

Supporting Information

Rhodamine based pH-sensitive “intelligent” polymer as lysosome targeting probes and their imaging application *in vivo*

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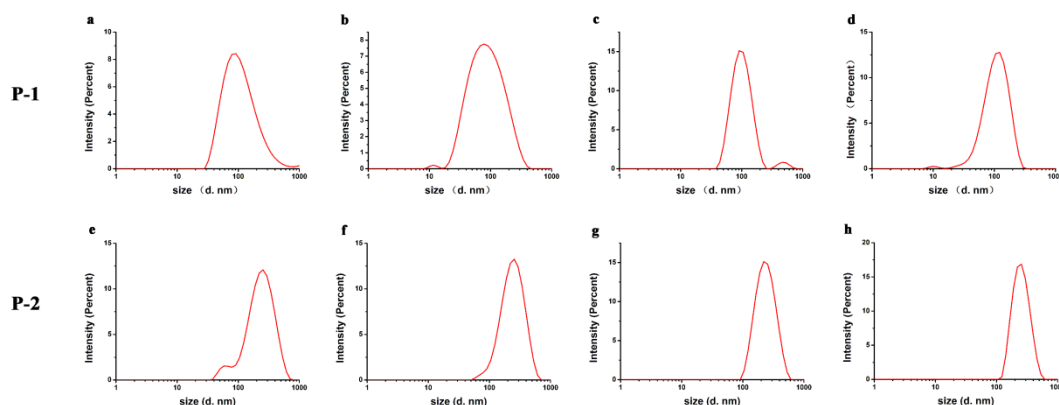
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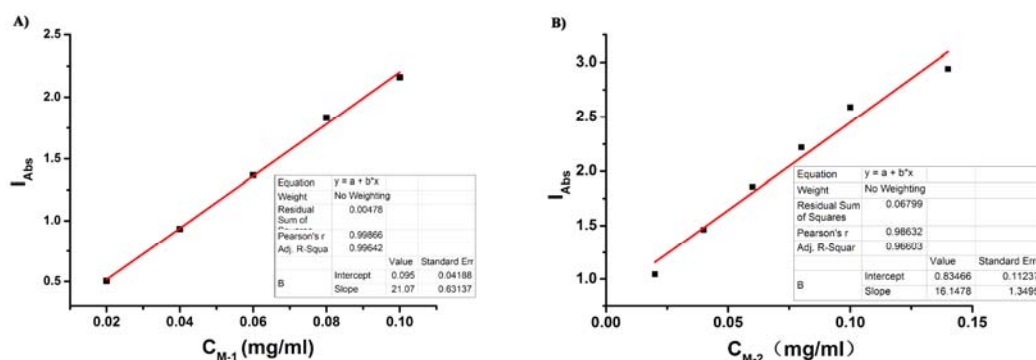
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Table S1 GPC data of **P-1** and **P-2**

	Mn (Daltons)	Mw (Daltons)	PDI
P-1	7940	11140	1.40
P-2	2250	4100	1.83

Table S2. Diameter sizes of **P-1** and **P-2** at different concentrations determined by dynamic light scattering.

	10 µg/ml		25 µg/ml		50 µg/ml		100 µg/ml	
	size/nm	PDI	size/nm	PDI	size/nm	PDI	size/nm	PDI
P-1	128.79	0.45	125.57	0.44	109.55	0.39	113.80	0.36
P-2	200.40	0.25	250.97	0.28	202.40	0.27	264.93	0.24

**Figure S1** A) Standard curves of **M-1**, the concentrations of **M-1** ethanol solution: 0.02, 0.04, 0.06, 0.08, 0.10 mg/ml. B) Standard curves of **M-2**, the concentrations of **M-2** ethanol solution: 0.02, 0.04, 0.06, 0.08, 0.10, 0.12 mg/ml.

