Lipid composition dictates serum stability of reconstituted high-density lipoproteins: implications for in vivo applications

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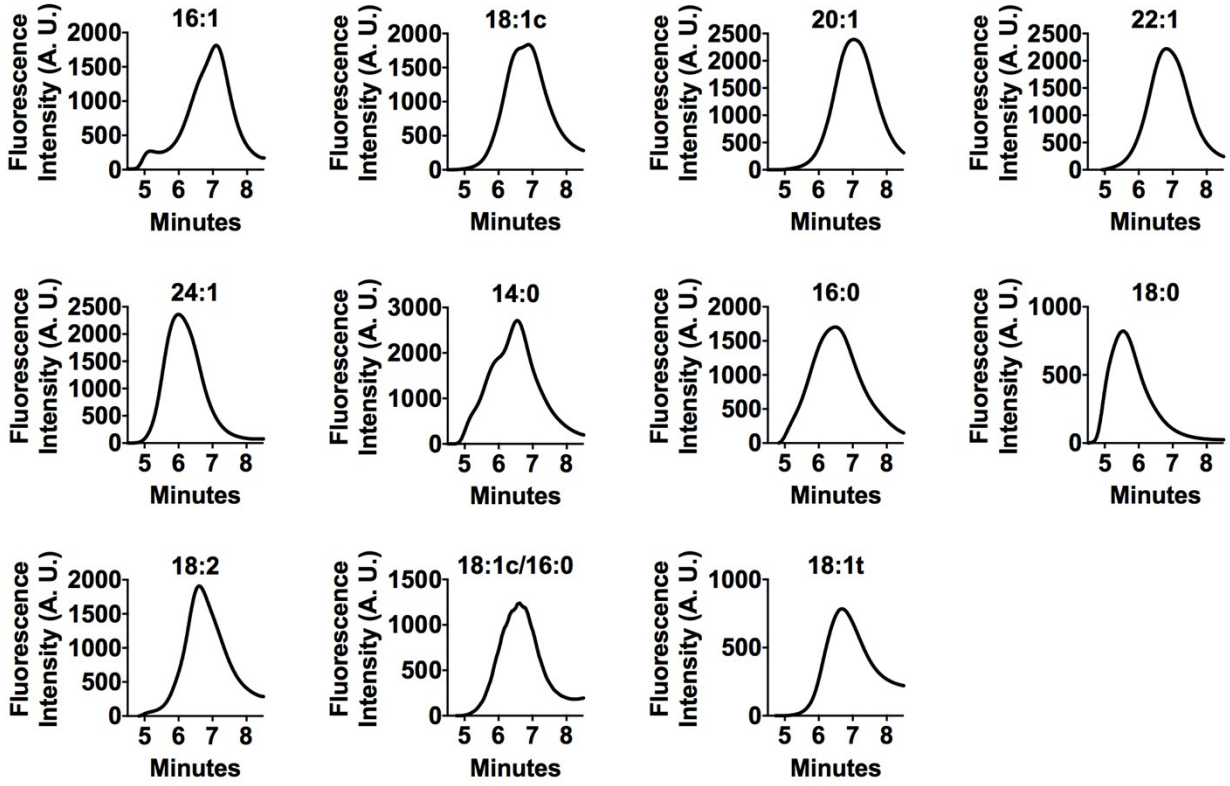
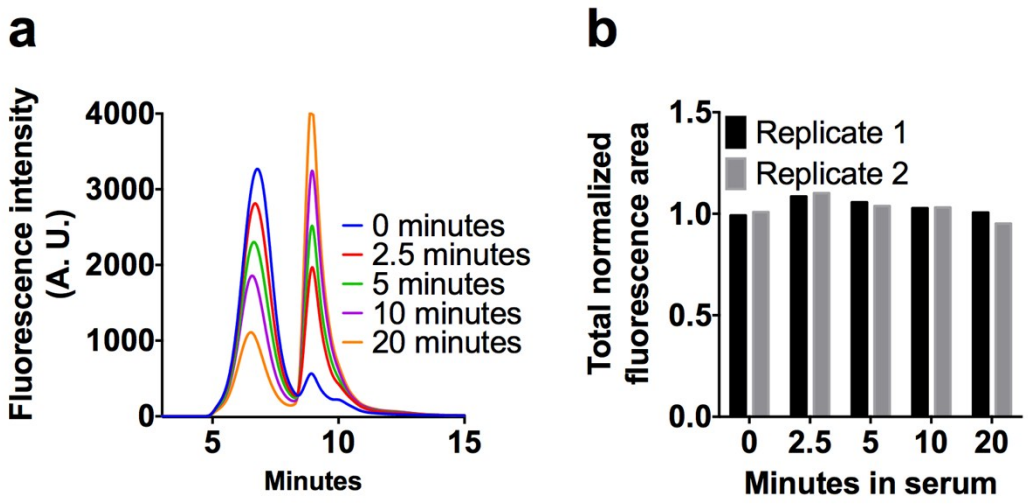
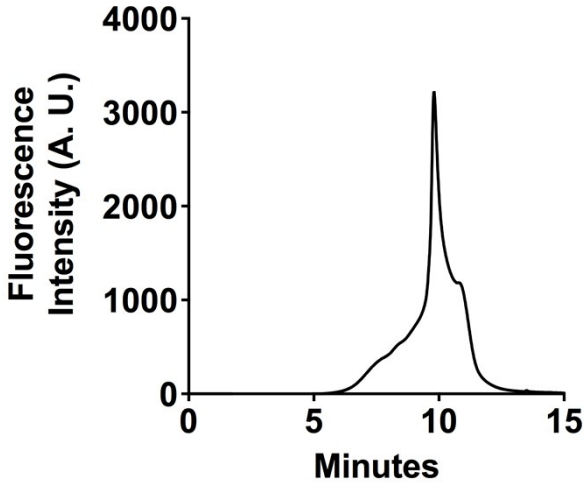
Supporting Information



