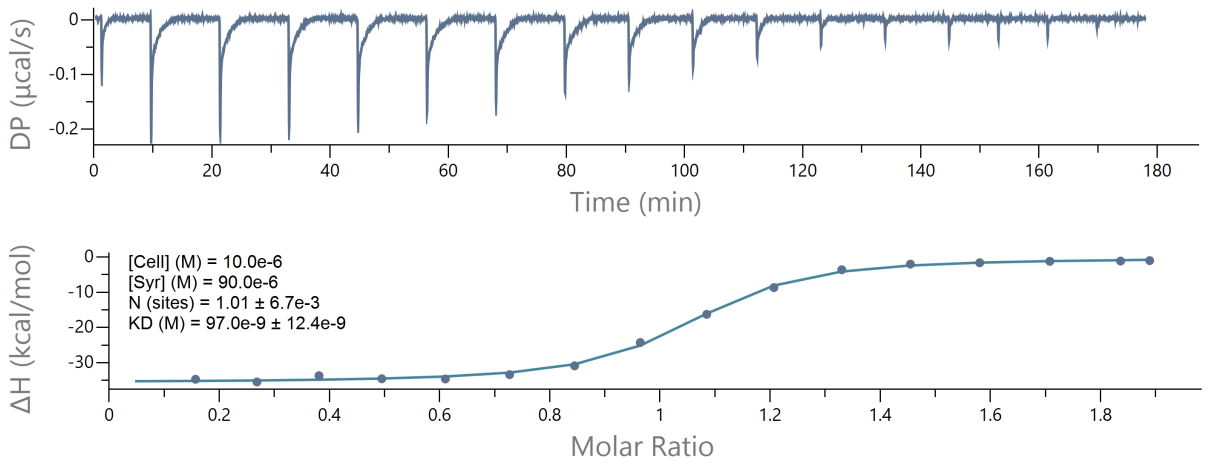

Figure S25. Representative ITC result of **PNA4** against **rHRP1**.

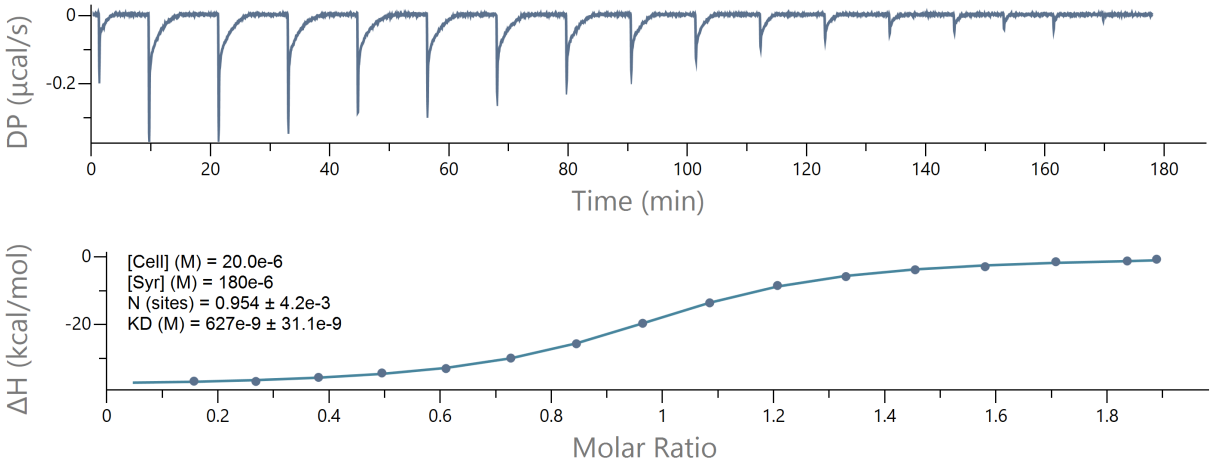

Figure S26. Representative ITC result of **PNA4** against **rHRP2**.

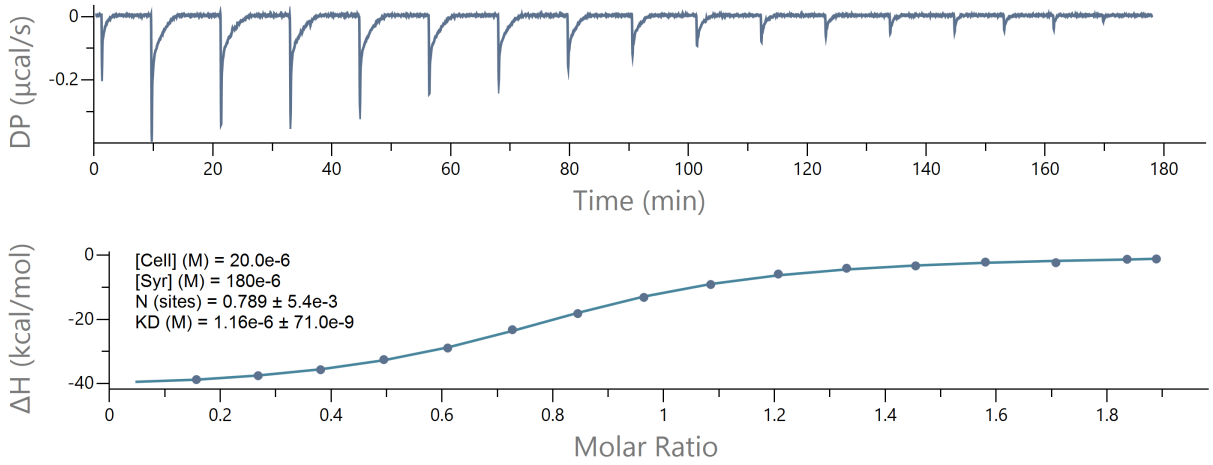

Figure S27. Representative ITC result of **PNA4** against **rHRP3**.

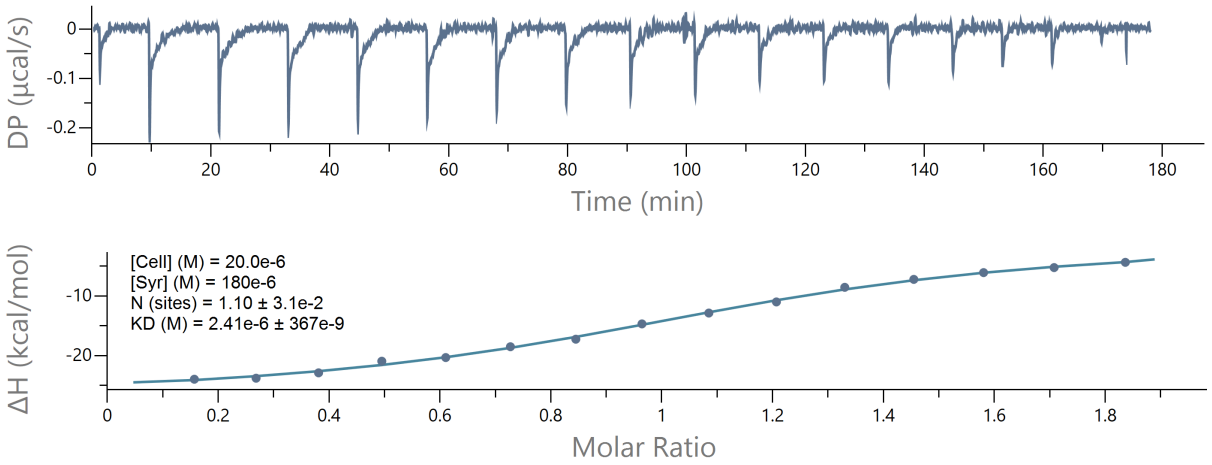

Figure S28. Representative ITC result of **PNA4** against **rHRP4**.