The rhodamine content of **P-1** and **P-2** were calculated to be 7.79% and 6.76% by the following equation:

$$n = C_{MR} / (0.2/M)$$

n: The molar contents of rhodamine derivatives in the polymer

M: The average molecular weight of polymer unit (**P-1** and **P-2** both are 86.09 g/mol)

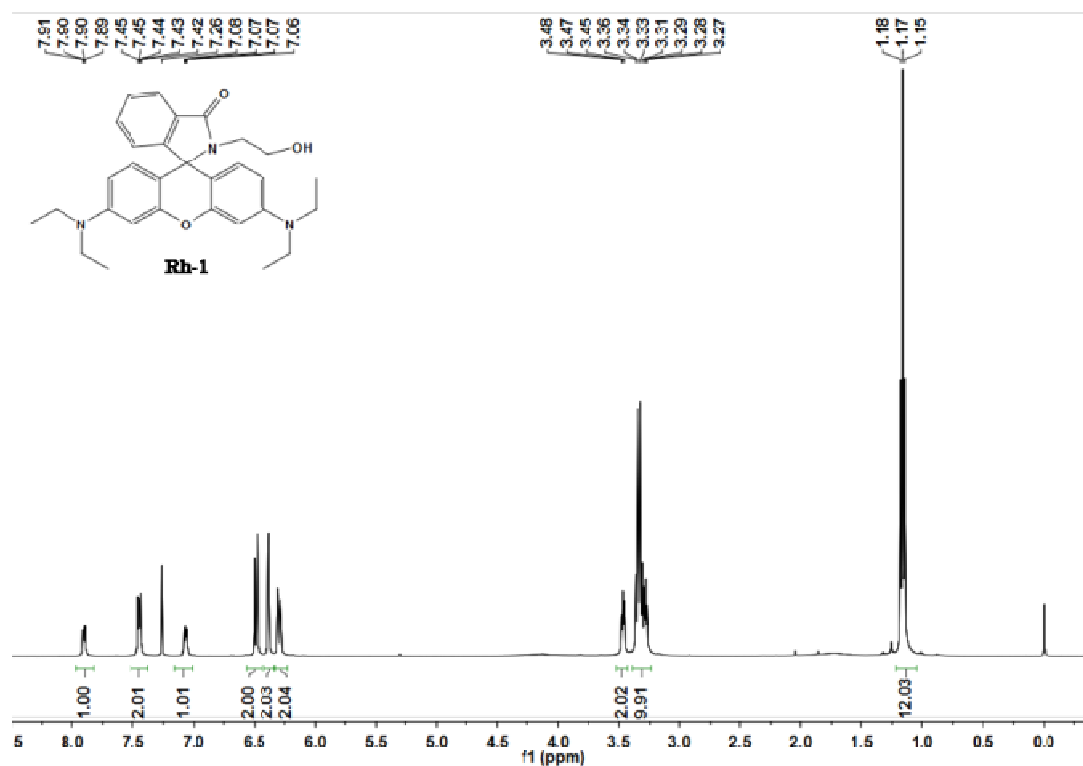


Figure S2 ¹H-NMR spectra recorded for **Rh-1** (in CDCl₃)

