SUPPLEMENTAL DATA

Targeted deletion of adipocyte Abca1 impairs diet-induced obesity

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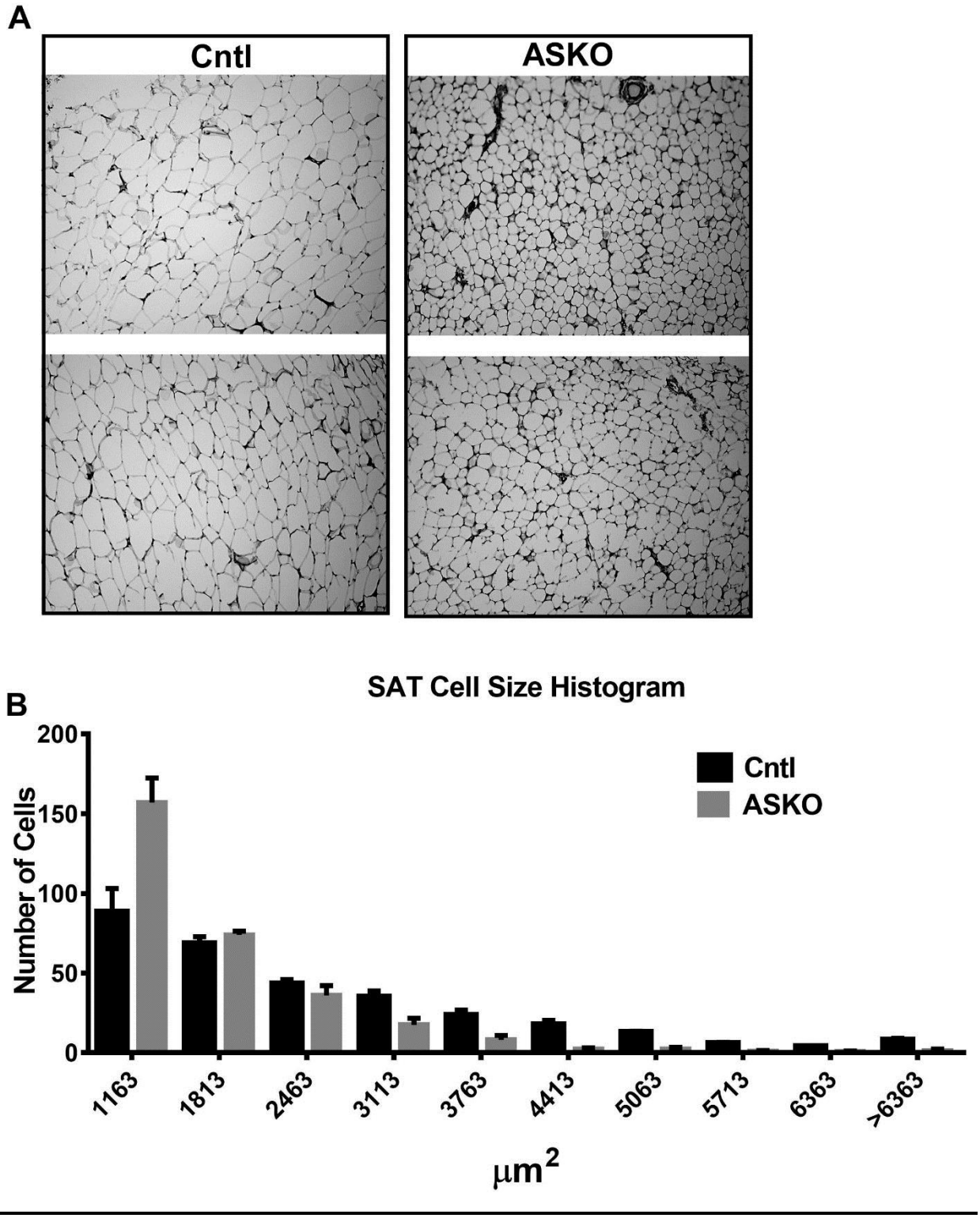
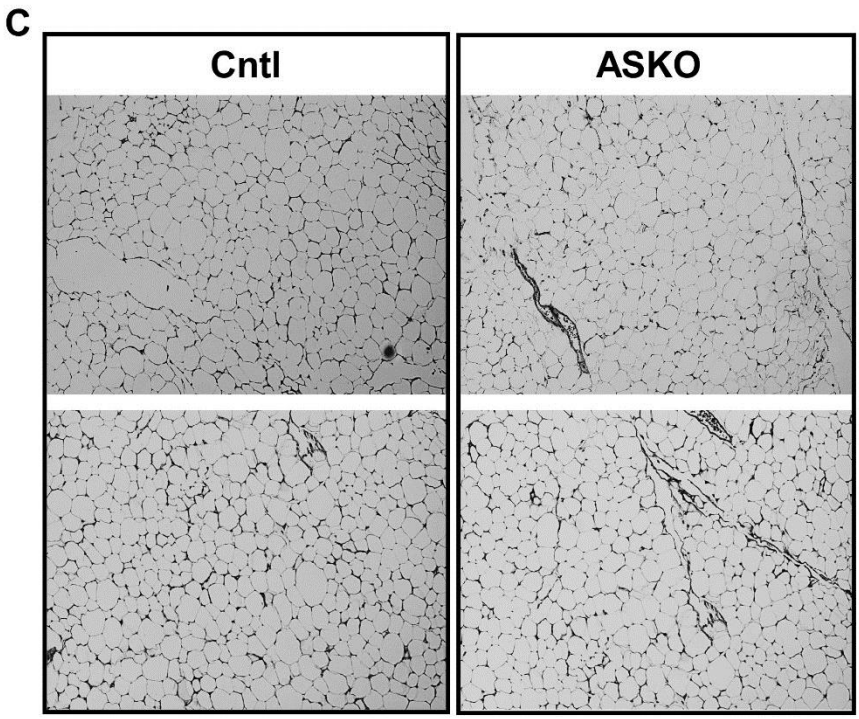
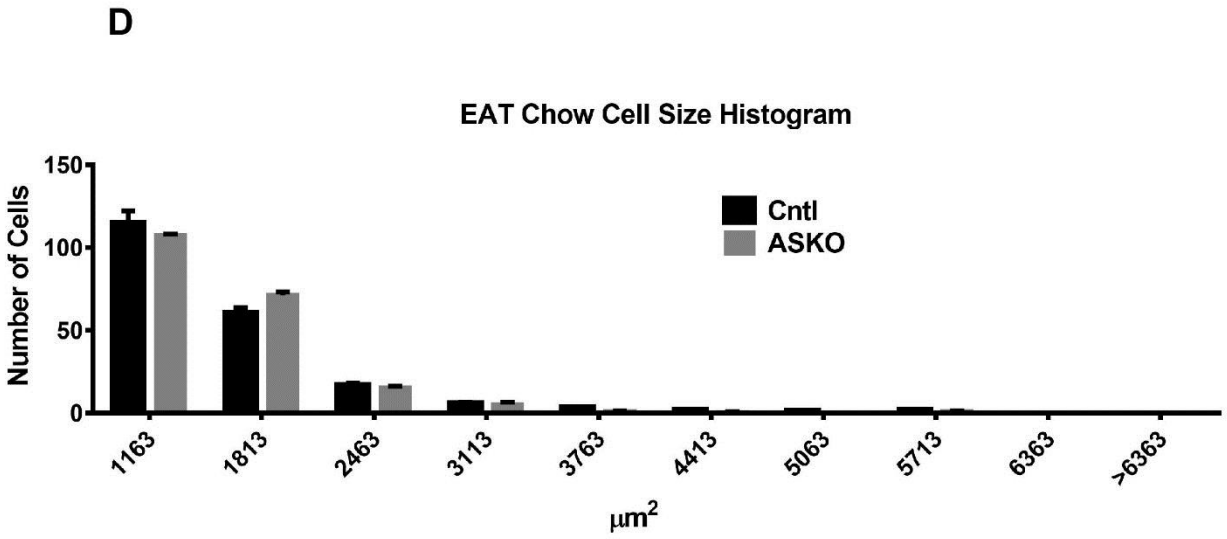
Supplemental Figure I



