Supporting Information

Design of the PG-surfactants, bearing Polyacrylamide Polymer Chain, and application to the method to solubilize membrane proteins in a surfactant-free buffer.

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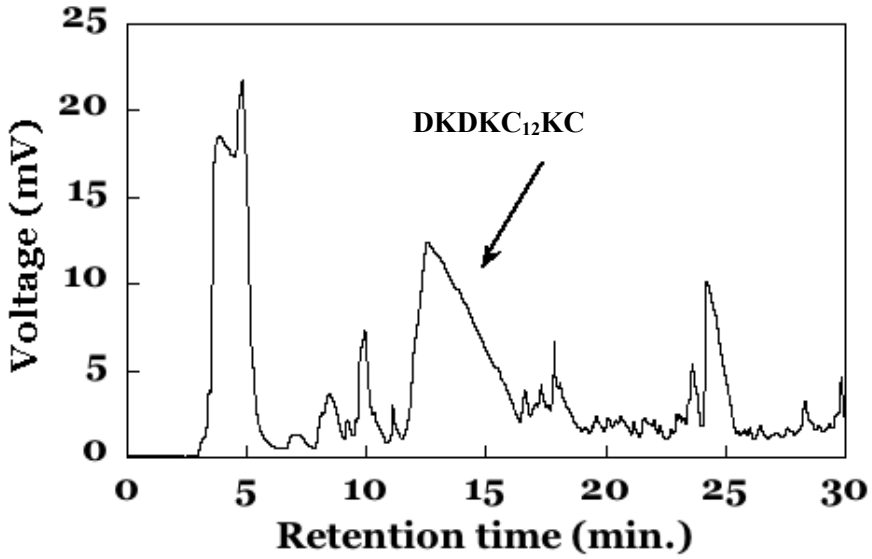
(a)



(b)

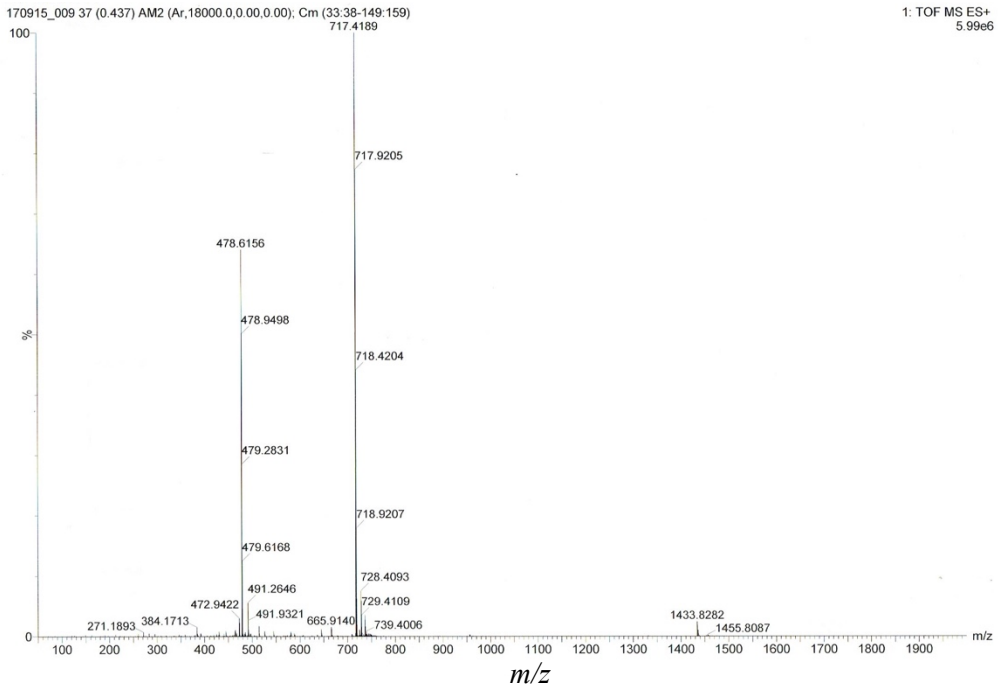


Figure S1. Purification of PG-surfactant, **DKDKC$_{12}$KC.** (a) RP-HPLC chromatogram, eluent; linear gradient of MeCN (+ 0.1 vol% TFA)/H_2O (+ 0.1 vol% TFA) from 40/60 to 60/40 for 30 min. (b) High resolution ESI-TOF Mass analysis of **DKDKC$_{12}$KC**.

