

Electronic Supporting Information

3,3'-Dioctadecyloxacarbocyanine Perchlorate (DiO) as a Fluorogenic Probe for Measurement of Critical Micelle Concentration

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Table of Contents

Figure S1. Chemical Supplier Information	S2
Figure S2. Examples of Failed Trials with NR	S3
Figure S3. Triton X-100 CMC Curves	S4
Figure S4. Tween 20 CMC Curves	S4
Figure S5. Tween 80 CMC Curves	S4
Figure S6. Brij 58 CMC Curves	S5
Figure S7. SDS CMC Curves	S5
Figure S8. NaGC CMC Curves	S5
Figure S9. NaTC CMC Curves	S6
Figure S10. DTAB CMC Curves	S6
Figure S11. CTAB CMC Curves	S6
Figure S12. CHAPS CMC Curves	S7
Figure S13. Empigen BB CMC Curves	S7
Figure S14. Zwittergent 3-14 CMC Curves	S7

Figure S1. Chemical Supplier Information

Chemical	Supplier	Catalog Number	Purity/Composition
Nile Red	Acros Organics	415711000	99%
3,3'-Dioctadecyloxacarbocyanine Perchlorate (DiO)	Sigma Aldrich	D4292	≥98%
Triton X-100	CalBioChem	648466	-
Tween 20	Sigma Life Sciences	P1379	47% Lauric acid
Tween 80	Sigma Aldrich	P1754	Oleic acid, ≥58.0%
Brij 58	Aldrich	P5884	-
Sodium dodecyl sulfate (SDS)	Research Products International Group	L22010	≥99%
Sodium glycocholate (NaGC)	Sigma Aldrich	G7132	≥97%
Sodium taurocholate (NaTC)	Chem Impex	00511	≥97%
Dodecytrimethylammonium bromide (DTAB)	Chem Impex	27309	≥99%
Cetyl trimethylammonium bromide (CTAB)	Sigma Aldrich	H5882	≥98%
CHAPS	Sigma Aldrich	C3023	98%
Empigen BB	Sigma Aldrich	45165	~35% active substance in H ₂ O
Zwittergent 3-14	Sigma Aldrich	T7763	≥99%

Figure S2. Examples of failed trials with NR: (a) A triplicate trial with Brij 58. (b) A triplicate trial with DTAB. The sigmoidal fit produced a CMC for one of the trials. (c) A triplicate trial for Tween 80. In all graphs, the red and blue points represent concentrations below and above the literature CMC value, respectively.