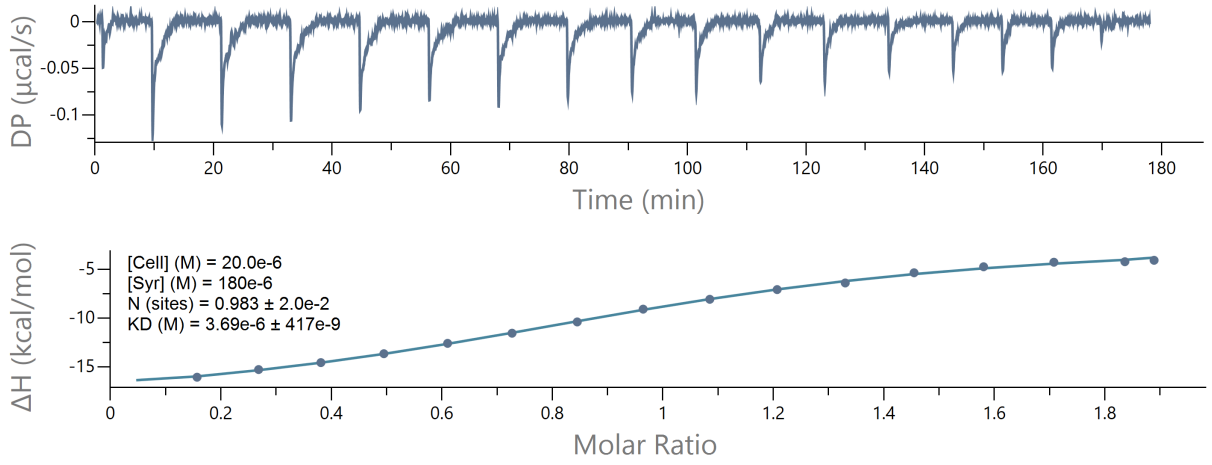

Figure S29. Representative ITC result of **PNA4** against **dHRP1**.

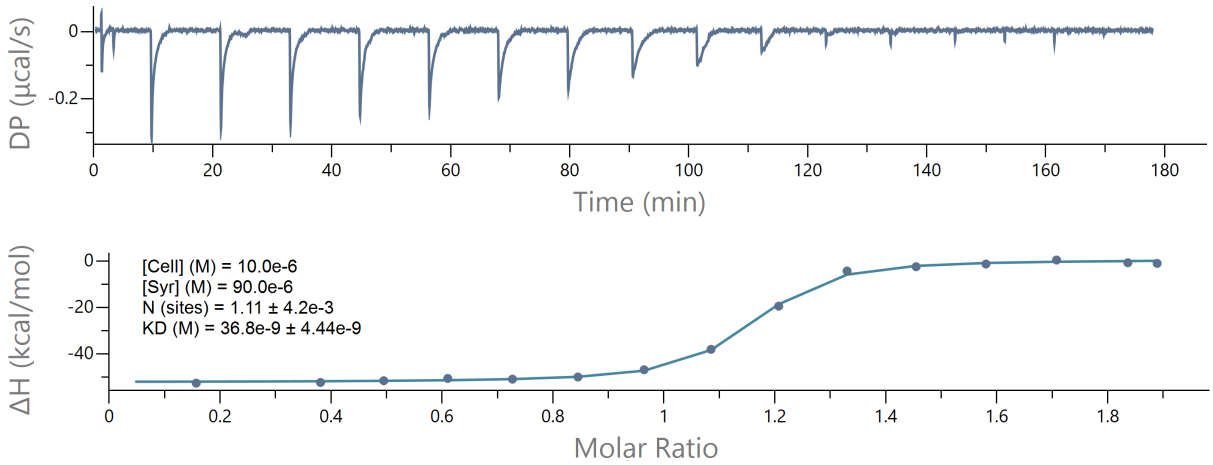

Figure S30. Representative ITC result of **PNA5** against **HRP5r**.

