Supporting Information

Self-assembled serum albumin-poly(L-lactic acid) nanoparticles: novel nanoparticle platform for drug delivery in cancer

Lin Dai,^a Chun-Xiao Li,^a Ke-Feng Liu,^a Hai-Jia Su,^b Bi-Qiang Chen,^b Gui-Feng Zhang,^c Jing He, *^a and Jian-Du Lei, *^a

^a Beijing Key Laboratory of Lignocellulosic Chemistry, Beijing Forestry University, Beijing 100083, P. R. China, ^b Beijing Key Laboratory of Bioprocess, Beijing University of Chemical Technology, Beijing 100029, P. R. China, and ^c Institute of Process Engineering, Chinese Academy of Sciences, Beijing 100090, P. R. China

E-mail addresses: hejing2008@sina,com (J. H.). E-mail: ljd2012@bjfu.edu.cn (J.D. L.).

¹H-NMR spectrum was used to identify ratio of BSA to PLLA in conjugates. As shown in Figure S1, the signals from $6.0 \sim 9.0$ ppm attribute to 1262 protons from the BSA molecule,¹ while the signals from $0.9 \sim 1.6$ ppm belongs to 3 protons from methyl group of each repeating unit in PLLA.² By integration of the peaks from $6.0 \sim 9.0$ ppm, the molar ratio of repeating unit in PLLA to BSA molecule was calculated to be 307:1, 1174:1, and 2368:1, respectively. Knowing that repeating unit in PLLA and BSA has a molecular weight of 76 Da and 66 kDa, respectively. And, the mass percentage of PLLA in the conjugate was calculated to be 25 wt%, 56 wt%, and 72 wt%.

1. Ge, J.; Neofytou, E.; Lei, J.; Beygui, R. E.; Zare, R. N. Protein-polymer hybrid nanoparticles for drug delivery. *Small* 2012, 8, 3573-8.

2. Nomura, N.; Ishii, R.; Akakura, M.; Aoi, K. Stereoselective Ring-Opening Polymerization of Racemic Lactide Using Aluminum-Achiral Ligand Complexes: Exploration of a Chain-End Control Mechanism. *Journal of the American Chemical Society* 2002, 124, 5938-5939.

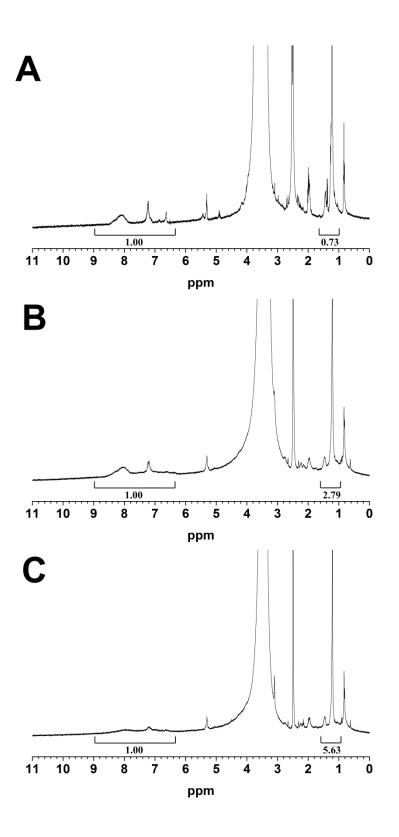


Figure S1. ¹H-NMR of BSA-PLLA with different PLLA content. (A) 25 wt%; (B) 56 wt%; (C) 72 wt%.