



Supplementary information, Figure S2 BAT transplantation (DIO+BAT) were performed in 14-week-old male DIO mice that had been fed an HFD for the previous 8 weeks to evaluate the ability of transplanted BAT to reverse pre-existing obesity. Epididymal fat (DIO+EP) and muscle (DIO+muscle) transplantation and sham operated DIO mice served as controls. At the end of study (10 weeks), BAT transplantation **(A)** significantly reduced in total fat mass, **(D)** increased core body temperature during cold challenge, but not in thermoneutral conditions, **(E)** increased total movement, **(F)** significantly improved glucose clearance, as assessed by the glucose tolerance tests (GTT) (inner graph, area under the curve [AUC]), **(G)** totally reversed DIO hepatic steatosis, **(H)** increased AKT phosphorylation in epididymal white adipose tissue. Densitometric result which is analyzed by image J software was represented as number. **(I)** Slightly but not significant increased oxygen consumption. There were no significant changes in **(B)** food intake, or **(C)** respiratory quotient (RQ). Such changes were not observed following either EP or muscle transplantation. Data are mean \pm SEM. $n = 5-9$ /group. * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$ for comparisons between the BAT-transplanted mice and the HFD groups.