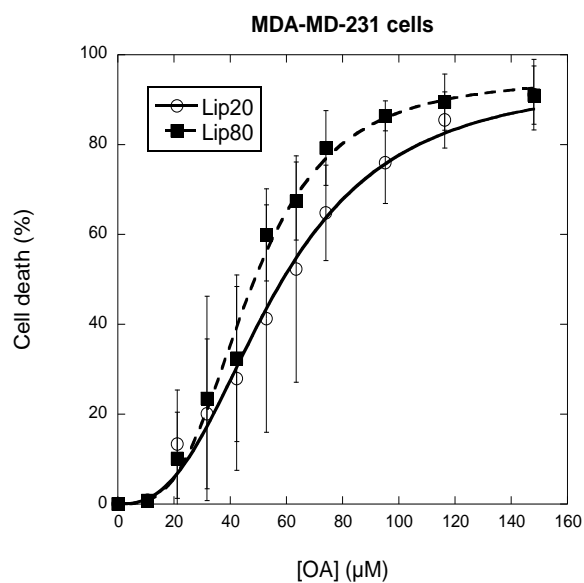


Liprotides kill cancer cells by disrupting the plasma membrane

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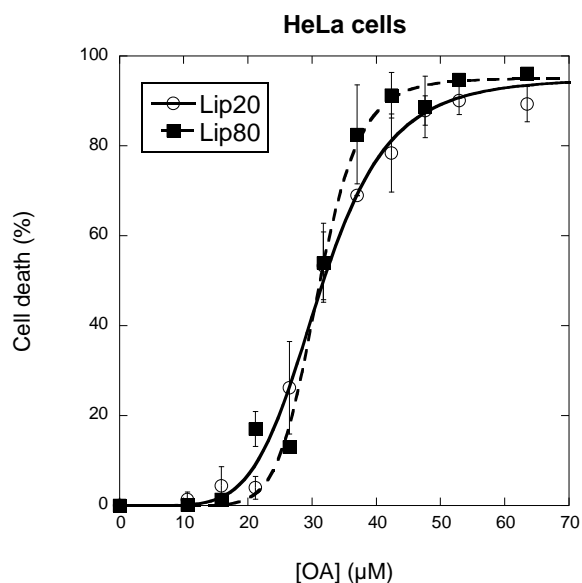
Supplementary Figures and Videos

a



	Lip20	Lip80
CD_0	0 ± 3.4	0 ± 3.3
LD_{50}	47.1 ± 1.1	56.4 ± 1.4
k	3.2 ± 0.2	2.6 ± 0.2
Chisq	90.3	87.6
R^2	0.9932	0.9921

b



	Lip20	Lip80
CD_0	0 ± 2.8	0 ± 5.4
LD_{50}	31.2 ± 0.4	$30.9 \pm$
k	-5.7 ± 0.4	-9.5 ± 1.5
Chisq	71.45	263.5
R^2	0.9979	0.9935

Figure S1: Percentage dead cells plotted versus OA concentration. (a) MDA-MD-231 cells treated with lip20 and lip80. (b) HeLa cells treated with lip20 and lip80. A sigmoidal curve (Eq. 1) was fitted to data for lip20 and lip80 with fitted parameters indicated below the figures.