Supplemental Figure I

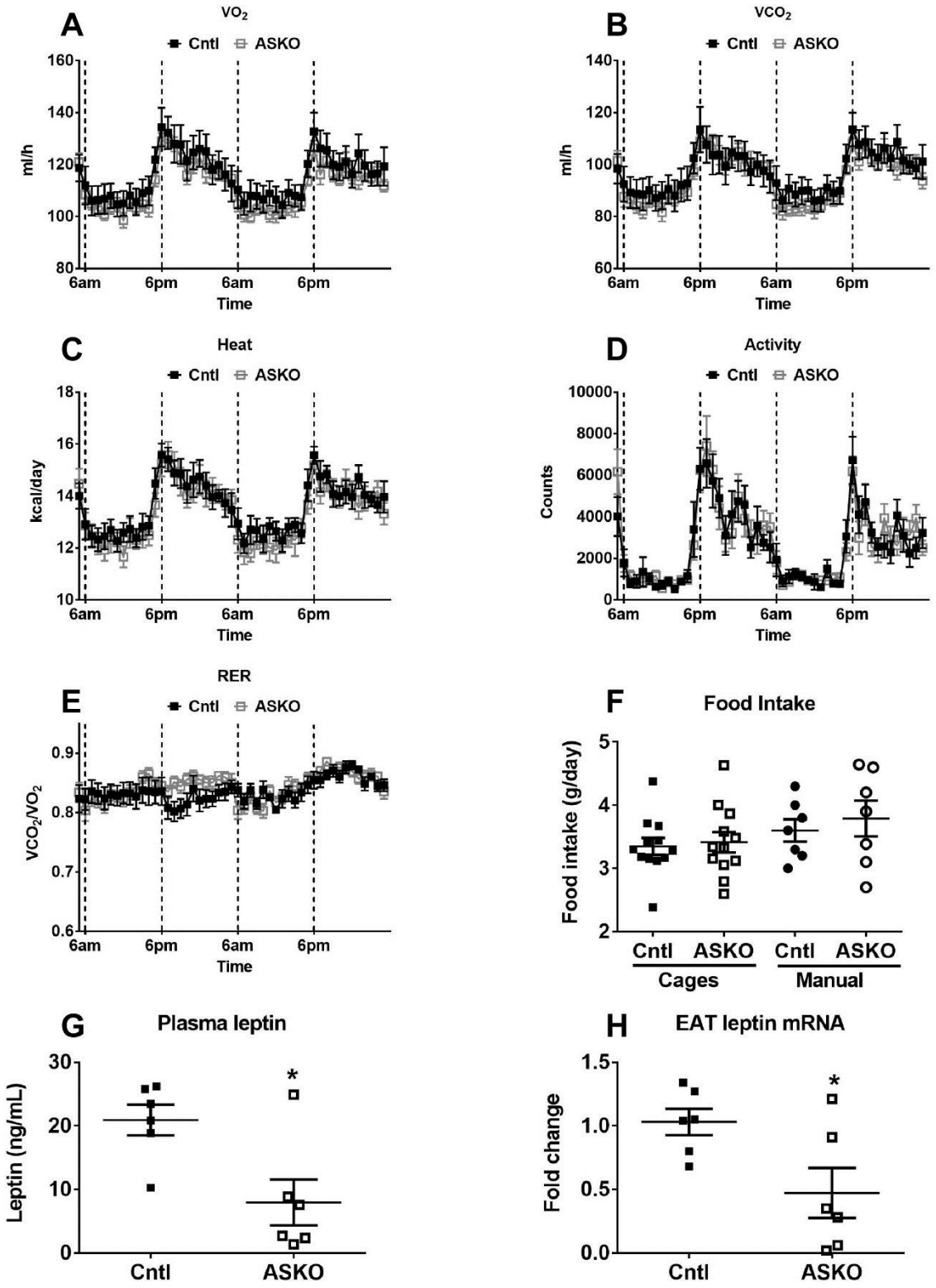




Supplemental Figure I: Male Cntl and ASKO mice were fed chow for 24 weeks or a HFHC diet for 16 weeks starting at 8 weeks of age. Mice were sacrificed at 24 weeks of age to harvest subcutaneous adipose tissue (SAT) and epididymal white adipose tissue

