Supporting Information for

Fully Biodegradable Antibacterial Hydrogels via Thiol-ene “Click” Chemistry†

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Synthesis of POEGMS

15.0 g of diol oligo(ethylene glycol) (OEG, Mₙ = 600, 25 mmol), 3.75 g of mercaptosuccinic acid (MSA, 25 mmol) and 123 mg of Sc(OTf)₃ (0.25 mmol) were mixed and stirred at 80 °C under a nitrogen flow. After a homogeneous state was observed, the pressure was gradually reduced to 0.3 mm Hg and then maintained for 12 h. The crude product was dissolved in methylene chloride, and poured into large amount of cold ethyl ether to precipitate the product. (13.4 g, yield: 75.1 %)
Fig. S1 $^1$H NMR of POEGMS.

Fig. S2 GPC trace of POEGMS.
Fig. S3 GPC traces of POEGDMAMs.