**Supplementary Figure 1.** A) SIRT1 and DBC1 expression in inguinal fat tissue in young (8 weeks) and old (12 months) mice. B) Protection against liver steatosis in DBC1 KO mice fed with high-fat diet for 12 weeks. H&E staining. Magnification 100X.
Supplementary Figure 2. DBC1 deletion preserves insulin sensitivity in skeletal muscle. A) AKT phosphorylation in skeletal muscle from WT mice fed with normal and high-fat diet compared with DBC1 KO mice fed with high-fat diet. 20 week old mice were fed for 5 weeks with a high-fat diet. B) AKT phosphorylation in 25 weeks old ApoE-/-DBC1+/+ and ApoE-/DBC1-/- mice after 5 weeks of feeding with a high-fat diet.
Supplementary Figure 3. Energy expenditure was measured ApoE-/-DBC1+/+ and ApoE-/-DBC1-/- mice over a 24 hours period after 20 weeks of feeding with a high-fat diet (n = 8 per group).