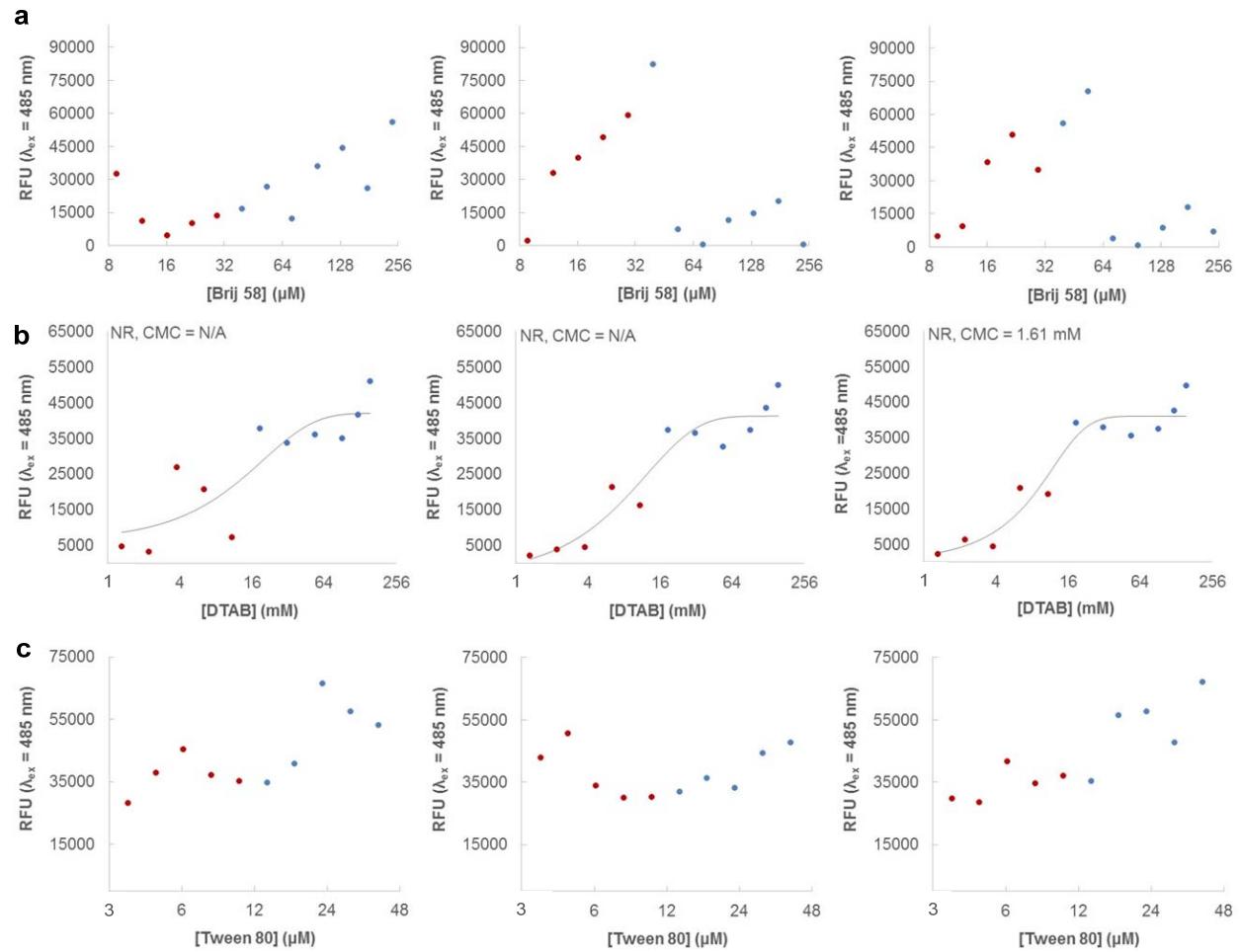


Figure S3. Triton X-100 CMC curves using (a) NR and (b) DiO. The error bars represent the average of three trials.

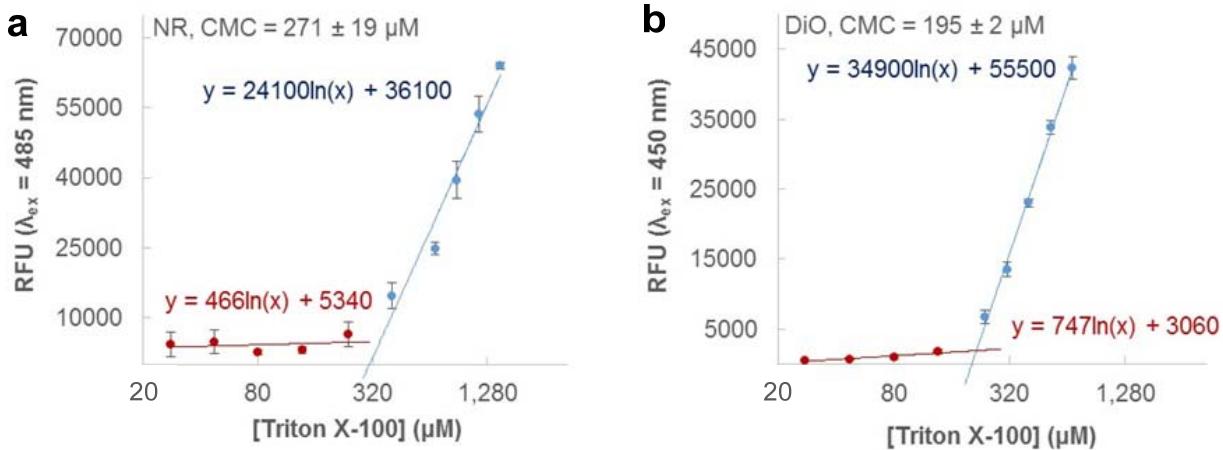


Figure S4. Tween 20 CMC curves using (a) NR and (b) DiO. The error bars represent the average of three trials.

