Supplementary Information:

Specific Uptake and Interactions of Peptide Nucleic Acid Derivative with Biomimetic Membranes

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Figure S1. $\Delta f$-t plot showing the overtone effect for PNA1 (5 $\mu$M) uptake on DMPC/cholesterol membrane. Time (t) $\geq$ 50 min corresponds to final PBS rinse.

Figure S2. $\Delta f$-t plot showing the overtone effect for PNA2 (5 $\mu$M) uptake on DMPC/cholesterol membrane. Time (t) $\geq$ 50 min corresponds to final PBS rinse.
Figure S3. Δf-t plot showing the overtone effect for PNA3 (10 μM) uptake on DMPC/cholesterol membrane. Time (t) ≥ 50 min corresponds to final PBS rinse.

Figure S4. Δf-t plot showing the overtone effect for PNA4 (10 μM) uptake on DMPC/cholesterol membrane. Time (t) ≥ 50 min corresponds to final PBS rinse.
Figure S5. $\Delta f$-t plot showing effect of PNA1 concentrations (1-10 $\mu$M) on its interaction with DMPC/DMPG (4:1) lipid membrane. Time (t) ≥ 50 min corresponds to final PBS rinse.

Figure S6. Energy dissipation ($\Delta D$) vs. frequency ($\Delta f$) dependence of PNA1 activity on DMPC/DMPG (4:1) membrane. The x and y-axis represent $\Delta f$ and $\Delta D$ ($10^6$) values, respectively. The final buffer rinse is not shown.
Figure S7. Energy dissipation (ΔD) vs. frequency (Δf) dependence of PNA3 activity on DMPC/DMPG (4:1) membrane. The x and y-axis represent Δf and ΔD (10^-6) values, respectively. The final buffer rinse is not shown.

Figure S8. Energy dissipation (ΔD) vs. frequency (Δf) dependence of PNA4 activity on DMPC/DMPG (4:1) membrane. The x and y-axis represent Δf and ΔD (10^-6) values, respectively. The final buffer rinse is not shown.
Figure S9. Energy dissipation (ΔD) vs. frequency (Δf) dependence of PNA1 activity on neat DMPC membrane. The x and y-axis represent Δf and ΔD (10⁻⁶) values, respectively. The final buffer rinse is not shown.

Figure S10. Energy dissipation (ΔD) vs. frequency (Δf) dependence of PNA2 activity on neat DMPC membrane. The x and y-axis represent Δf and ΔD (10⁻⁶) values, respectively. The final buffer rinse is not shown.
Figure S11. Energy dissipation (ΔD) vs. frequency (Δf) dependence of PNA3 activity on neat DMPC membrane. The x and y-axis represent Δf and ΔD (10⁻⁶) values, respectively. The final buffer rinse is not shown.

Figure S12. Energy dissipation (ΔD) vs. frequency (Δf) dependence of PNA4 activity on neat DMPC membrane. The x and y-axis represent Δf and ΔD (10⁻⁶) values, respectively. The final buffer rinse is not shown.