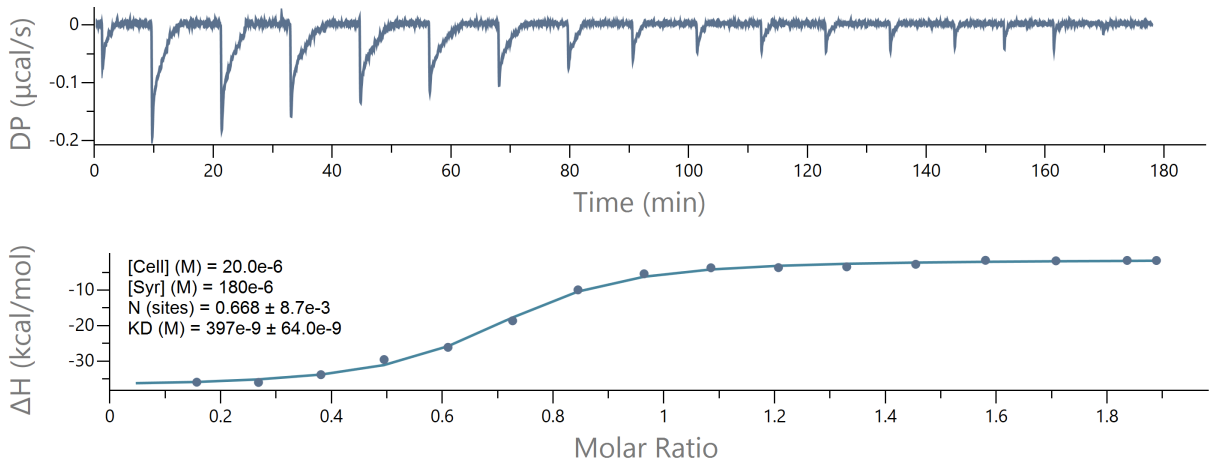

Figure S31. Representative ITC result of **PNA5** against **HRP5d.**

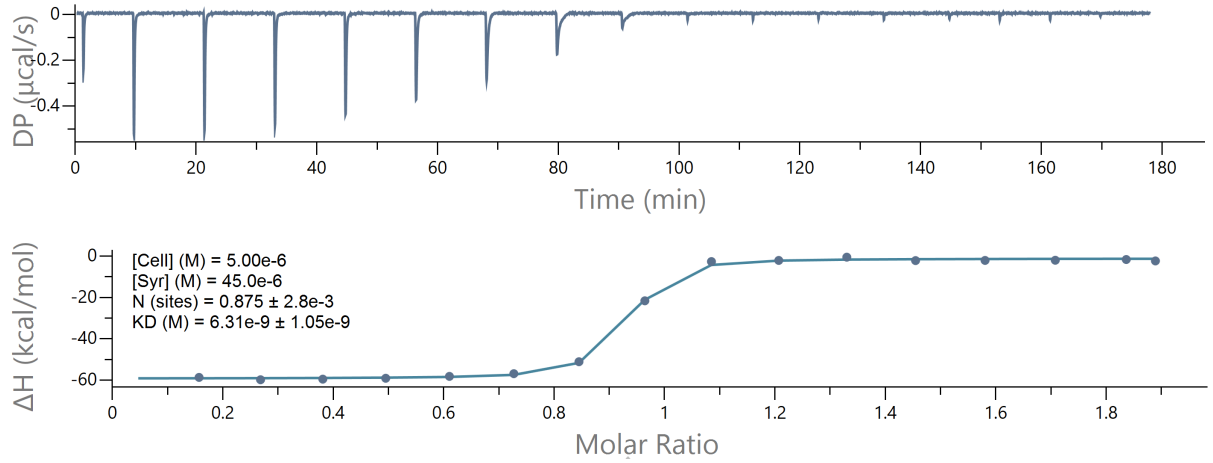

Figure S32. Representative ITC result of **PNA10** against **ssDNA$_5$**.

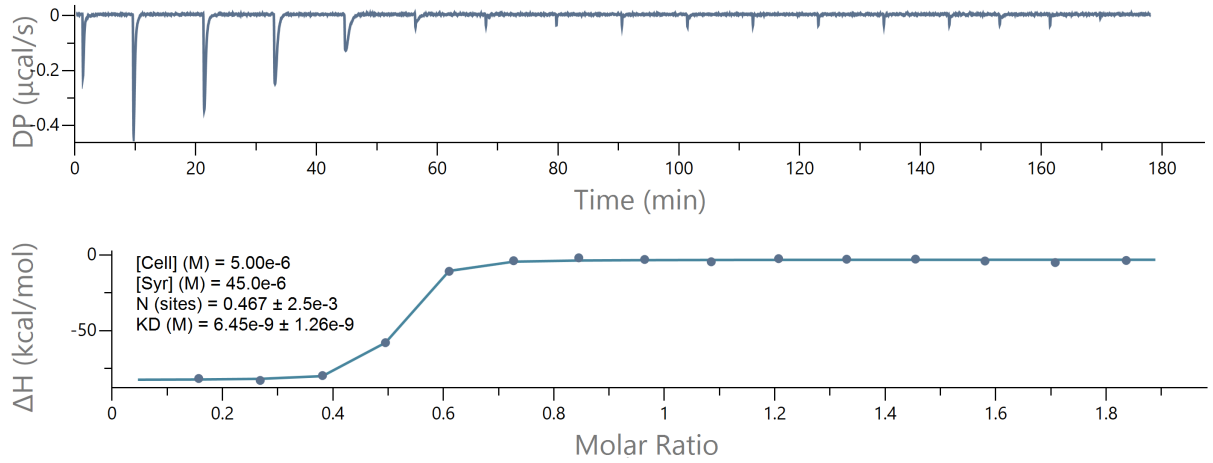

Figure S33. Representative ITC result of **PNA11** against **ssDNA$_5$**.

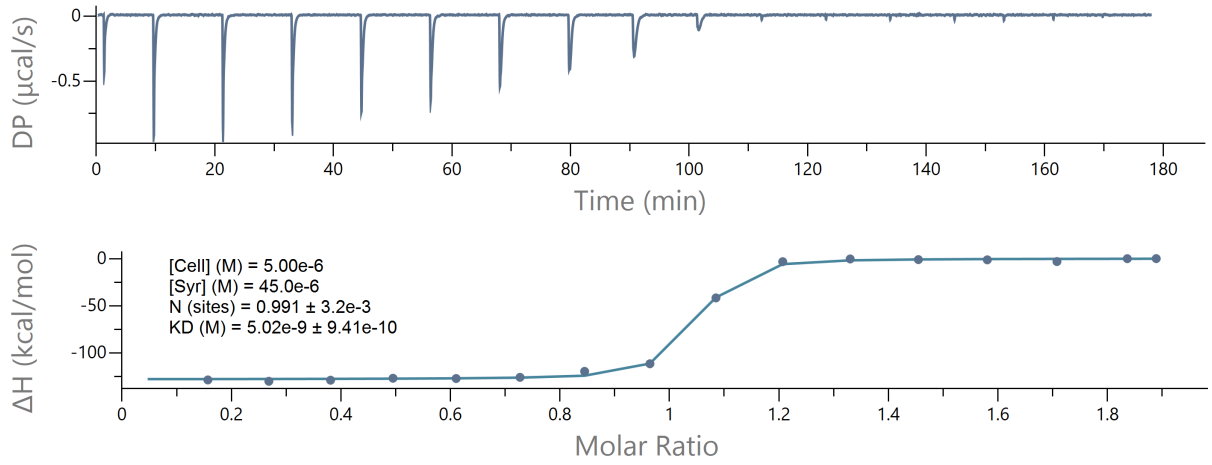

Figure S34. Representative ITC result of **PNA12** against **ssDNA$_5$**.