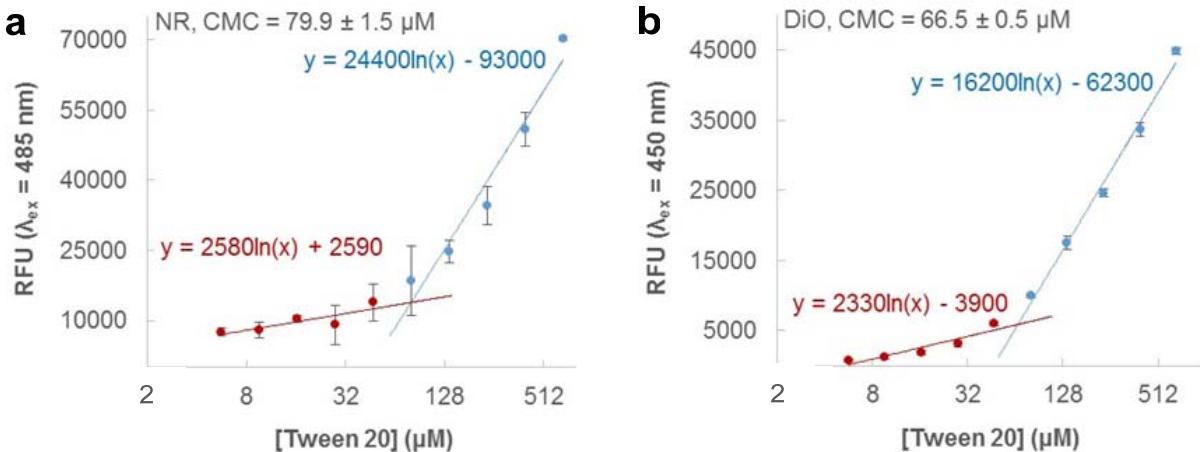


Figure S5. Tween 80 CMC curves using (a) NR and (b) DiO. The error bars represent the average of three trials.

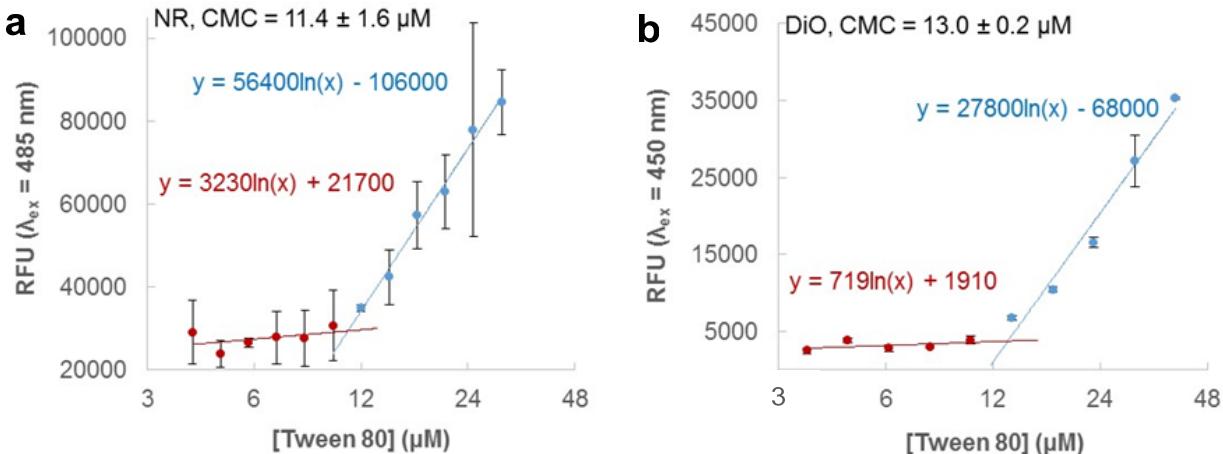


Figure S6. Brij 58 CMC curves using (a) NR and (b) DiO. The error bars represent the average of three trials.

