

**Cerenkov luminescence imaging
for visualizing interscapular
brown adipose tissue using a
TSPO-targeting PET probe in
UCP1 ThermoMouse
(Supporting information)**

Figure S1. Cold stimulation also increases both [^{18}F]FDG-PET and [^{18}F]TSPO-CLI signals in iBAT. (A) Representative [^{18}F]FDG-PET and [^{18}F]FDG-CLI images under cold stimulation (4 °C) for 4 h. (B) Representative [^{18}F]FDG-PET and [^{18}F]FDG-CLI images under thermoneutral condition (30 °C) for 4 h. (C) Quantitative analysis of PET signals from iBAT after [^{18}F]FDG injection under cold stimulation (4 °C) or thermoneutral condition (30 °C). (D) Quantitative analysis of CLI signals from iBAT after [^{18}F]FDG injection under cold stimulation (4 °C) or thermoneutral condition (30 °C). Data represent means \pm SD (n = 4 per group). * P < 0.05.

Figure S2. Isoflurane exposure does not affect signals of [^{18}F]FDG-PET and [^{18}F]FDG-CLI on iBAT. (A) Representative [^{18}F]FDG-PET and [^{18}F]FDG-CLI images under short exposure of isoflurane anesthesia (“short-term”, shorter than 2 h). (B) Representative [^{18}F]FDG-PET and [^{18}F]FDG-CLI images under long exposure of isoflurane anesthesia (“long-term”, longer than 2 h). (C) Quantitative analysis of PET signals from iBAT after [^{18}F]FDG injection under short or long exposure of isoflurane anesthesia. (D) Quantitative analysis of CLI signals from iBAT after [^{18}F]FDG injection under short or long exposure of isoflurane anesthesia. Data represent means \pm SD (n = 4 per group). ns, not significant.

Figure S3. Young UCP1 ThermoMouse shows higher signals of TSPO-PET and TSPO-CLI than older UCP1 ThermoMouse. Representative images using TSPO-PET and TSPO-CLI in young UCP1 ThermoMouse (9 weeks old) and older UCP1 ThermoMouse (36 weeks old) under normal condition. (n = 1 per group).