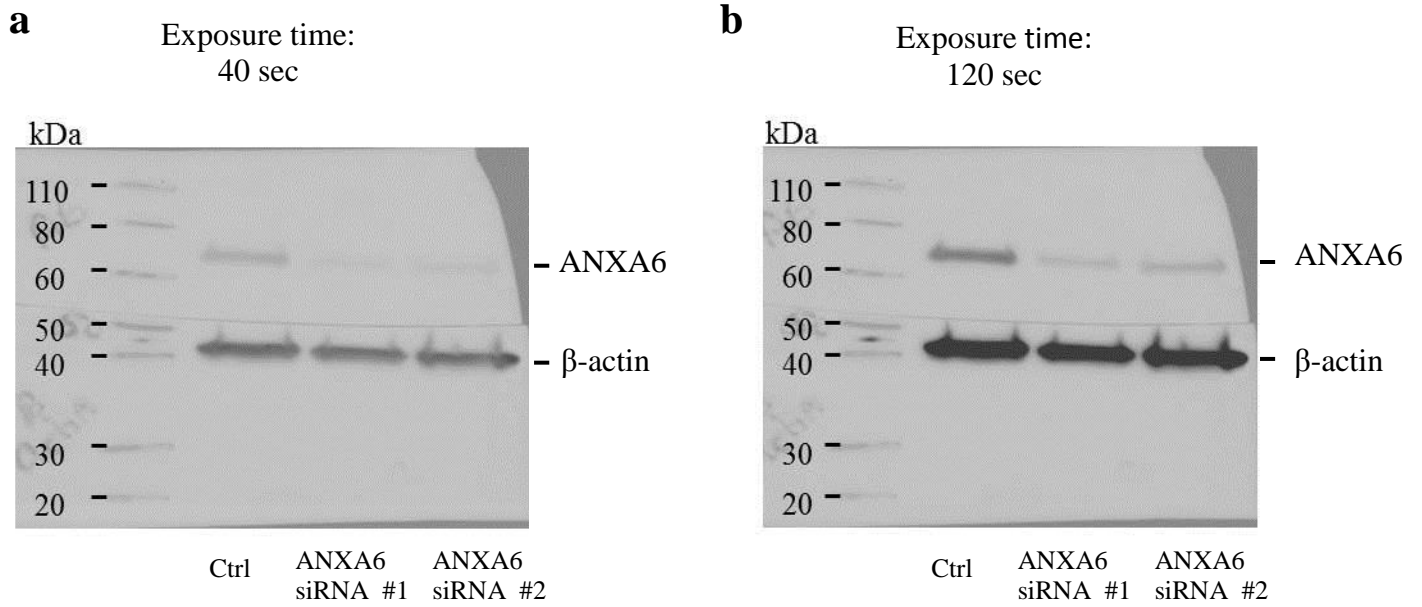


Figure S2: Immunoblot of ANXA6 protein levels from control and siRNA depleted cells. β -actin was used as control for equal loading. (a) Immunoblot achieved by exposure time of 40 sec. (b) Immunoblot achieved by exposure time of 120 sec.

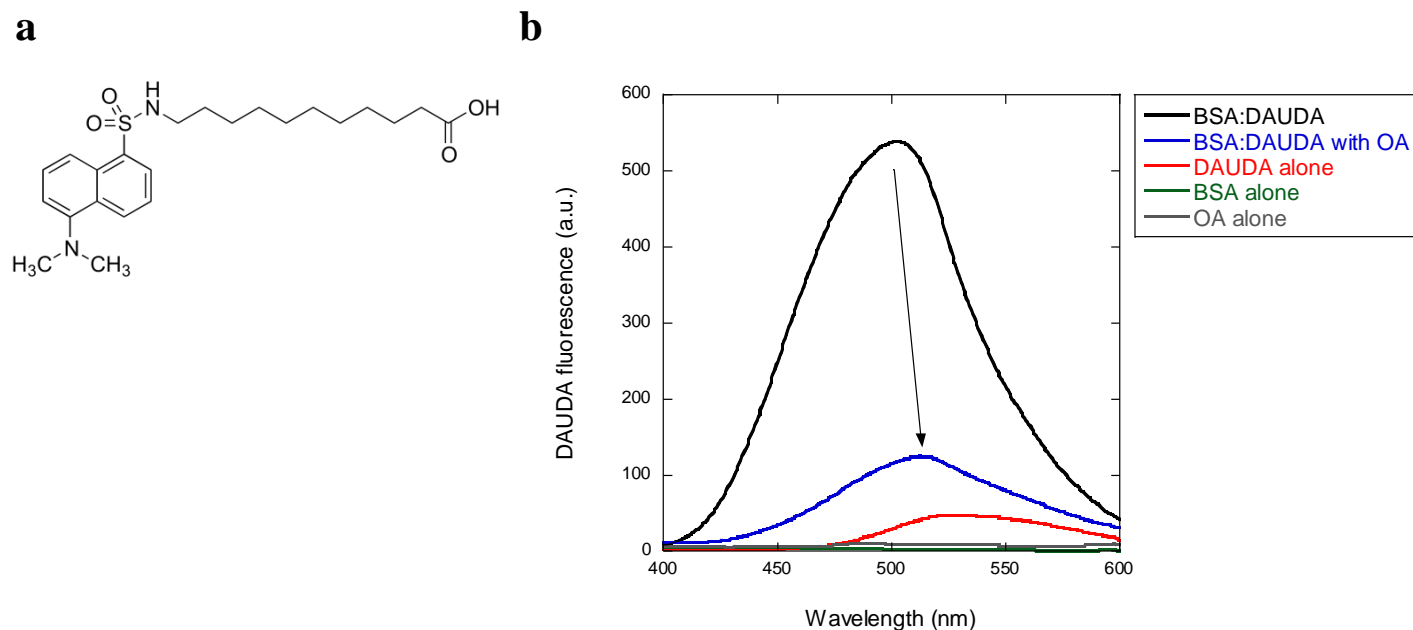


Figure S3: Change in DAUDA fluorescence cause by OA. (a) Structure of DAUDA. (b) DAUDA fluorescence measured for DAUDA in complex with BSA (BSA:DAUDA) and mixed with OA and control measurements with DAUDA alone, BSA alone and OA alone. Adding OA to a sample with BSA:DAUDA decreases and red-shifts the fluorescence of DAUDA.