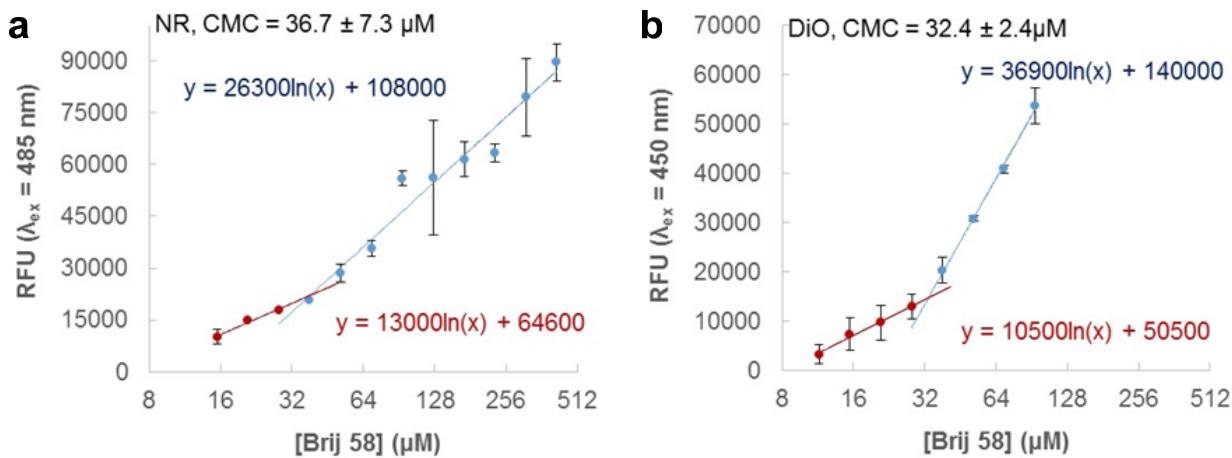


Figure S7. SDS CMC Curves using (a) NR and (b) DiO. The error bars represent the average of three trials.

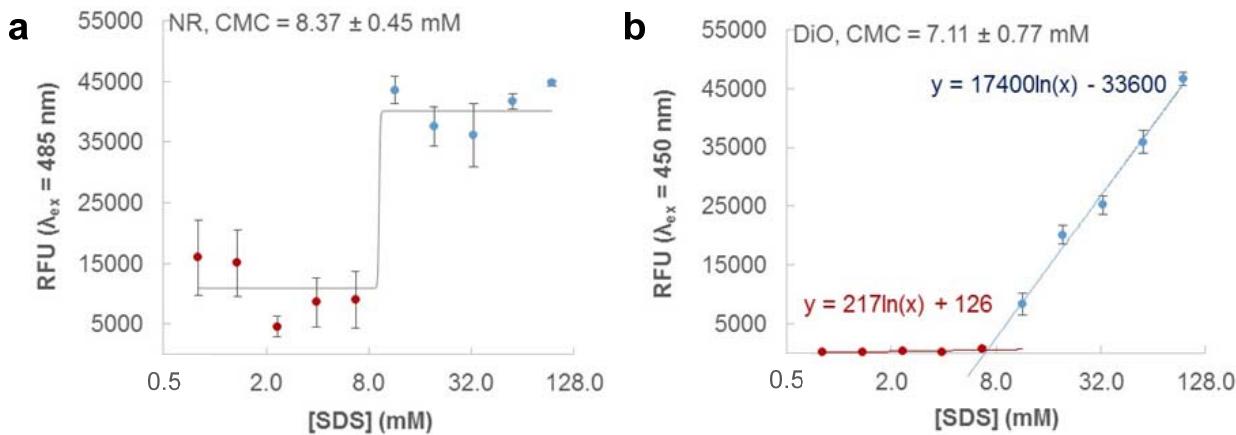


Figure S8. NaGC CMC Curves using (a) NR and (b) DiO. The error bars represent the average of three trials.