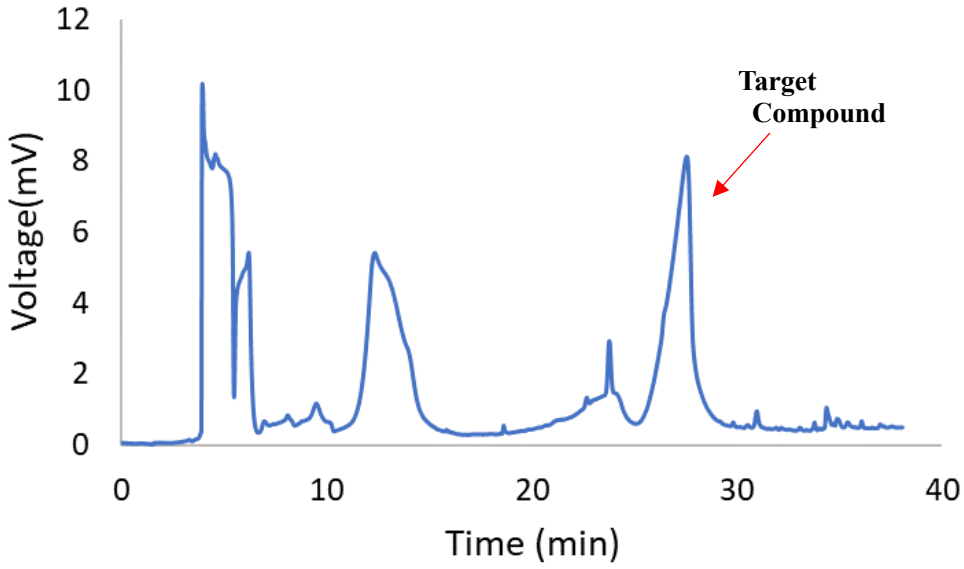


Figure S2. Purification of PA-modified PG-surfactant, **DKDKC$_{12}$K-PA$_5$**. Eluent; linear gradient of MeCN (+ 0.1 vol% TFA)/H_2O (+ 0.1 vol% TFA) from 10/90 to 60/40 for 30 min.

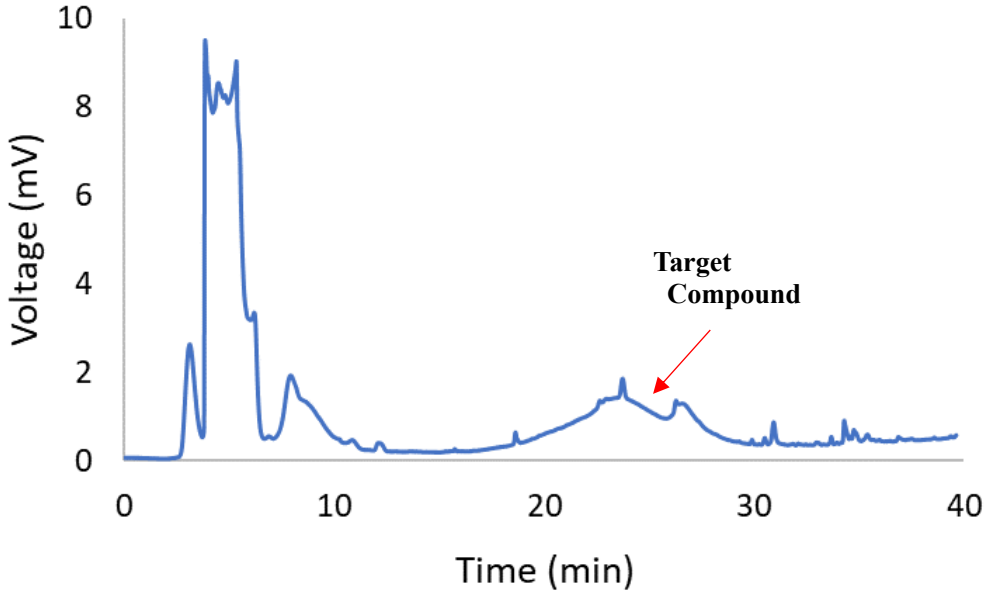


Figure S3. Purification of PA-modified PG-surfactant, **DKDKC$_{12}$K-PA$_7$**. Eluent; linear gradient of MeCN (+ 0.1 vol% TFA)/H_2O (+ 0.1 vol% TFA) from 10/90 to 60/40 for 30 min.