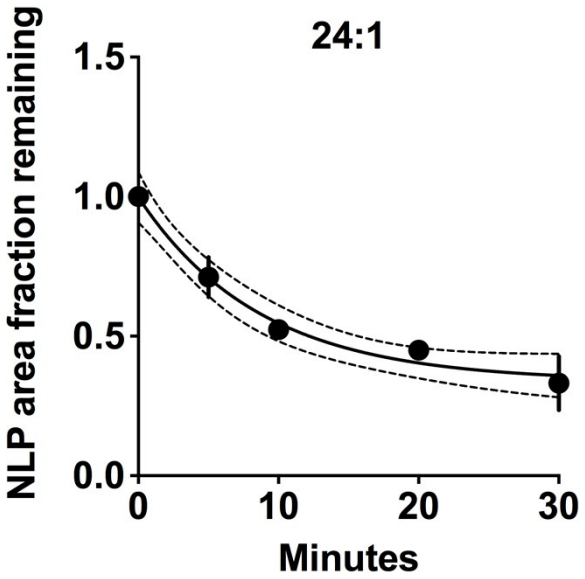
Supporting Information 1. Size-exclusion chromatography traces showing the NLP region of all the NLP samples in PBS.



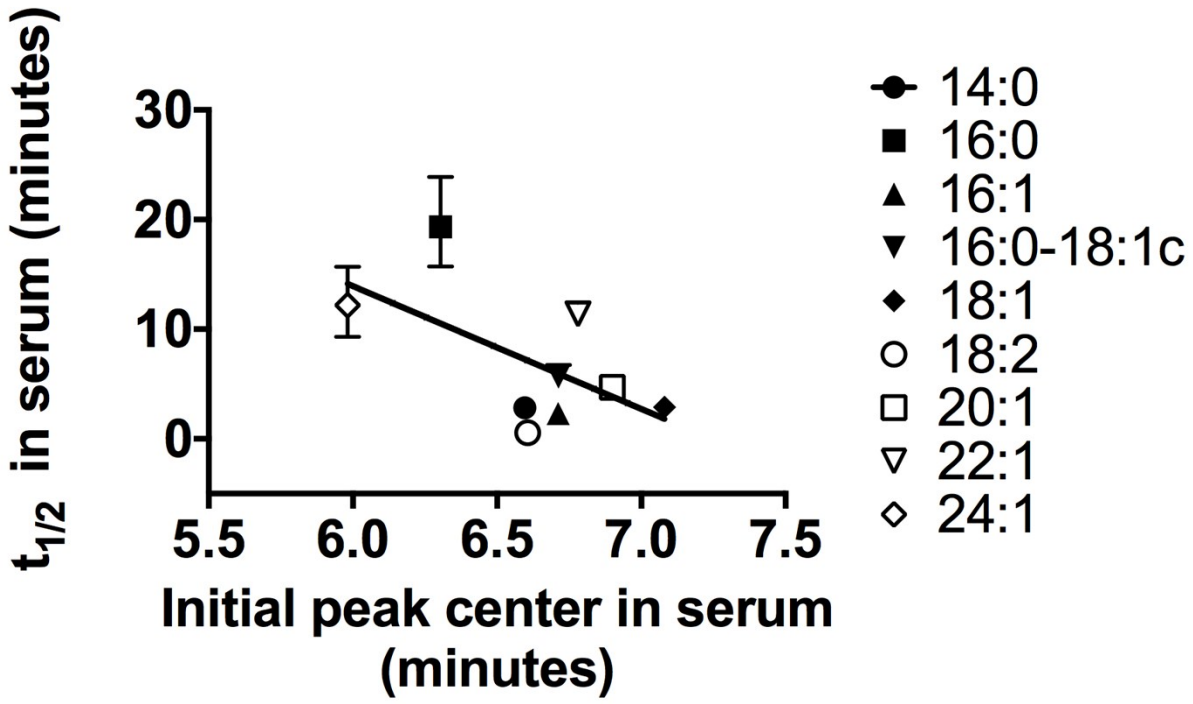
Supporting information 2. a, the full SEC fluorescence chromatogram for the data