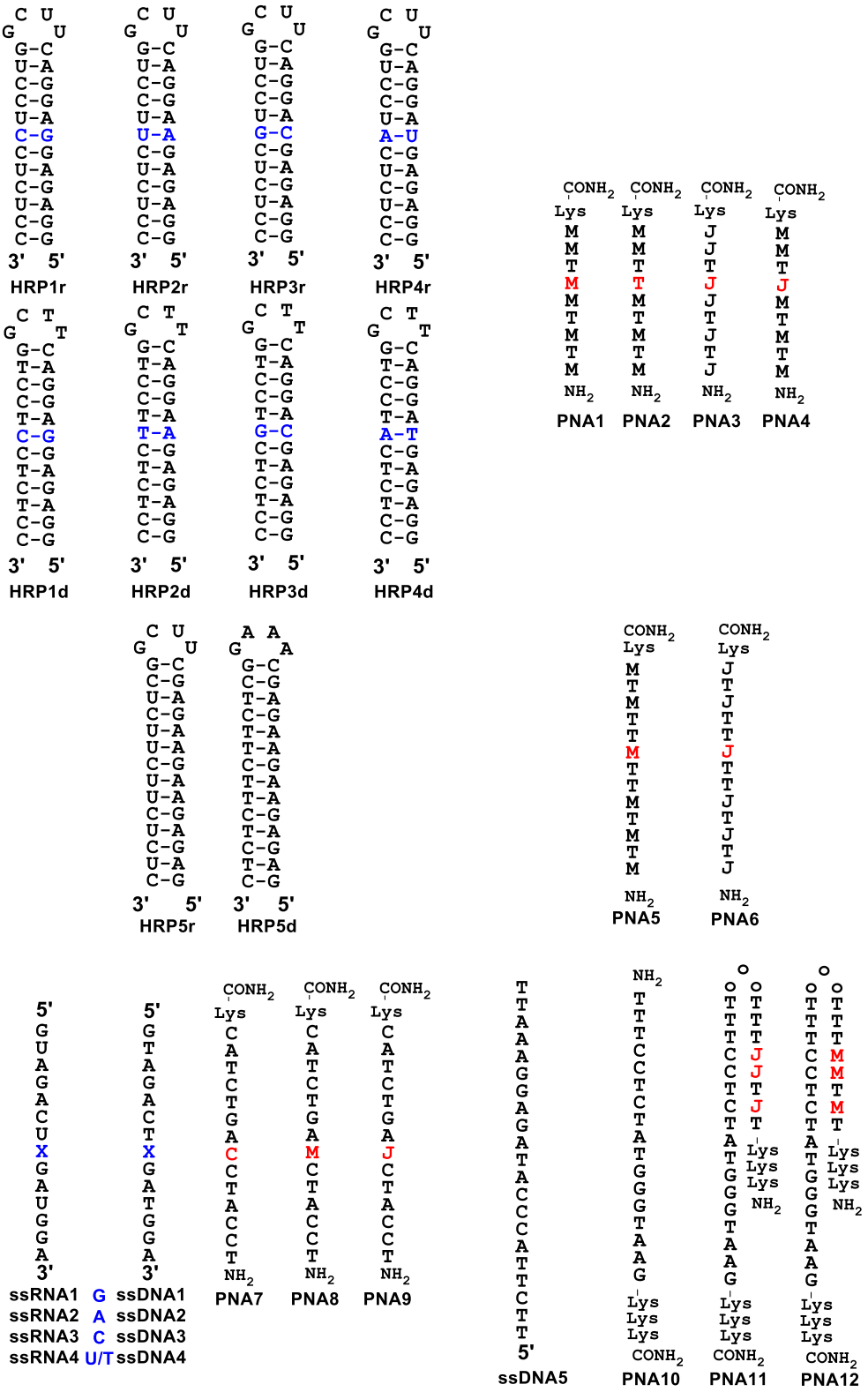

Figure S35. PNA and Oligonucleotide sequences.

Table S2. PNA1 binding affinity and thermodynamic data obtained by ITC.

Name	K_d (M)	K_a (M^{-1})	ΔH (kcal/mol)	-TΔS (kcal/mol)	N (sites)
PNA1 vs rHRP1 01	3.18E-08	3.14E+07	-52.0	41.8	1.1
PNA1 vs rHRP1 02	2.94E-08	3.40E+07	-47.1	36.8	1.1
PNA1 vs rHRP1 03	2.89E-08	3.46E+07	-49.1	38.8	1.1
Average	3.00E-08	3.34E+07	-49.4	39.1	1.1
St. Dev.	1.27E-09	1.37E+06	2.0	2.1	0.00
PNA1 vs rHRP2 01	7.78E-07	1.29E+06	-39.2	30.8	1.2
PNA1 vs rHRP2 02	7.50E-07	1.33E+06	-47.2	38.8	0.9
PNA1 vs rHRP2 03	7.96E-07	1.26E+06	-47.9	39.6	0.9
Average	7.75E-07	1.29E+06	-44.8	36.4	1.0
St. Dev.	1.89E-08	3.18E+04	3.9	4.0	0.17
PNA1 vs rHRP3 01	7.46E-07	1.34E+06	-40.2	31.8	1.0
PNA1 vs rHRP3 02	7.90E-07	1.27E+06	-45.0	36.6	0.9
PNA1 vs rHRP3 03	8.15E-07	1.23E+06	-45.2	36.9	1.0
Average	7.84E-07	1.28E+06	-43.5	35.1	1.0
St. Dev.	2.85E-08	4.71E+04	2.3	2.3	0.06
PNA1 vs rHRP4 01	8.67E-07	1.15E+06	-32.7	24.5	1.0
PNA1 vs rHRP4 02	7.39E-07	1.35E+06	-37.1	28.7	0.9
PNA1 vs rHRP4 03	8.94E-07	1.12E+06	-33.7	25.4	0.9
Average	8.33E-07	1.21E+06	-34.5	26.2	0.9
St. Dev.	6.76E-08	1.03E+05	1.9	1.8	0.06
PNA1 vs dHRP1 01	1.43E-06	6.99E+05	-48.0	40.0	1.1
PNA1 vs dHRP1 02	1.37E-06	7.30E+05	-39.3	31.3	1.2
PNA1 vs dHRP1 03	1.21E-06	8.26E+05	-52.0	43.9	1.0
Average	1.34E-06	7.52E+05	-46.4	38.4	1.1
St. Dev.	1.14E-07	6.64E+04	6.5	6.5	0.12

Table S3. PNA2 binding affinity and thermodynamic data obtained by ITC.

Name	K_d (M)	K_a (M^{-1})	ΔH (kcal/mol)	-TΔS (kcal/mol)	N (sites)
PNA2 vs rHRP1 01	5.92E-07	1.69E+06	-38.8	30.3	1.0
PNA2 vs rHRP1 02	5.09E-07	1.96E+06	-38.5	29.9	1.1
PNA2 vs rHRP1 03	5.11E-07	1.96E+06	-40.5	31.9	1.0
Average	5.37E-07	1.87E+06	-39.3	30.7	1.0
St. Dev.	3.87E-08	1.28E+05	0.9	0.9	0.06
PNA2 vs rHRP2 01	7.98E-08	1.25E+07	-42.4	32.7	1.0
PNA2 vs rHRP2 02	8.34E-08	1.20E+07	-41.4	31.7	1.1
PNA2 vs rHRP2 03	8.44E-08	1.18E+07	-40.4	30.7	1.1
Average	8.25E-08	1.21E+07	-41.4	31.7	1.1
St. Dev.	1.98E-09	2.94E+05	0.8	0.8	0.06
PNA2 vs rHRP3 01	9.64E-07	1.04E+06	-33.9	25.7	1.1
PNA2 vs rHRP3 02	1.04E-06	9.62E+05	-33.9	25.7	1.1
PNA2 vs rHRP3 03	1.31E-06	7.63E+05	-32.0	24.0	1.2
Average	1.10E-06	9.21E+05	-33.3	25.1	1.1
St. Dev.	1.48E-07	1.16E+05	0.9	0.8	0.06
PNA2 vs rHRP4 01	2.40E-06	4.17E+05	-39.2	31.6	1.1
PNA2 vs rHRP4 02	2.19E-06	4.57E+05	-37.1	29.4	1.1
PNA2 vs rHRP4 03	2.95E-06	3.39E+05	-38.6	31.0	1.1
Average	2.51E-06	4.04E+05	-38.3	30.7	1.1
St. Dev.	3.20E-07	4.88E+04	0.9	0.9	0.00
PNA2 vs dHRP2 01	1.03E-06	9.71E+05	-23.0	14.9	1.0
PNA2 vs dHRP2 02	9.98E-07	1.00E+06	-25.5	17.3	1.1
PNA2 vs dHRP2 03	1.16E-06	8.62E+05	-23.9	15.7	1.0
Average	1.06E-06	9.45E+05	-24.1	16.0	1.1
St. Dev.	8.58E-08	7.35E+04	1.3	1.2	0.03

