Supporting Information

A novel photoacoustic nanoprobe of ICG@PEG-Ag₂S for atherosclerosis targeting and imaging in vivo

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Fig. S1 Optimized photoacoustic and fluorescent intensity by 1 mg Ag_2S coupling with various concentration of ICG from 0, 16, 32, 64, 128 to 256 nM. Ag_2S QD was excited at 808 nm with a semiconductor laser and the emission was collected with a 1000-nm longpass filter.



Fig. S2 TEM image of PEG-Ag₂S.



Fig. S3 UV absorbance spectra of PEG-Ag₂S, ICG and ICG@PEG-Ag₂S.



Fig. S4 Tissue penetration depth and imaging sensitivity of ICG. (A) Phantom images of a coneshaped agarose tube containing ICG (24 nM) at different depth. (B) The PA signal sensitivity of ICG at a depth of 2 mm underneath the skin of a living mouse after injection of ICG in various concentrations from 0.192 to 24 nM.



Fig. S5 Blood circulation of ICG@PEG-Ag₂S after injection by vein.



Fig. S6 Blood circulation of ICG after injection by vein.



Fig. S7 Time course of PA images of Apoe^{-/-} mice after ICG treatment.



Fig. S8 *Ex vivo* imaging of atherosclerotic plaques and correlation with histological assessment in C57BL/6 mice.