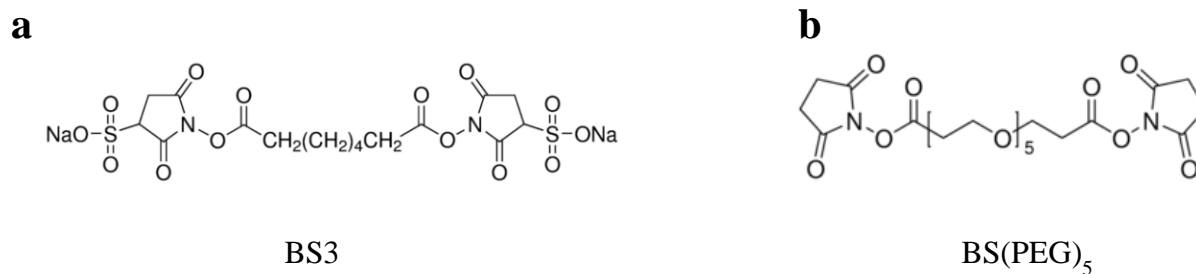


Figure S4: Structure of crosslinkers. (a) BS3. (b) BS(PEG)₅.

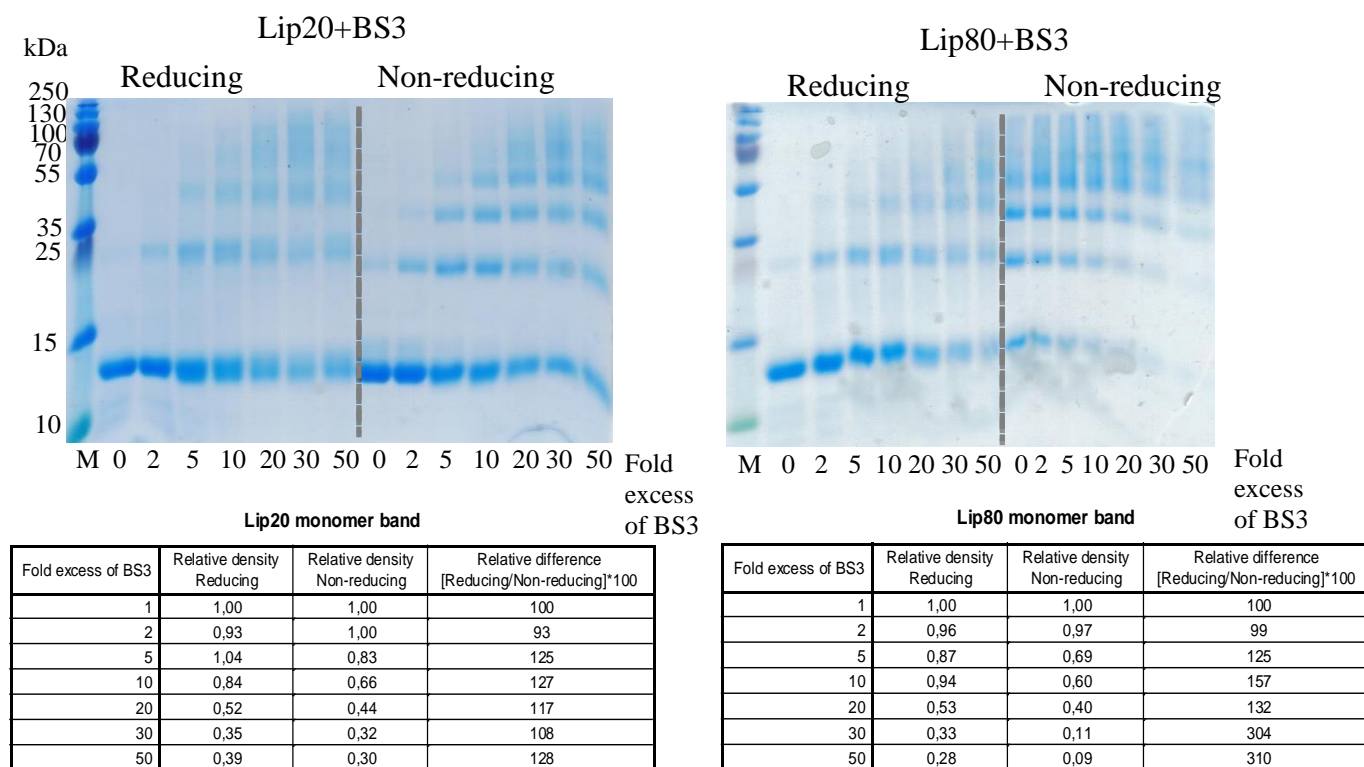
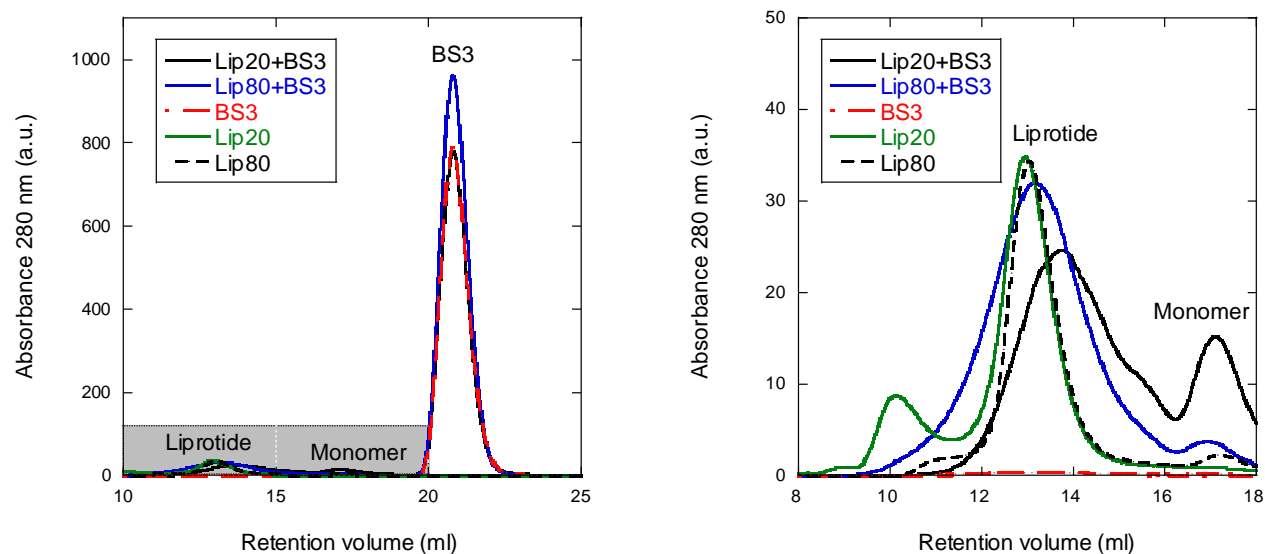
a**b**