Table S4. PNA3 binding affinity and thermodynamic data obtained by ITC.

Name	K_d (M)	K_a (M^{-1})	ΔH (kcal/mol)	-TΔS (kcal/mol)	N (sites)
PNA3 vs rHRP5 01	1.87E-06	5.35E+05	-7.82	-1.6	0.7
PNA3 vs rHRP5 02	2.63E-06	3.80E+05	-8.55	0.9	0.7
PNA3 vs rHRP5 03	2.50E-06	4.00E+05	-10.1	2.4	0.7
Average	2.33E-06	4.38E+05	-8.8	0.6	0.7
St. Dev.	4.07E-07	8.41E+04	1.2	2.0	0.02
PNA3 vs dHRP5 01	1.19E-05	8.40E+04	-14.7	8.0	0.8
PNA3 vs dHRP5 02	9.31E-06	1.07E+05	-8.56	1.7	0.9
Average	1.06E-05	9.57E+04	-11.6	4.9	0.8
St. Dev.	1.83E-06	1.65E+04	4.3	4.5	0.08

Table S5. PNA4 binding affinity and thermodynamic data obtained by ITC.

Name	K_d (M)	K_a (M^{-1})	ΔH (kcal/mol)	-TΔS (kcal/mol)	N (sites)
PNA4 vs rHRP1 01	9.70E-08	1.03E+07	-35.3	25.7	1.0
PNA4 vs rHRP1 02	9.54E-08	1.05E+07	-34.7	25.1	1.0
PNA4 vs rHRP1 03	9.07E-08	1.10E+07	-36.4	27.1	1.0
Average	9.44E-08	1.06E+07	-35.5	26.0	1.0
St. Dev.	3.27E-09	3.74E+05	0.9	1.0	0.01
PNA4 vs rHRP2 01	8.31E-07	1.20E+06	-30.3	21.7	0.9
PNA4 vs rHRP2 02	5.24E-07	1.91E+06	-43.6	35.1	0.5
PNA4 vs rHRP2 03	6.27E-07	1.60E+06	-38.7	30.2	1.0
Average	6.61E-07	1.57E+06	-37.5	29.0	0.8
St. Dev.	1.56E-07	3.53e+05	6.7	6.8	0.27
PNA4 vs rHRP3 01	1.16E-06	8.62E+05	-42.9	34.8	0.8
PNA4 vs rHRP3 02	1.06E-06	9.43E+05	-51.5	43.4	0.9
PNA4 vs rHRP3r 03	1.29E-06	7.75E+05	-40.7	32.4	0.8
Average	1.17E-06	8.60E+05	-45.0	36.9	0.8
St. Dev.	1.15E-07	8.41E+04	5.8	5.8	0.09
PNA4 vs rHRP4 01	2.89E-06	3.45E+05	-28.9	21.3	1.2
PNA4 vs rHRP4 02	2.68E-06	3.73E+05	-19.5	11.9	0.7
PNA4 vsr HRP4 03	2.41E-06	4.15E+05	-26.3	18.7	1.1
Average	2.66E-06	3.80E+05	-24.9	17.3	1.0
St. Dev.	2.41E-07	4.87E+04	4.9	4.9	0.24
PNA4 vs dHRP1 01	4.92E-06	2.03E+05	-27.0	19.7	1.1
PNA4 vs dHRP1 02	3.69E-06	2.71E+05	-17.2	9.8	1.0
PNA4 vs dHRP1 03	5.10E-06	1.96E+05	-22.2	15.0	1.1
Average	4.57E-06	2.23E+05	-22.1	14.8	1.1
St. Dev.	7.67E-07	4.13E+04	4.9	5.0	0.06

Table S6. UV-melting of **PNA1** vs matched and mismatched dsRNA and dsDNA.

Name	PNA1 vs rHRP1	PNA1 vs rHRP2	PNA1 vs rHRP3	PNA1 vs rHRP4
	67.1	36.2	36.6	32.9
Melting	67.3	36.2	37.3	32.8
	66.2	35.8	36.2	32.8
temp. (˚C)	66.5	36.2	37.2	31.8
	65.6	36.9	36.9	32.6
Average	66.5	36.3	36.8	32.6
St. Dev.	0.7	0.4	0.4	0.4
Name	**PNA1 vs dHRP1**	**PNA1 vs dHRP2**	**PNA1 vs dHRP3**	**PNA1 vs dHRP4**
	35.2	<20	<20	<20
Melting	34.5	<20	<20	<20
	35.5	<20	<20	<20
temp. (˚C)	35.0	<20	<20	<20
	34.8	<20	<20	<20
Average	35.0	-	-	-
St. Dev.	0.3	-	-	-

Table S7. UV-melting of **PNA2** vs matched and mismatched dsRNA and dsDNA.

Name	PNA2 vs rHRP1	PNA2 vs rHRP2	PNA2 vs rHRP3	PNA2 vs rHRP4
Melting	46.4	70.1	35.4	34.7
	46.8	70.1	35.2	34.5
temp. (˚C)	46.5	70.4	36.0	34.3
	45.6	68.7	35.6	34.8
	46.9	68.6	34.7	34.7
Average	46.4	69.6	35.4	34.6
St. Dev.	0.5	0.8	0.4	0.2
Name	**PNA2 vs dHRP1**	**PNA2 vs dHRP2**	**PNA2 vs dHRP3**	**PNA2 vs dHRP4**
	<20	29.7	<20	<20
Melting	<20	29.9	<20	<20
	<20	29.0	<20	<20
temp. (˚C)	<20	28.9	<20	<20
	<20	29.6	<20	<20
Average	-	29.4	-	-
St. Dev.	-	0.4	-	-

Table S8. UV-melting of **PNA3** vs matched dsRNA and dsDNA.