shown in Figure 1b. b, a bar graph showing the total fluorescence area of the curves in S2a.



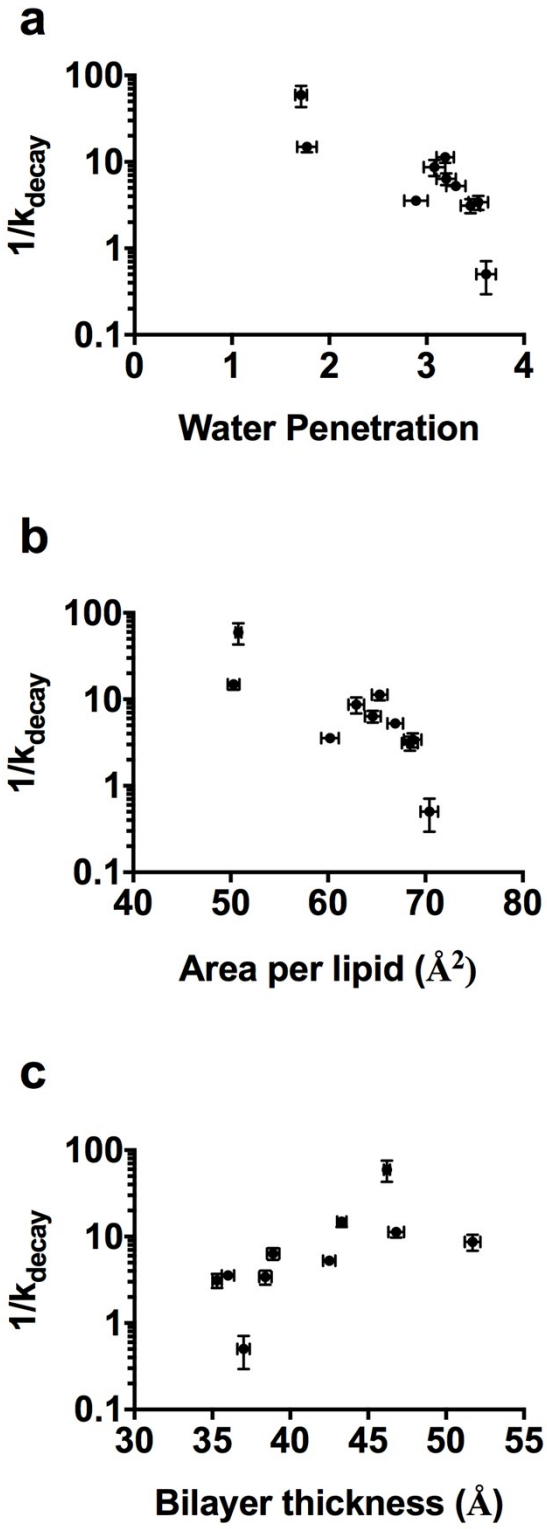
Supporting Information 3. A size-exclusion chromatography trace showing 18:0 NLPs following exposure to 0.25 M sodium cholate solution at 100°C.