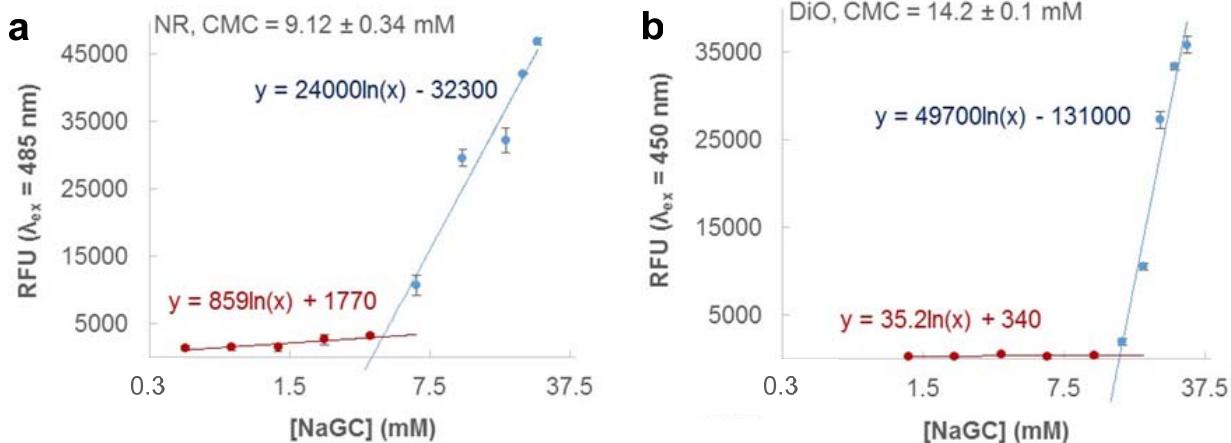


Figure S9. NaTC CMC Curves using (a) NR and (b) DiO. The error bars represent the average of three trials.

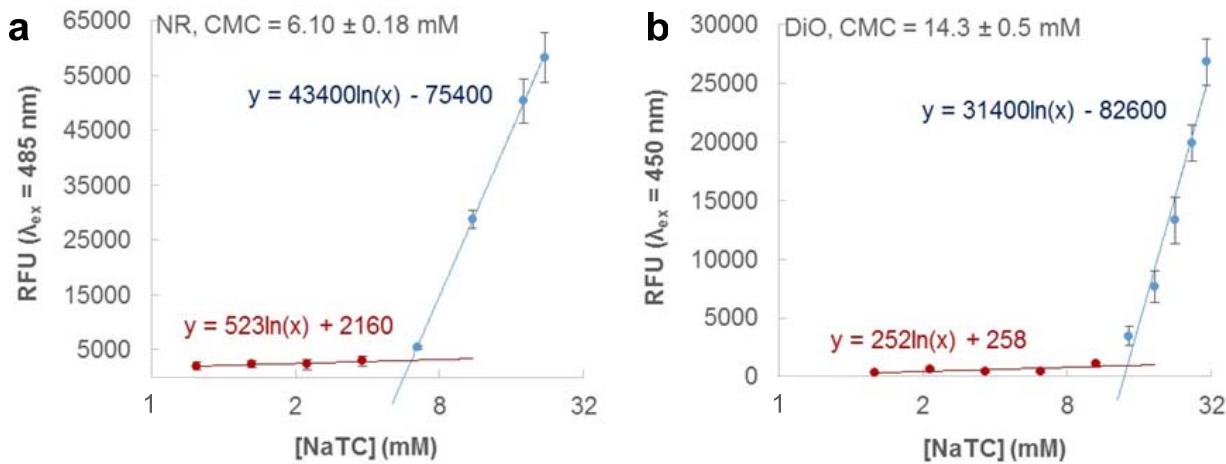


Figure S10. DTAB CMC Curves using (a) NR and (b) DiO. The error bars represent the average of three trials.