Name	PNA3 vs rHRP1
Melting temp. (˚C)	37.6 36.3 36.9 36.4 37.0
Average	36.8
St. Dev.	0.5
Name	**PNA3 vs dHRP1**
Melting temp. (˚C)	<20 <20 <20 <20 <20
Average	-
St. Dev.	-

Table S9. UV-melting of **PNA4** vs matched and mismatched dsRNA and dsDNA.

Name	PNA4 vs rHRP1	PNA4 vs rHRP2	PNA4 vs rHRP3	PNA4 vs rHRP4
Melting temp. (˚C)	60.0 60.8 61.4 60.3 61.1	43.8 44.1 43.5 44.6 43.1	39.4 39.3 38.9 38.7 39.3	35.1 35.4 36.4 35.8 35.8
Average	60.7	43.8	39.1	35.7
St. Dev.	0.6	0.6	0.3	0.5
Name	**PNA4 vs dHRP1**	**PNA4 vs dHRP2**	**PNA4 vs dHRP3**	**PNA4 vs dHRP4**
Melting temp. (˚C)	29.4 30.2 29.7 29.8 29.5	<20 <20 <20 <20 <20	<20 <20 <20 <20 <20	<20 <20 <20 <20 <20
Average	29.7	-	-	-
St. Dev.	0.3	-	-	-

Table S10. PNA5 binding affinity and thermodynamic data obtained by ITC.

Name	K_d (M)	K_a (M^{-1})	ΔH (kcal/mol)	-TΔS (kcal/mol)	N (sites)
PNA5 vs HRP5r 01	3.68E-06	2.72E+07	-53.4	42.7	0.8
PNA5 vs HRP5r 02	3.55E-06	2.82E+07	-57.2	43.2	0.7
PNA5 vs HRP5r 03	3.66E-06	2.73E+07	-54.5	47.0	0.8
Average	3.84E-06	2.76E+07	-54.5	44.3	0.7
St. Dev.	7.73E-07	5.37E+05	2.4	2.4	0.06
PNA5 vs HRP5d 01	4.54E-07	2.20E+06	-34.6	26.0	1.1
PNA5 vs HRP5d 02	3.97E-07	2.52E+06	-35.9	27.2	1.1
PNA5 vs HRP5d 03	3.01E-07	3.32E+06	-35.3	26.4	1.1
Average	3.63E-07	2.68E+06	-35.3	26.5	1.1
St. Dev.	7.00E-08	5.77E+05	0.7	0.6	0.01

Table S11. UV-melting of **PNA5** vs matched dsRNA and dsDNA

Name	PNA5 vs HRP5r	PNA5 vs HRP5d
Melting temp. (˚C)	90.7	85.9
	90.2	87.0
	89.8	86.5
	89.9	87.5
	89.0	87.1
Average	89.9	86.8
St. Dev.	0.6	0.6

Table S12. UV-melting of **PNA7** vs matched and mismatched ssRNA and ssDNA.

Name	PNA7 vs ssRNA1	PNA7 vs ssRNA2	PNA7 vs ssRNA3	PNA7 vs ssRNA4
	73.3	58.2	56.9	57.2
Melting	72.8	58.1	56.7	56.9
	73.1	57.5	56.3	56.4
temp. (˚C)	73.8	57.8	56.0	56.7
	72.4	57.3	55.9	56.9
Average	73.2	57.8	56.4	56.8
St. Dev.	0.5	0.4	0.4	0.3
Name	**PNA7 vs ssDNA1**	**PNA7 vs ssDNA2**	**PNA7 vs ssDNA3**	**PNA7 vs ssDNA4**
	66.9	46.1	45.0	47.8
Melting	65.5	46.2	44.2	47.5
	66.6	45.7	44.4	47.1
temp. (˚C)	65.2	45.2	44.4	47.3
	66.0	44.9	44.7	47.3
Average	66.0	45.6	44.5	47.4
St. Dev.	0.7	0.5	0.3	0.3

Table S13. UV-melting of **PNA8** vs matched and mismatched ssRNA and ssDNA.

Name	PNA8 vs ssRNA1	PNA8 vs ssRNA2	PNA8 vs ssRNA3	PNA8 vs ssRNA4
	59.9	55.7	57.7	56.1
Melting	58.4	55.7	57.0	56.5
	59.5	55.4	56.4	55.1
temp. (˚C)	58.3	55.4	56.6	56.0
	59.5	54.9	56.0	55.2
Average	59.1	55.4	56.8	55.8
St. Dev.	0.7	0.3	0.6	0.6
Name	**PNA8 vs ssDNA1**	**PNA8 vs ssDNA2**	**PNA8 vs ssDNA3**	**PNA8 vs ssDNA4**
	45.0	42.4	46.8	46.0
Melting	45.6	41.2	47.0	45.9
	45.4	41.9	46.2	45.2
temp. (˚C)	45.2	41.1	46.3	45.2
	45.2	41.1	46.0	45.4
Average	45.3	41.5	46.5	45.6
St. Dev.	0.2	0.6	0.4	0.4

Table S14. UV-melting of **PNA9** vs matched and mismatched ssRNA and ssDNA.

Name	PNA9 vs ssRNA1	PNA9 vs ssRNA2	PNA9 vs ssRNA3	PNA9 vs ssRNA4
	73.0	58.1	58.4	58.9
Melting	72.0	57.7	58.1	59.0
	71.8	57.3	58.0	58.2
temp. (˚C)	72.7	56.9	57.8	58.6
	71.4	56.9	57.5	57.8
Average	72.2	57.4	58.0	58.5
St. Dev.	0.6	0.5	0.4	0.5
Name	**PNA9 vs ssDNA1**	**PNA9 vs ssDNA2**	**PNA9 vs ssDNA3**	**PNA9 vs ssDNA4**
	67.1	46.5	49.0	49.9
Melting	65.8	45.5	49.4	49.9
	66.6	45.9	48.7	49.8
temp. (˚C)	65.9	45.6	48.7	49.7
	66.2	46.2	48.6	49.3
Average	66.3	45.9	48.9	49.7
St. Dev.	0.5	0.4	0.3	0.2

Table S15. PNA10-PNA12 binding affinity and thermodynamic data obtained by ITC.