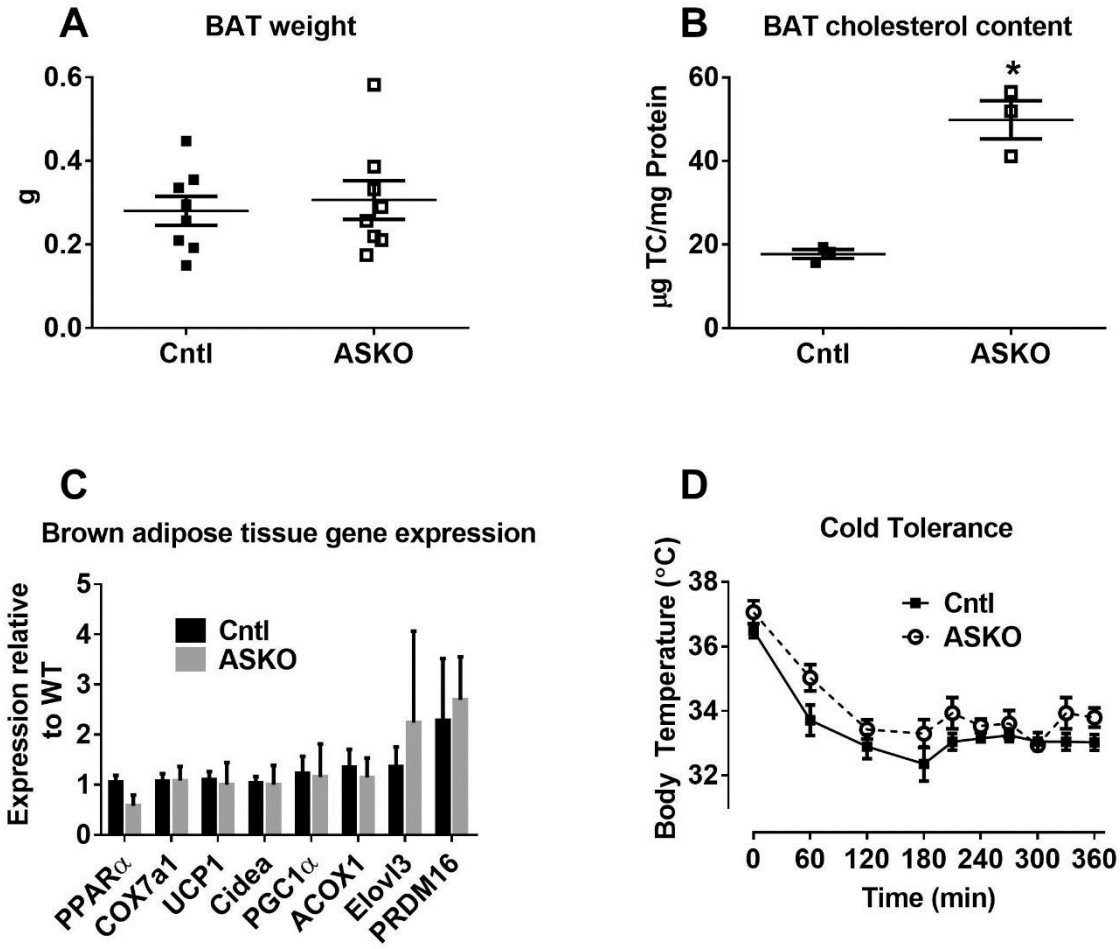
(EAT) for analysis. A) Representative H&E stained sections of SAT and B) Histogram of SAT adipocyte cross sectional area for HFHC-fed mice (n=6 mice per genotype and 300 cell area measurements per mouse). HFHC diet-fed ASKO mice had significantly smaller adipocytes than their WT counterparts by Chi square analysis ($p<0.001$), C) Representative H&E stained sections of EAT and D) Histogram of EAT adipocyte cross sectional area for chow-fed mice (n=3 mice per genotype, and 200 cell area measurements per mouse).

