**Supplementary Data**

**Endogenous sialic acid-modified therapeutic nanoparticles for ameliorating ischemia reperfusion-induced renal injury**

Jing-bo Hu1, Gui-ling Song2, Di Liu1, Shu-juan Li1, Jia-hui Wu1, Xu-Qi Kang1, Jing Qi1, Fei-yang Jin1, Xiao-Juan Wang1, Xiao-Ling Xu1, Xiao-Ying Ying1, Lian Yu2, Jian You1 and Yong-Zhong Du1\*

1. Institute of Pharmaceutics, College of Pharmaceutical Sciences, Zhejiang University, 866 Yuhangtang Road, Hangzhou 310058, China;

2. College of Pharmaceutical Sciences, Jiamusi University, Jiamusi 154000, China.

Corresponding authors: Yong-Zhong Du, Institute of Pharmaceutics, College of Pharmaceutical Sciences, Zhejiang University, 866 Yuhangtang Road, Hangzhou 310058, China, E-mail: duyongzhong@zju.edu.cn.

Figure S1. The synthesis route of sialic acid-g-PEG-g-dexamethasone.

Figure S2. The proton spectrum of sialic acid-*g*-PEG-*g*-dexamethasone.



Figure S3. The *in vitro* release behavior of conjugated DXM from SA-PEG-DXM at 37 °C in pH 7.4 PBS. Data were presented as mean ± SD (*n* = 3).



Figure S4. Cell survival of HUVECs were incubated with a range of concentrations of H2O2 (100, 200, 400 and 800 µmol/L) for 4 h and the results showed cell viability reduced with the enhanced concentration of H2O2. Data were presented as mean ± SD (*n* = 4).

Figure S5. The changes in liver function index after SA-NPs therapy. Data were presented as mean ± SD (*n* = 3).



Figure S6. Representative images of liver sections stained by H&E. The scale bar = 100 μm.