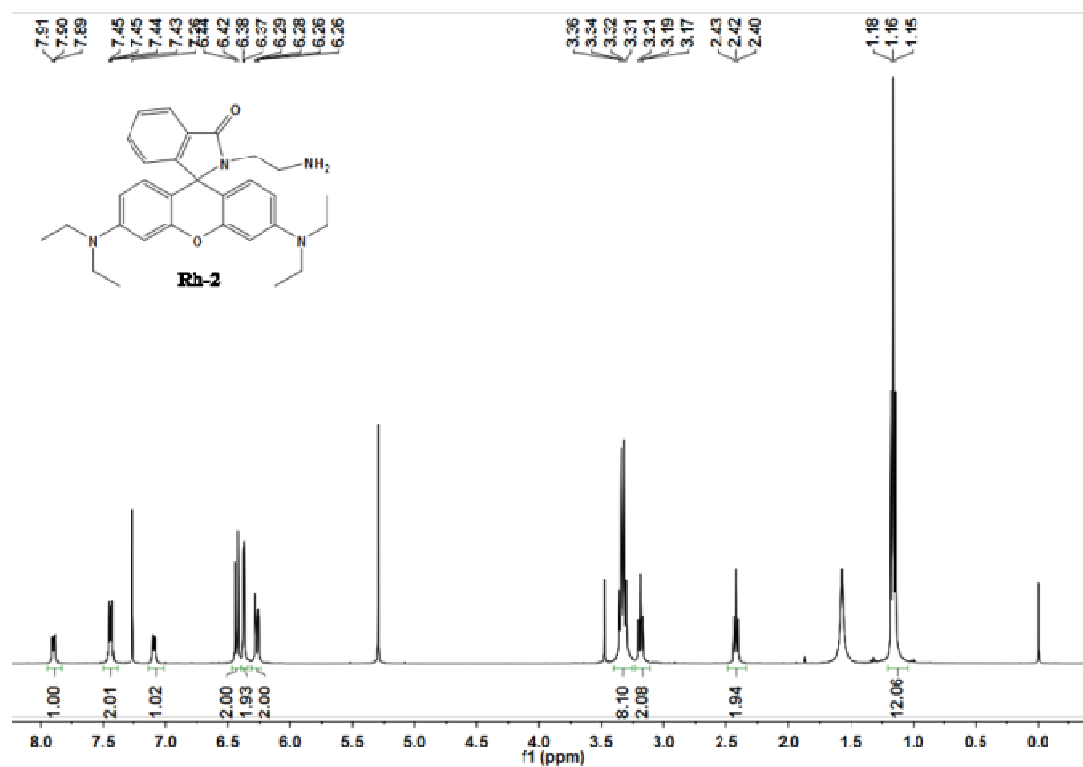


Figure S3 ¹H-NMR spectra recorded for **Rh-2** (in CDCl₃)

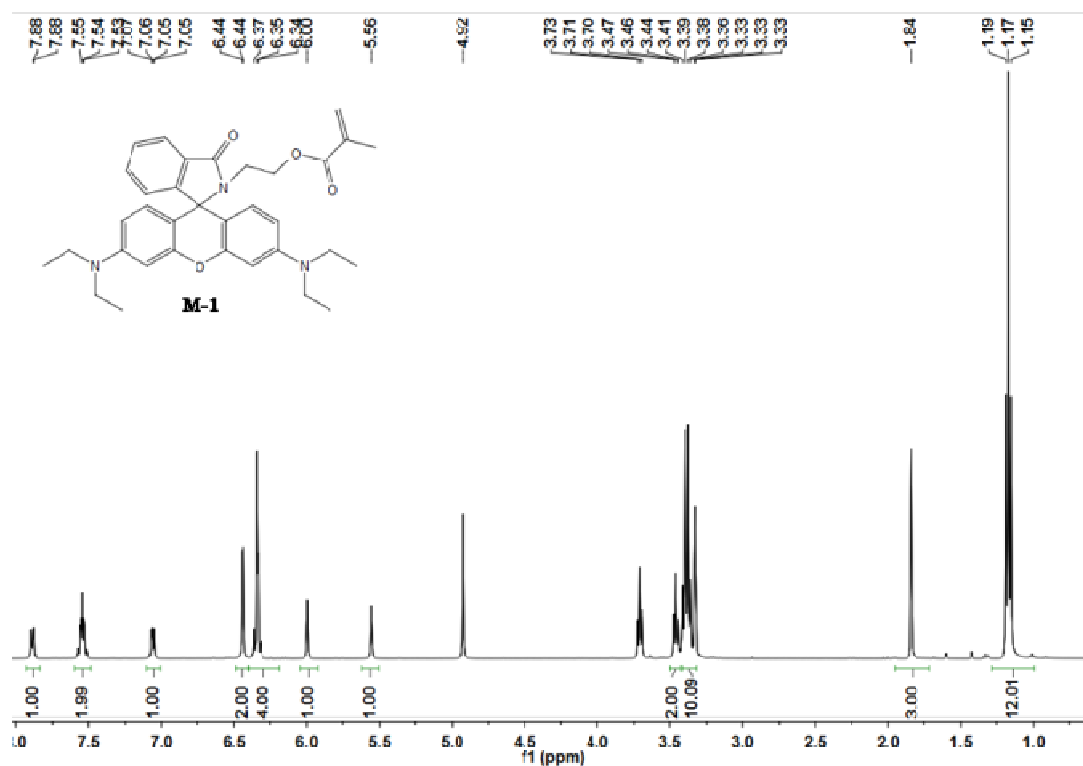


Figure S4 ^1H -NMR spectra recorded for **M-1** (in CD_3OD)