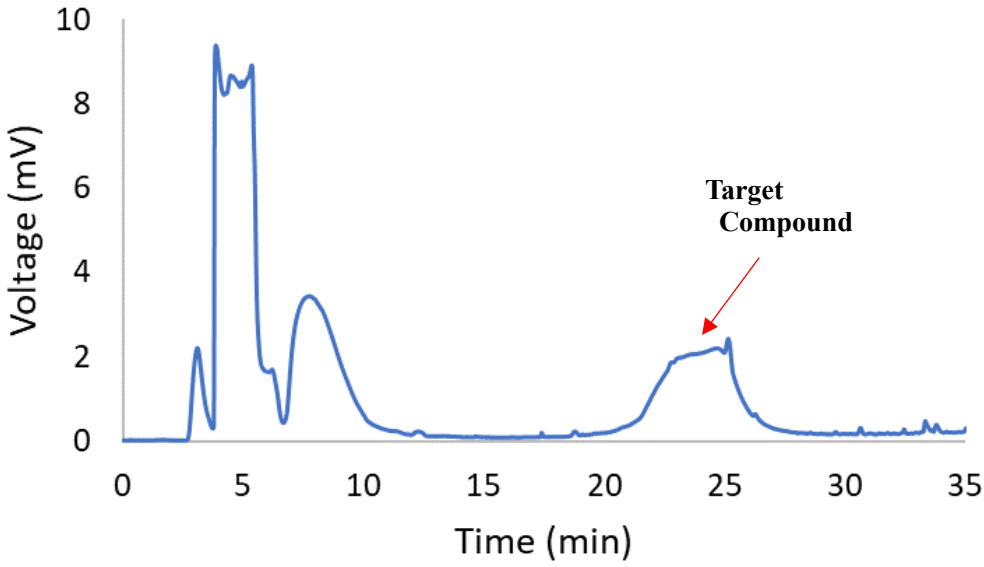


Figure S4. Purification of PA-modified PG-surfactant, **DKDKC$_{12}$K-PA$_{18}$**. Eluent; linear gradient of MeCN (+ 0.1 vol% TFA)/H_2O (+ 0.1 vol% TFA) from 10/90 to 60/40 for 30 min.

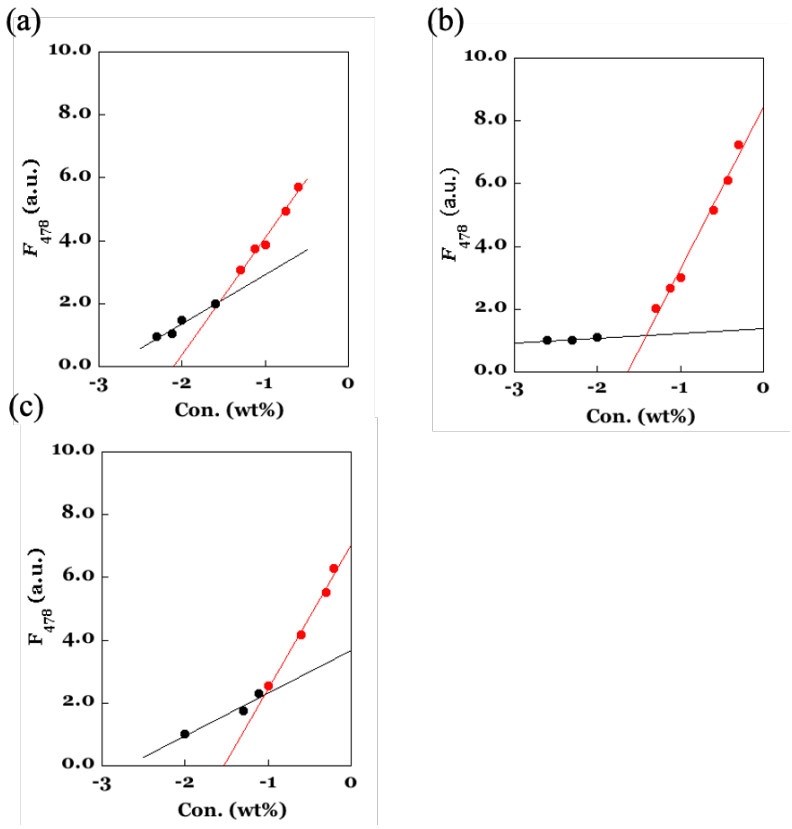


Figure S5. Change in F_{478} of 8-anilino-1-naphthalene sulfonate (ANS) in accordance with increased concentration of **DKDKC$_{12}$K-PA$_5$** (a), **DKDKC$_{12}$K-PA$_7$** (b), and **DKDKC$_{12}$K-PA$_{18}$** (c)). [PG-surfactant] = 0–1 mM, [ANS] = 10 μM, 50 mM phosphate buffer, 25 °C.