Endowing Catanionic Surfactant Vesicles with Dual Responsive Abilities via a Noncovalent Strategy: Introduction of a Responser, Sodium Cholate

Lingxiang Jiang, Ke Wang, Fuyou Ke, Dehai Liang and Jianbin Huang*

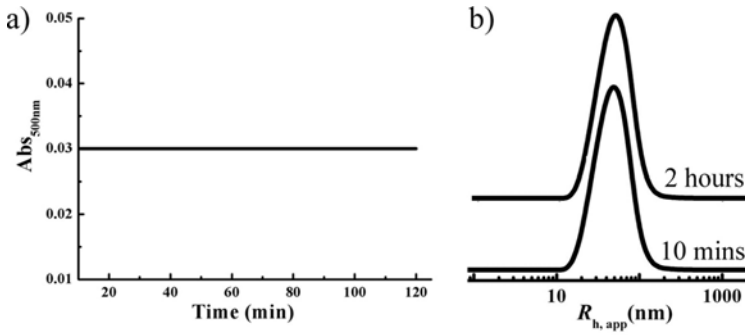

Fig. S1 Time stability of the DEAB/SDS/SC mixed vesicles at 60 ^{o}C and pH 6.8 for two hours.

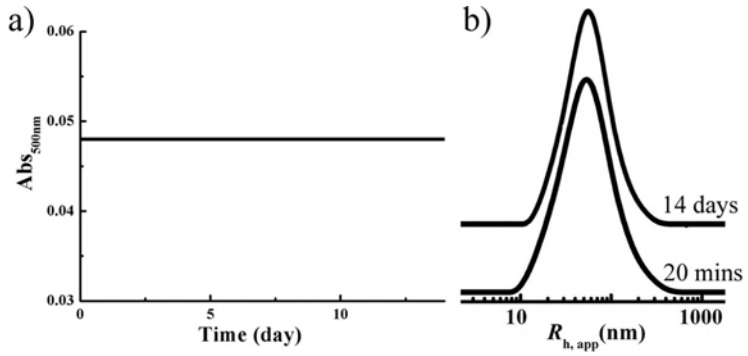

Fig. S2 Time stability of the DEAB/SDS/SC mixed vesicles at pH 3.4 and 25 ^{o}C for two weeks.

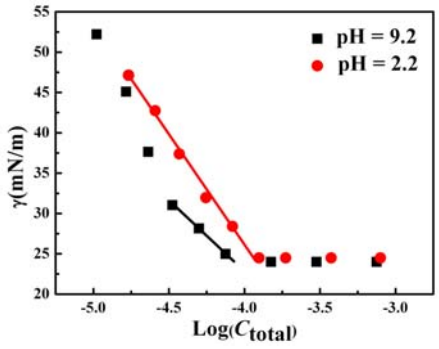

Fig. S3 Surface tension curves for DEAB/SDS/SC (molar ratio 3/1/2, 25 ^{o}C) systems at pH 9.2 or 2.2. Two inflecting points are observed in the surface tension curve at pH 9.2, which may arise out from the asynchronous adsorption of SDS and SC. Because both hydrophobicity and electrostatic attraction to

DEAB are weaker for SC than for SDS, the adsorption of SC to the air-water interface may be weaker than that of SDS. As a result, the adsorption of SC does not happen until the first transition point. Therefore, the average headgroup area is obtained from the slope of the curve between the first and second inflecting points.

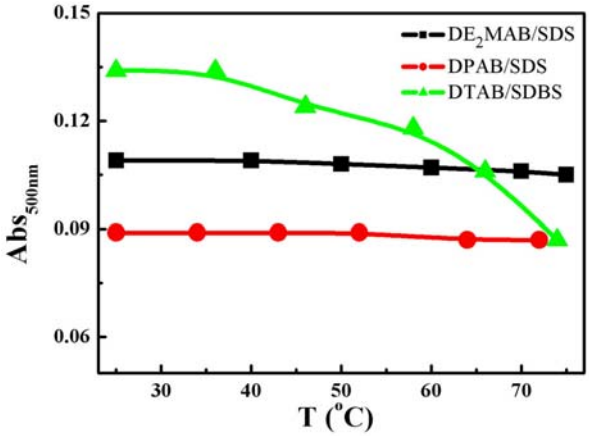

Fig. S4 Different temperature-dependences for three kinds of catanionic surfactant vesicles (without SC).