Figure S5: Lip20 and lip80 crosslinked with BS3. (a) SDS-PAGE of lip20 and lip80 crosslinked with BS3 in non-reducing and reducing conditions. The relative monomer band density is shown in the table below the figure. (b) SEC chromatogram of lip20 and lip80 crosslinked with BS3 (left) and a close up of the gray box (right).

LEGENDS FOR SUPPLEMENTARY VIDEOS

Video S1 (file name S1.lip20): MCF7 cells treated with 52 μ M lip20 at time 0 min and induced cell death followed by FM1-43 shown in green and impermeable Hoechst in red.

Video S2 (file name S2.lip80): MCF7 cells treated with 52 μ M lip80 at time 0 min and induced cell death followed by FM1-43 shown in green and impermeable Hoechst in red.

Video S3 (file name S3.lip80GFP): MCF7 cells expressing GFP treated with 212 μ M lip80 at time 0 min. GFP is shown in green and impermeable Hoechst in red.

Video S4 (file name S4.lip80-ca): MCF7 cells in media without Ca^{2+} treated with 52 μ M lip80 at time 0 min and induced cell death followed by FM1-43 shown in green and impermeable Hoechst in red.

Video S5 (file name S5.lip80+ca): MCF7 cells in media with Ca^{2+} treated with 52 μ M lip80 at time 0 min and induced cell death followed by FM1-43 shown in green and impermeable Hoechst in red.

Video S6 (file name S6.lip80+ca): MCF7 cells expressing ANXA6-GFP in media with Ca^{2+} treated with 212 μ M lip80 at time 0 min. Green is ANXA6-GFP and blue is impermeable Hoechst.

Video S7 (file name S7.lip80-ca): MCF7 cells expressing ANXA6-GFP in media without Ca^{2+} treated with 212 μ M lip80 at time 0 min. Green is ANXA6-GFP and blue is impermeable Hoechst.