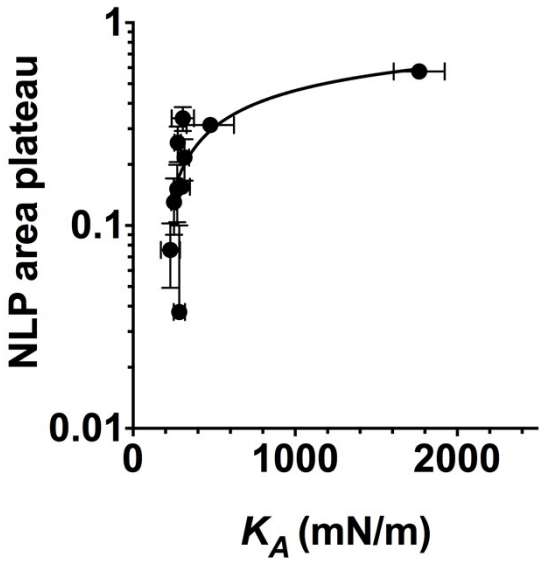
Supporting Information 4. 24:1 NLP peak area fraction change over time in serum, $R^2 = 0.96$.



Supporting information 5. A plot showing the $t_{1/2}$ of NLP formulations in serum plotted against the initial NLP peak center in serum. $R^2 = 0.35$.

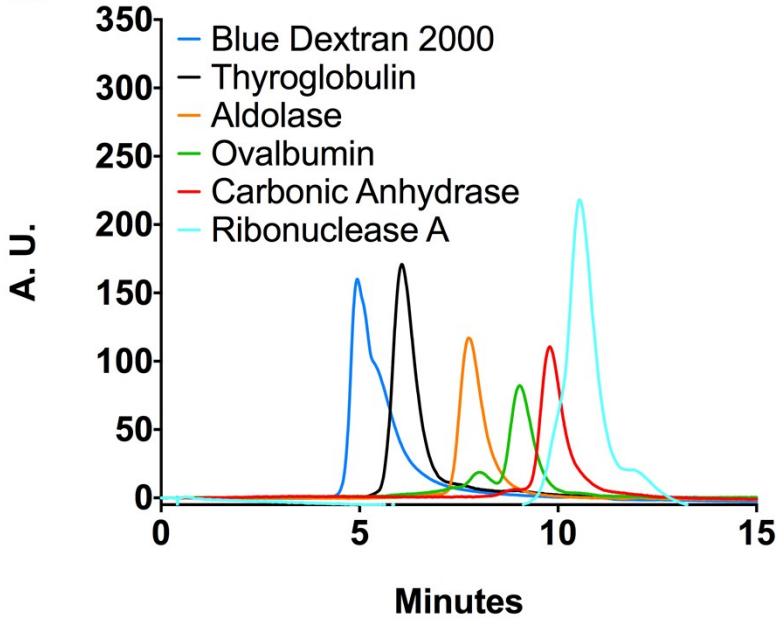


Supporting information 6. a, a plot showing the inverse of the experimentally-derived NLP decay constant as a function of the water penetration into the bilayer. b, a plot showing the inverse of the experimentally-derived NLP decay constant as a function of the area per lipid. c, a plot showing the inverse of the experimentally-derived NLP decay constant as a function of the bilayer thickness.



Supporting information 7. A plot showing the NLP peak area plateau plotted against the bilayer elasticity values obtained through computational simulations, $R^2 = 0.76$.

a



b

Protein	Molecular weight (kDa)	Elution time (m)	Elution volume (ml)	Stokes radius (nm)
Ribonuclease A	13.7	10.6	2.12	1.6
Carbonic anhydrase	29	9.8	1.96	2.1
Ovalbumin	44	9.1	1.82	2.8
Aldolase	158	7.8	1.56	4.8
Thyroglobulin	669	6.1	1.22	8.6
Blue Dextran 2000	2000	5.0	1.00	N/A

Supporting information 8. a, SEC traces of protein standards (measured with UV detector) run on the analytical S200 Increase column used to analyze NLPs in serum solutions. b, a table with showing the corresponding molecular weight and Stokes radius of the protein standards used in a, as well as the measured elution time and volume.