Name	K_d (M)	K_a (M^{-1})	ΔH (kcal/mol)	-TΔS (kcal/mol)	N (sites)
PNA10 vs ssDNA5 01	6.67E-9	1.49E+8	-65.9	54.7	0.8
PNA10 vs ssDNA5 02	6.29E-9	1.59E+8	-65.8	54.6	0.6
PNA10 vs ssDNA5 03	6.31E-9	1.58E+8	-58.0	46.8	0.9
Average	6.42E-9	1.56E+8	-63.2	52.0	0.8
St. Dev.	2.14E-10	5.09E+6	4.5	4.5	0.13
PNA11vs ssDNA5 01	6.93E-9	1.44E+8	-79.4	68.3	0.4
PNA11 vs ssDNA5 02	6.45E-9	1.55E+8	-79.5	68.3	0.5
PNA11 vs ssDNA5 03	6.89E-9	1.45E+8	-97.9	86.8	0.4
Average	6.76E-9	1.48E+8	-85	75	0.42
St. Dev.	2.66E-10	5.97E+6	11	11	0.06
PNA12 vs ssDNA5 01	5.14E-9	1.95E+8	-140	128	1.0
PNA12 vs ssDNA5 02	5.02E-9	1.99E+8	-128	117	1.0
PNA12 vs ssDNA5 03	5.33E-9	1.88E+8	-137	125	1.0
Average	5.16E-9	1.95E+8	-135	123	1.0
St. Dev.	1.56E-10	5.83E+6	6.2	5.7	0.03

Table S16. UV-melting of **PNA10-PNA12** vs matched ssDNA5.

Name	Tm (°C)
PNA10 vs ssDNA5 01	76.6
PNA10 vs ssDNA5 02	76.8
PNA10 vs ssDNA5 03	76.1
PNA10 vs ssDNA5 04	76.3
PNA10 vs ssDNA5 05	76.6
Average	76.4
St. Dev.	0.3
PNA11 vs ssDNA5 01	91.4
PNA11 vs ssDNA5 02	91.5
PNA11 vs ssDNA5 03	90.1
PNA11 vs ssDNA5 04	91.2
PNA11 vs ssDNA5 05	90.5
Average	91.0
St. Dev.	0.6
PNA12 vs ssDNA5 01	93.7
PNA12 vs ssDNA5 02	94.1
PNA12 vs ssDNA5 03	94.2
PNA12 vs ssDNA5 04	93.9
PNA12 vs ssDNA5 05	94.5
Average	94.1
St. Dev.	0.3

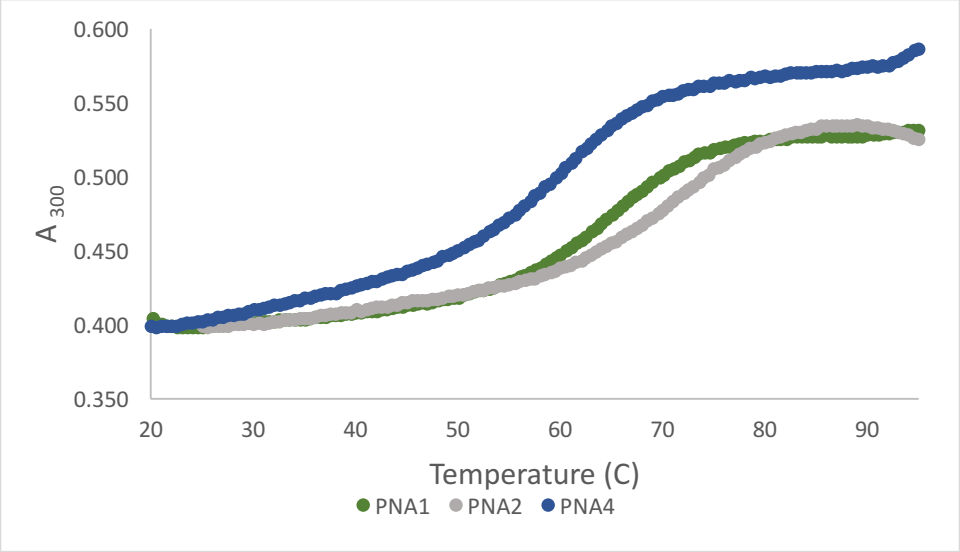

Figure S36. UV-melting at 300 nm of **PNA1** (M), **PNA2** (T), and **PNA4** (J) against matched dsRNA.

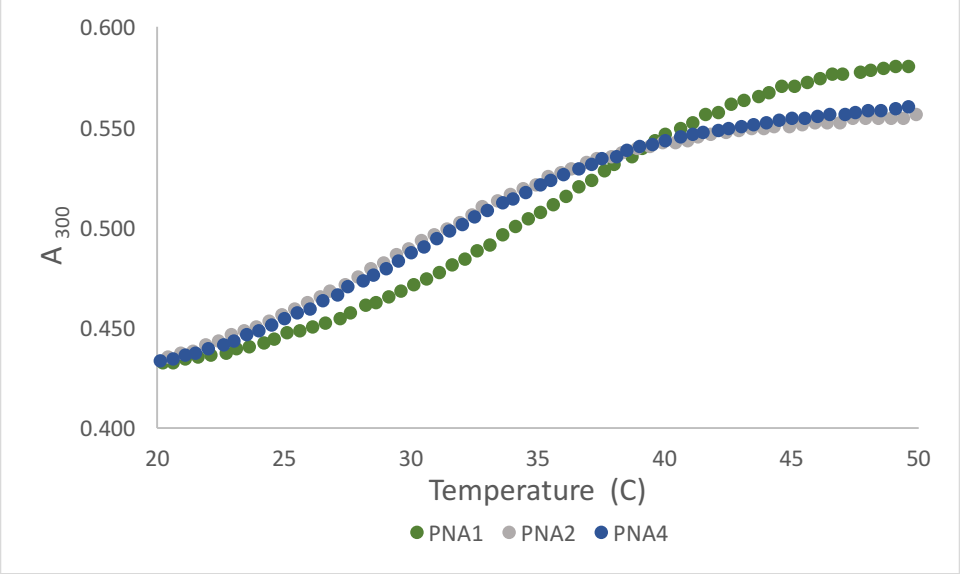

Figure S37. UV-melting at 300 nm of **PNA1** (M), **PNA2** (T), and **PNA4** (J) against matched dsDNA.

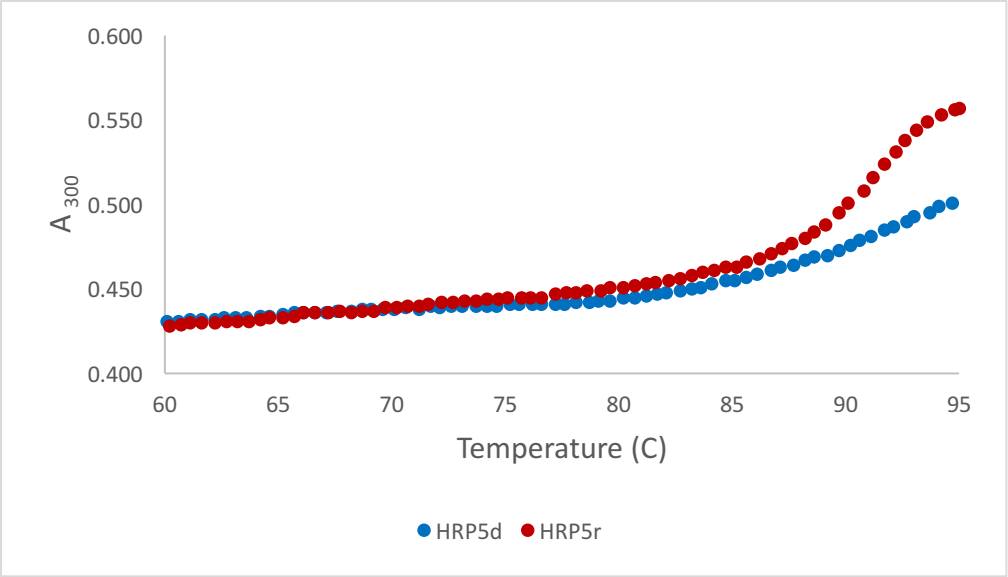

Figure S38. UV-melting at 300 nm of PNA5 against matched dsDNA and dsRNA.

