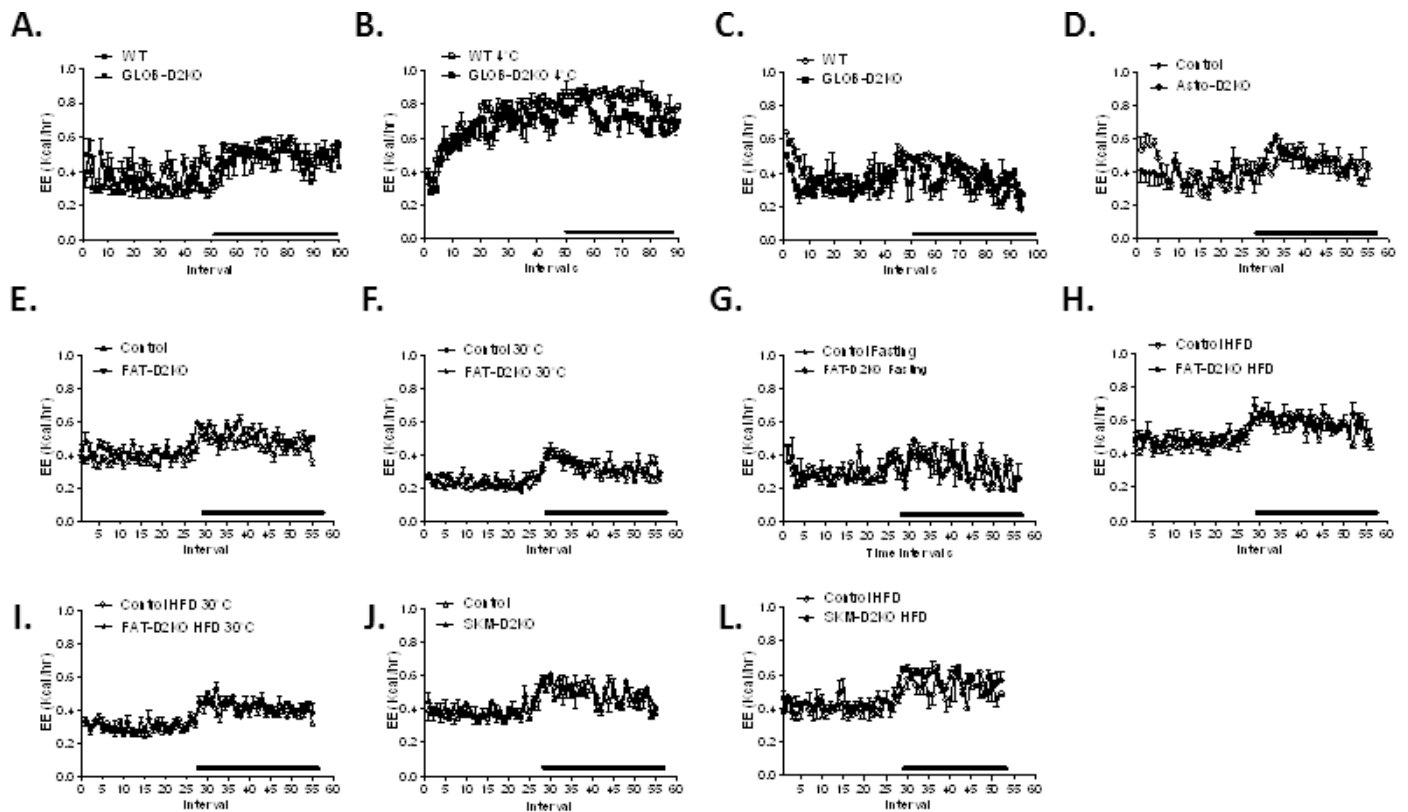SUPPLEMENTARY DATA

Supplementary Figure 1. Energy expenditure (EE) in GLOB-D2KO, ASTRO-D2KO, FAT-D2KO and SKM-D2KO measured under different conditions. The KO and WT controls were acclimated to individual metabolic cages in the comprehensive lab animal monitoring system (C.L.A.M.S.) for 48 hours before measurements were recorded. A) Energy expenditure (EE) during 12h light and dark cycles recorded on the second day after acclimatization in the GLOB-D2KO and WT mice at room temperature; B) Same as in A, except measurements were recorded during acute cold (4oC) exposure of 24hs duration; C) Same as in A, except measurements were recorded on the first day of a 48hs interval of fasting; D) EE in the ASTROD2KO and controls at room temperature; E) EE in the FAT-D2KO and controls at room temperature; F) Same as in E, except measurements were recorded during chronic (15 days) exposure to thermoneutrality (30oC); G) Same as in E, except measurements were recorded on the first day of a 48hs interval of fasting; H) Same as in E, except easurements were recorded in the animals kept at room temperature after 8 weeks on HFD; I) Same as in H, however the animals were kept at thermoneutrality (30oC); J) EE in the SMK-D2KO and controls at room temperature; L) Same as in J, except measurements were recorded in the animals kept at room temperature after 8 weeks on HFD; Entries are mean ± SEM. Statistical significance is shown in each graph and was set as p < 0.05. Student's t test was used to compare KO animals and the respective controls.

SUPPLEMENTARY DATA

Supplementary Figure 2. Characterization of FAT-D2KO mouse. A) Dio2 expression in the BAT of FAT-D2KO mouse and Controls (n=5) ; B) D2 activity in sonicate of BAT in WT, Cre Fabp4, FloxD2 and FAT-D2KO mouse (n=4-6); C) D2 activity in sonicate of cortex in control and FAT-D2KO mouse (n=4) and D) Serum TSH, E) T4 and F) T3 levels of control and Fat-D2KO mice (n=10-11). Entries are mean ± SEM. Statistical significance is shown in each graph and was set as p < 0.05. Student's t test was used to compare controls and FAT-D2KO. (*, p<0.05 and ***, p<0.001 vs. control).