Supplemental Figure II



Supplemental Figure II: Mice (n=10-11 per genotype) were fed the HFHC diet for 14-15 weeks before metabolic phenotyping was performed using Oxymax/Comprehensive Lab Animal Monitoring System (CLAMS): A) Oxygen consumption rates (VO_2; ml/h), (B) Carbon dioxide production rates (VCO_2; ml/h), C) Heat (kcal/day), D) Physical activity (counts), (E) respiratory exchange ratio (RER; VCO_2/VO_2). Data are displayed for a 48 hour time interval starting at 6am. Each time point approximately represents one hour of data collection. F) Food intake measured by CLAMS (cages) or using wire bottomed cages (manual). G) Plasma leptin concentrations in mice after 16 weeks of HFHC diet feeding (n=5-6 per genotype). H) Leptin gene expression in epididymal adipose tissue (EAT) after 16 weeks of HFHC diet feeding (n=6 per genotype). * $p<0.03$.

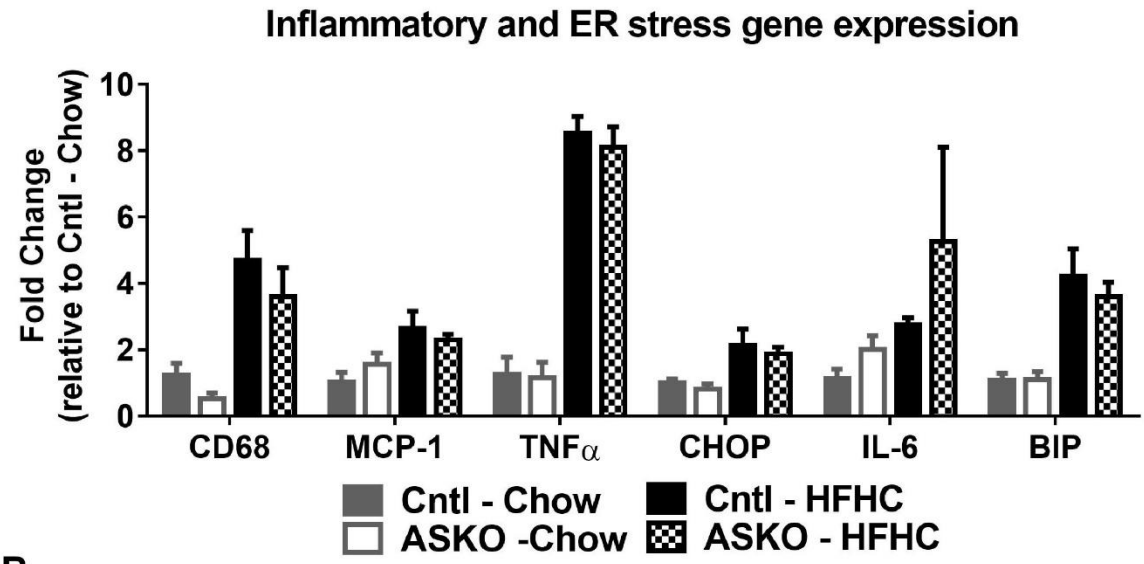