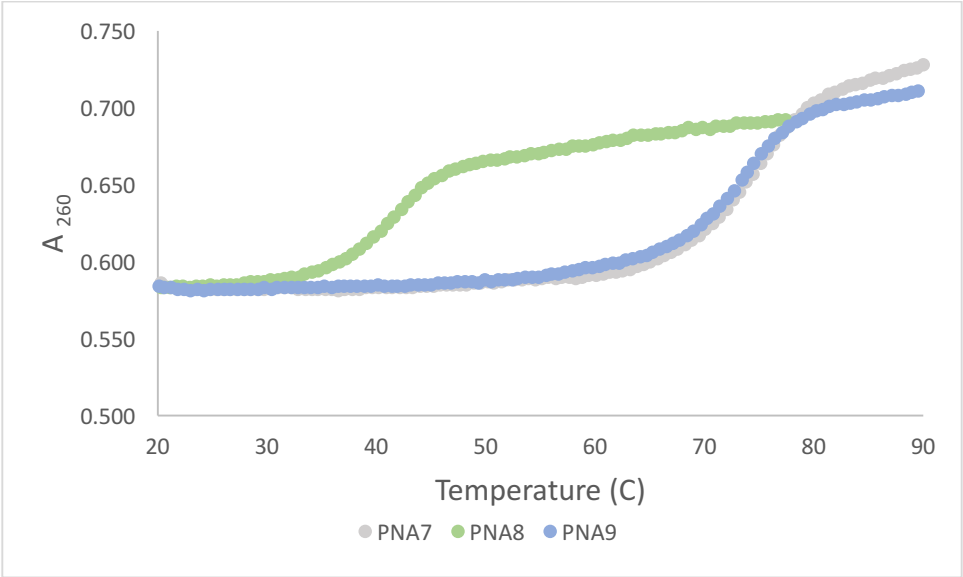

Figure S39. UV-melting at 260 nm of **PNA7** (C), **PNA8** (J), and **PNA9** (J) against matched ssRNA1.

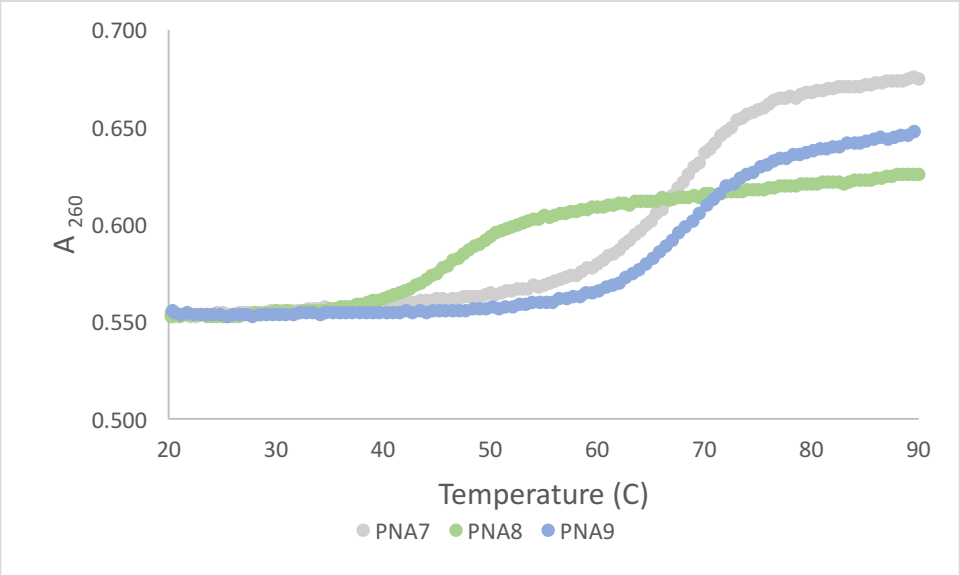

Figure S40. UV-melting at 260 nm of **PNA7** (C), **PNA8** (M), and **PNA9** (J) against matched ssDNA1.

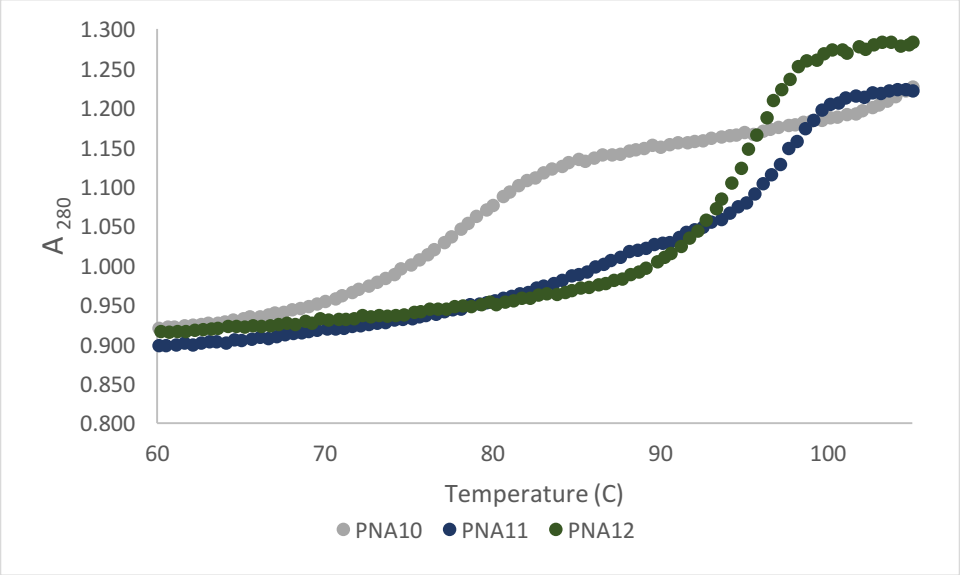

Figure S41. UV-melting at 280nm of **PNA10**, **PNA11**, and **PNA12** against ssDNA5.