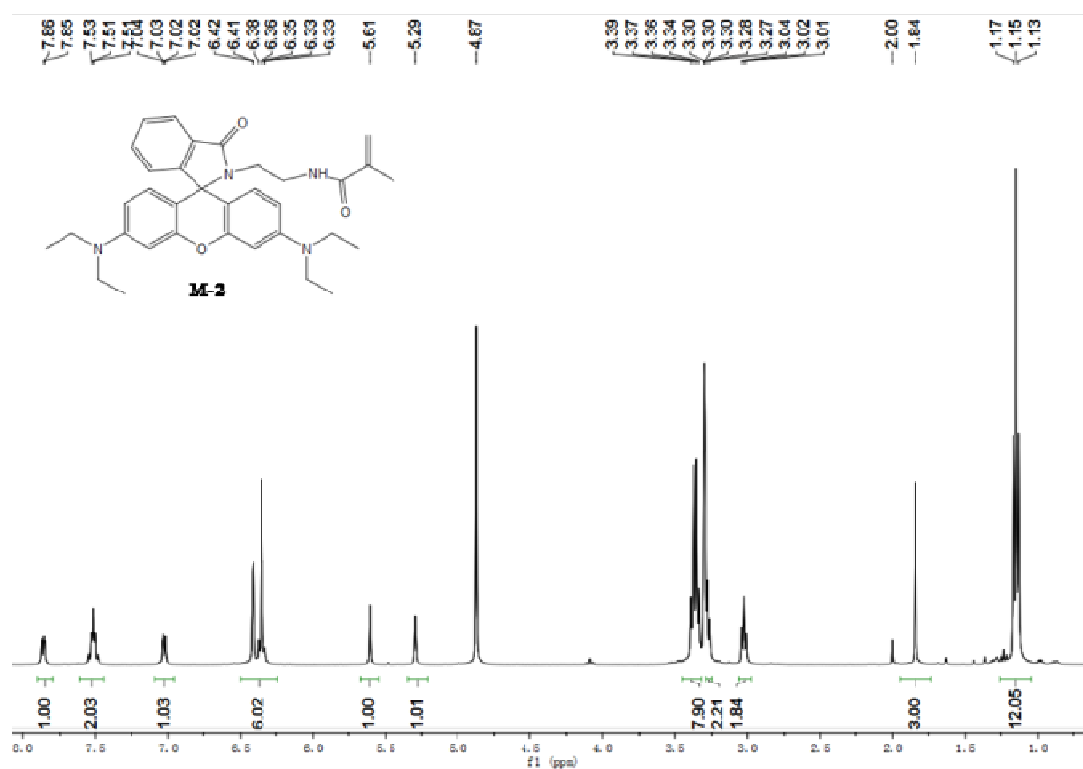


Figure S5 ^1H -NMR spectra recorded for **M-2** (in CD_3OD)