Supplemental Figure III



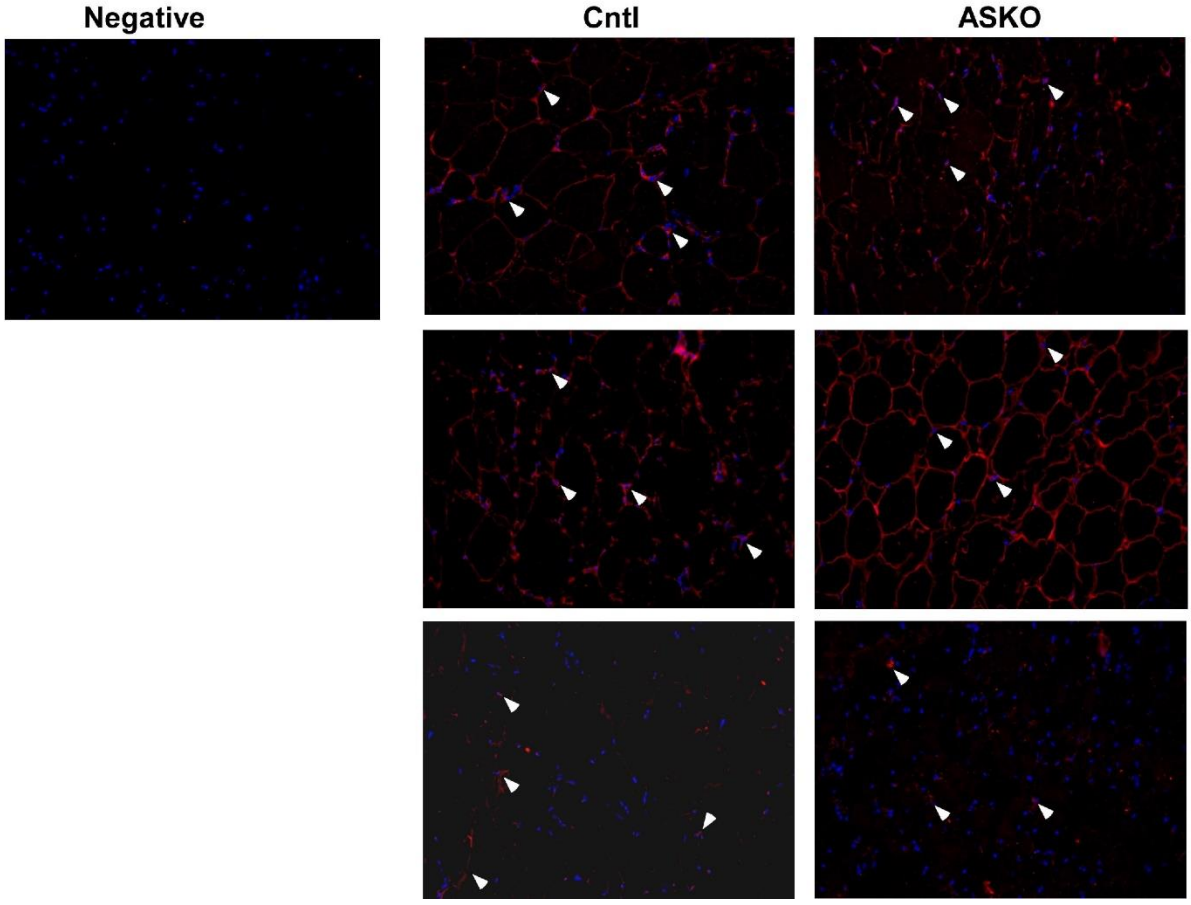
Supplemental Figure III: A-C) Male mice were fed a HFHC diet for 16 weeks before harvesting brown adipose tissue (BAT) for analysis. A) BAT weight, B) BAT cholesterol content, and C) BAT gene expression (n=5-7/genotype). D) Mice fed a HFHC diet for 15 weeks (n=5-7/genotype) were housed at 4°C for 6 hours and period measurements of body temperature were taken. ASKO maintained significantly higher body temperature ($p=0.035$ by repeated measures ANOVA) over the 6 hours compared to WT mice.

Supplemental Figure IV

A



B



Supplemental Figure IV: Male mice were fed a HFHC diet for 16 weeks before harvesting EAT for gene and protein expression. A) EAT inflammatory gene expression and B) representative EAT CD68 immunofluorescence staining. Representative images are shown with arrows indicating positive staining of immune cells.