Supporting Information

Electrochemical Detection of Single Phospholipid Vesicle Collisions at a Pt Ultramicroelectrode

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Figure S1. Size distribution of DMPC vesicle solution prepared in pure water (1) and redox DMPC vesicles solution prepared in 0.5 M K₄Fe(CN)₆ aqueous solution (2) from DLS measurement.
Figure S2. Size distribution and vesicle concentration of DMPC vesicle solution prepared in pure water (1) and redox DMPC vesicle solution prepared in 0.5 M K₄Fe(CN)₆ aqueous solution (2) diluted by 1000 from NTA measurement.
Figure S3. Cyclic voltammogram recorded at 0.1 V s⁻¹ on 1.7 μm Pt UME in 0.2 M K₄Fe(CN)₆ aqueous solution.
Figure S4. The i-t curve for collision experiments by vesicles blocking method recorded at +0.6 V vs. Ag/AgCl on 2.0 μm Pt UME in 2 mL of 0.2 M K₃Fe(CN)₆ aqueous solution in the absence (black) and in the presence (blue) of 5 μL redox DMPC vesicles aqueous solution.
Figure S5. The i-t curve for collision experiments by vesicle reactor method recorded at +0.6 V vs. Ag/AgCl on 2.0 µm Pt UME in 2 mL of 0.1 M KPB aqueous solution at pH 7 in the absence (black) and in the presence (blue) of 5 µL DMPC vesicles aqueous solution and 0.23 mM TX-100 surfactant.
Figure S6. (a) The collisions frequency determined from i-t curves of collision experiments by vesicles reactor method recorded at +0.6 V vs. Ag/AgCl on 2.0 μm Pt UME in 2 mL of 0.1 M KPB aqueous solution at pH 7 in the presence of 5 μL redox DMPC vesicles aqueous
solution at $t = 1$ min (black) and $t = 15$ min (blue) after addition of small TX100 concentrations every 20 minutes. (b) The collisions frequency determined from i-t curves of collision experiments by vesicles reactor method recorded at +0.6 V vs. Ag/AgCl on 1.7 µm Pt UME in 2 mL of 0.1 M KPB aqueous solution at pH 7 in the presence of 20 µL redox DMPC vesicles aqueous solution after addition of small TX100 concentrations every 5 minutes.