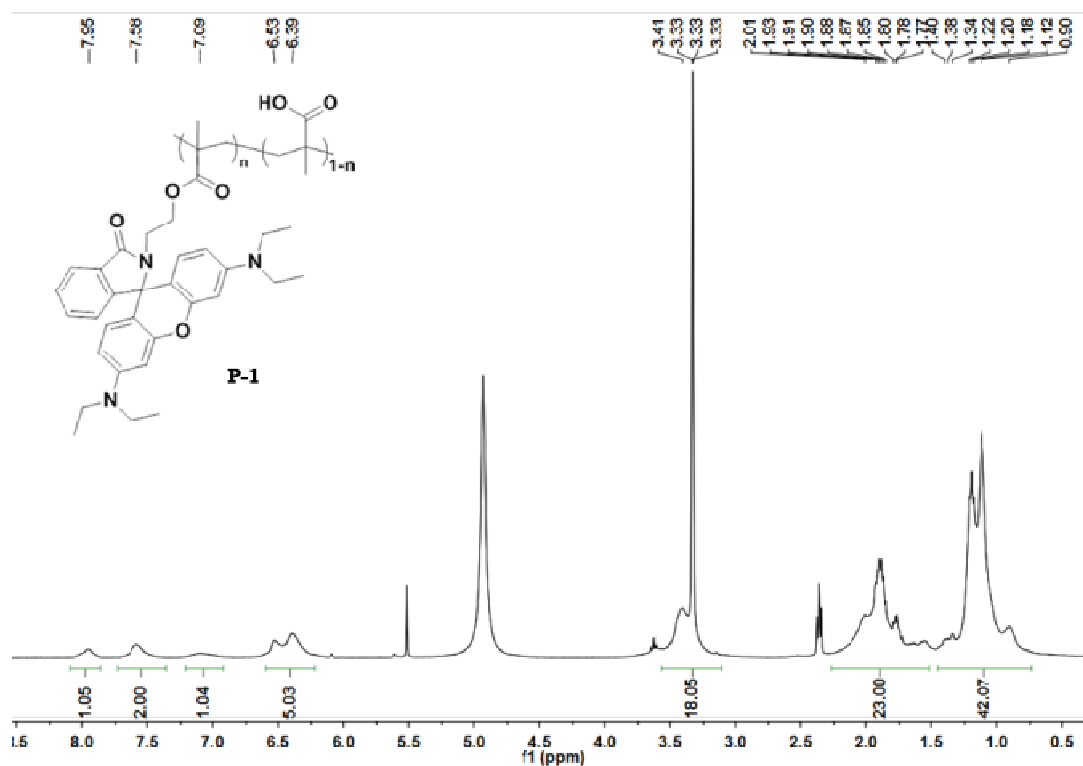


Figure S6 ^1H -NMR spectra recorded for **P-1** (in CD_3OD)

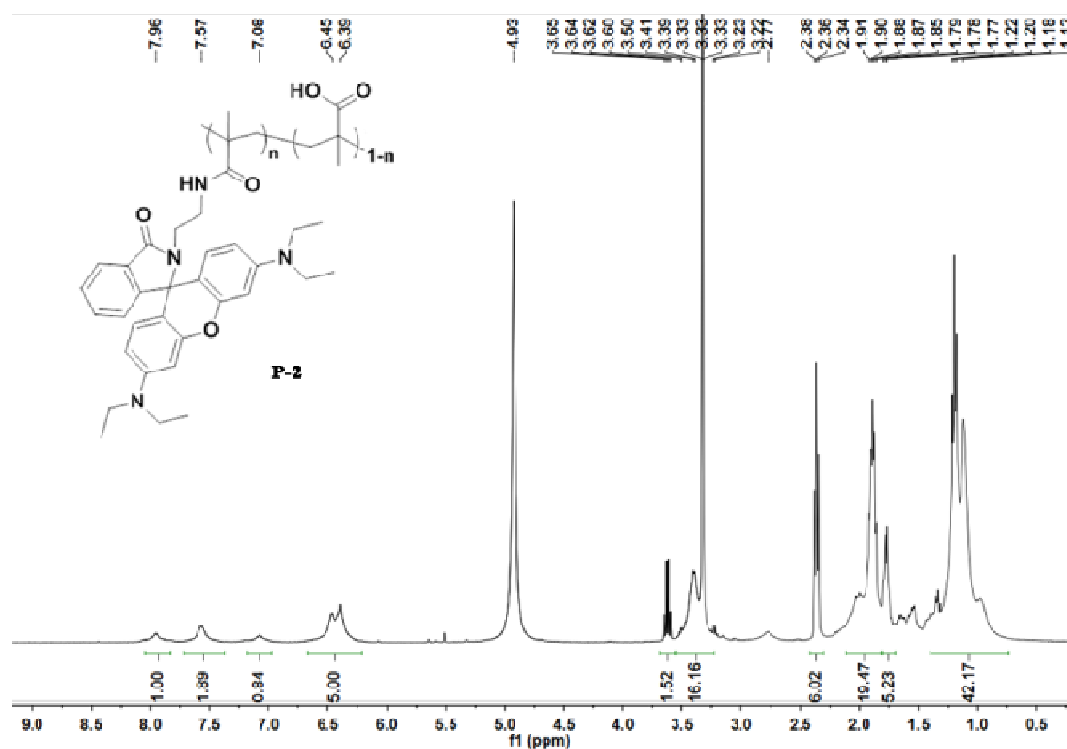


Figure S7 ^1H -NMR spectra recorded for **P-2** (in CD_3OD)