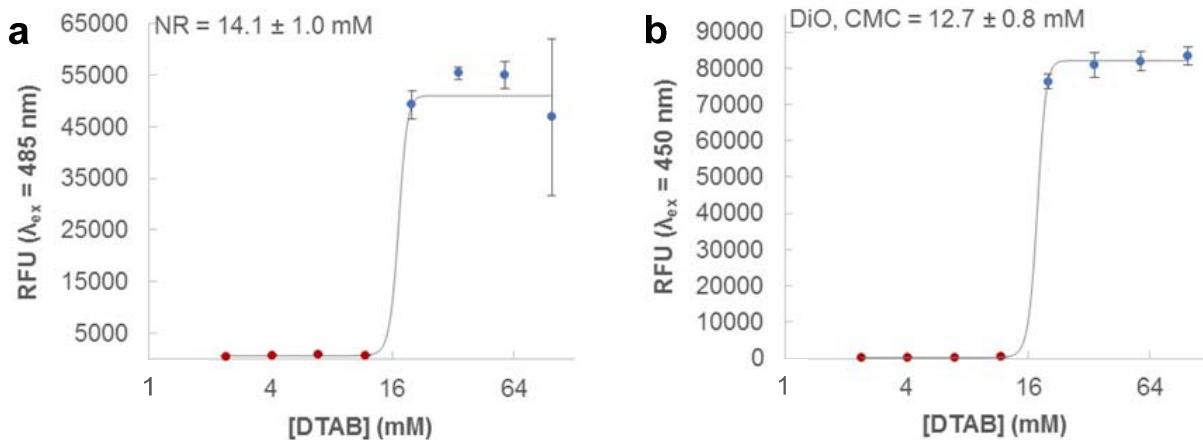


Figure S11. CTAB CMC Curves using (a) NR and (b) DiO. The error bars represent the average of three trials.

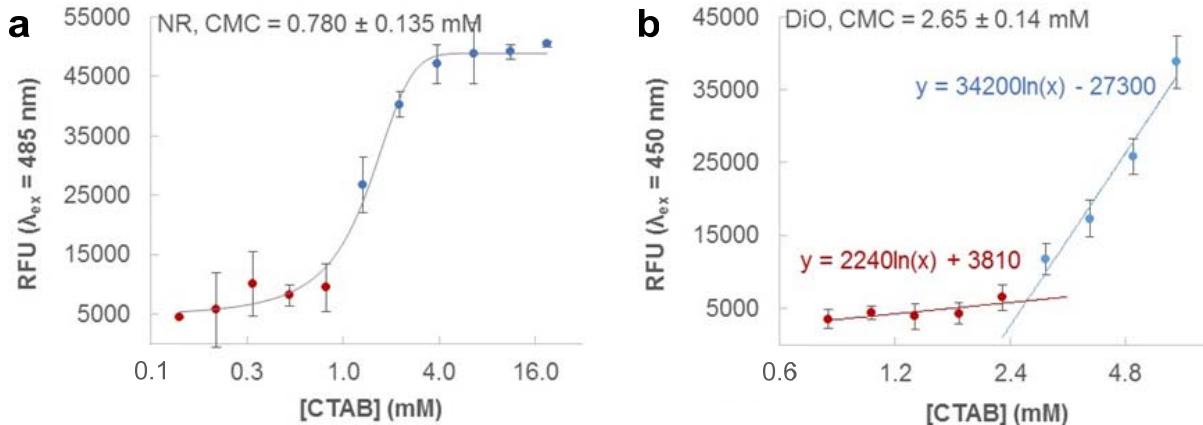


Figure S12. CHAPS CMC Curves using (a) NR and (b) DiO. The error bars represent the average of three trials.

