Electronic Supplementary Information (ESI) for:

## Fluorescence Imaging of Interscapular Brown Adipose Tissue in Living Mice

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**Figure S1:** [*left*] Fluorescence stability of micellar SRFluor680. The fluorescent signal (662 nm) from micellar SRFluor680 in phosphate buffered saline (PBS) at 37 °C was monitored over a 6 hour period. [*right*] Fluorescence emission of micellar SRFluor680 at two different temperatures in PBS (excitation  $\lambda$ : 570 nm).



**Figure S2:** Spectral properties of micellar Nile Red (*Green*) and IR786 (*Orange*) in PBS (pH 7.4, Nile Red excitation  $\lambda$ : 470 nm, IR786 excitation:  $\lambda$ : 700 nm).



**Figure S3.** Biodistribution of SRFluor680 (10 nmol) encapsulated in Cremophor El or DPPE-PEG<sub>2000</sub> in SKH1 mice at 6 hours after dosing. In both cases, the animals were sacrificed at six hours after micellar probe injection and the probe biodistribution in the excised tissues was determined by ex vivo fluorescence imaging and ROI analysis. The mean pixel intensities are relative to a leg muscle value of 1 and error bars are standard error of the mean. (N = 3)



**Figure S4.** [*top*] Representative whole-body images of Balb/C and C57Bl/6 mice treated with micellar SRFluor680 (10 nmol). Six hours after dosing, the mice were euthanized and their skin removed prior to imaging to reduce fluorescence scattering by the hair. (N = 4) [*bottom*] Biodistribution of SRFluor680 in organs taken from the mice. The mean pixel intensities are relative to a leg muscle value of 1 and error bars are standard error of the mean. (N = 4)



**Figure S5.** Whole-body images of three living nude mice at 6 hours after tail vein injections of micellar SRFluor680 (10 nmol). The fluorescence pixel intensity scale bar applies to all images (arbitrary units).