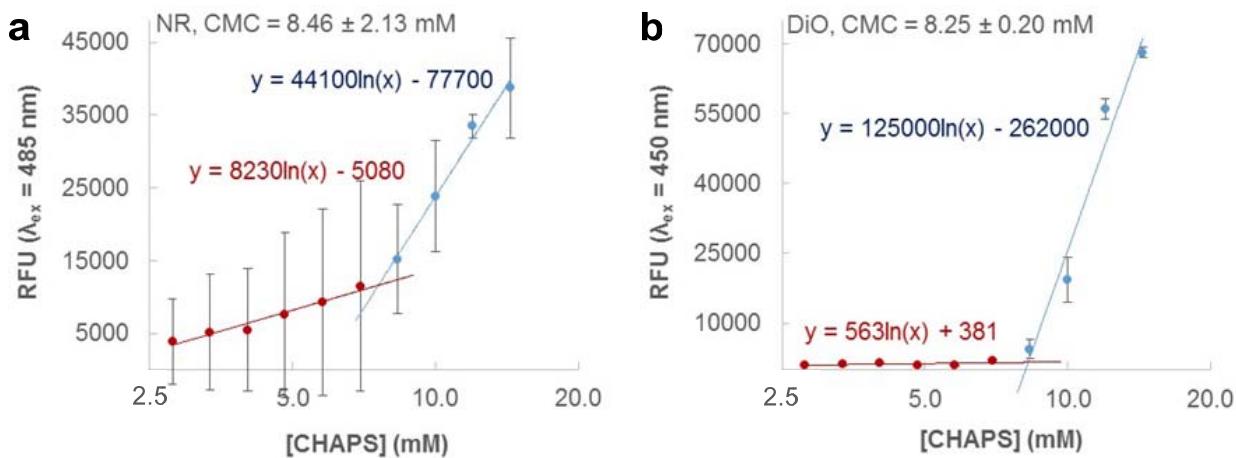


Figure S13. Empigen BB CMC Curves using (a) NR and (b) DiO. The error bars represent the average of three trials.

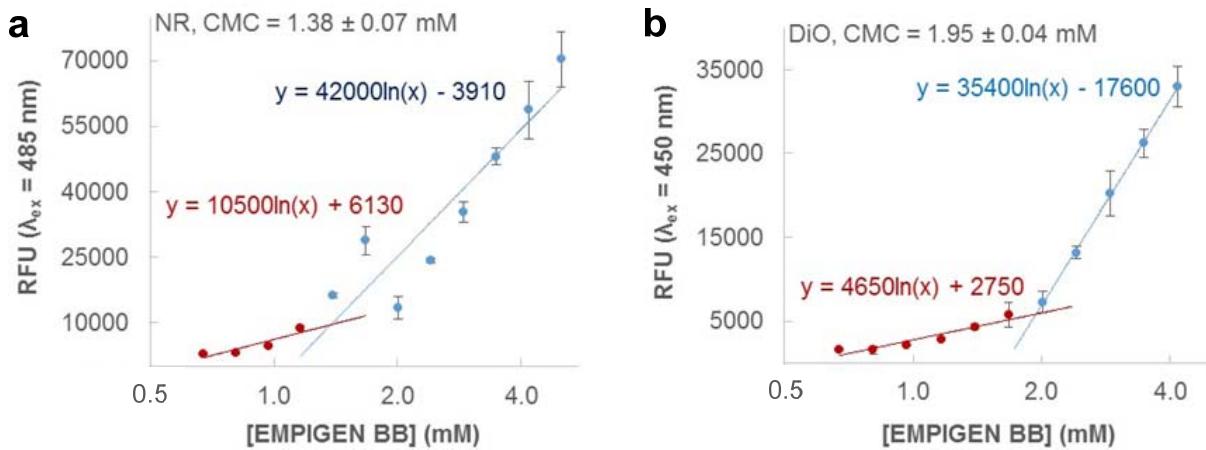


Figure S14. Zwittergent 3-14 CMC Curves using (a) NR and (b) DiO. The error bars represent the average of three trials.

