SUPPLEMENTARY DATA

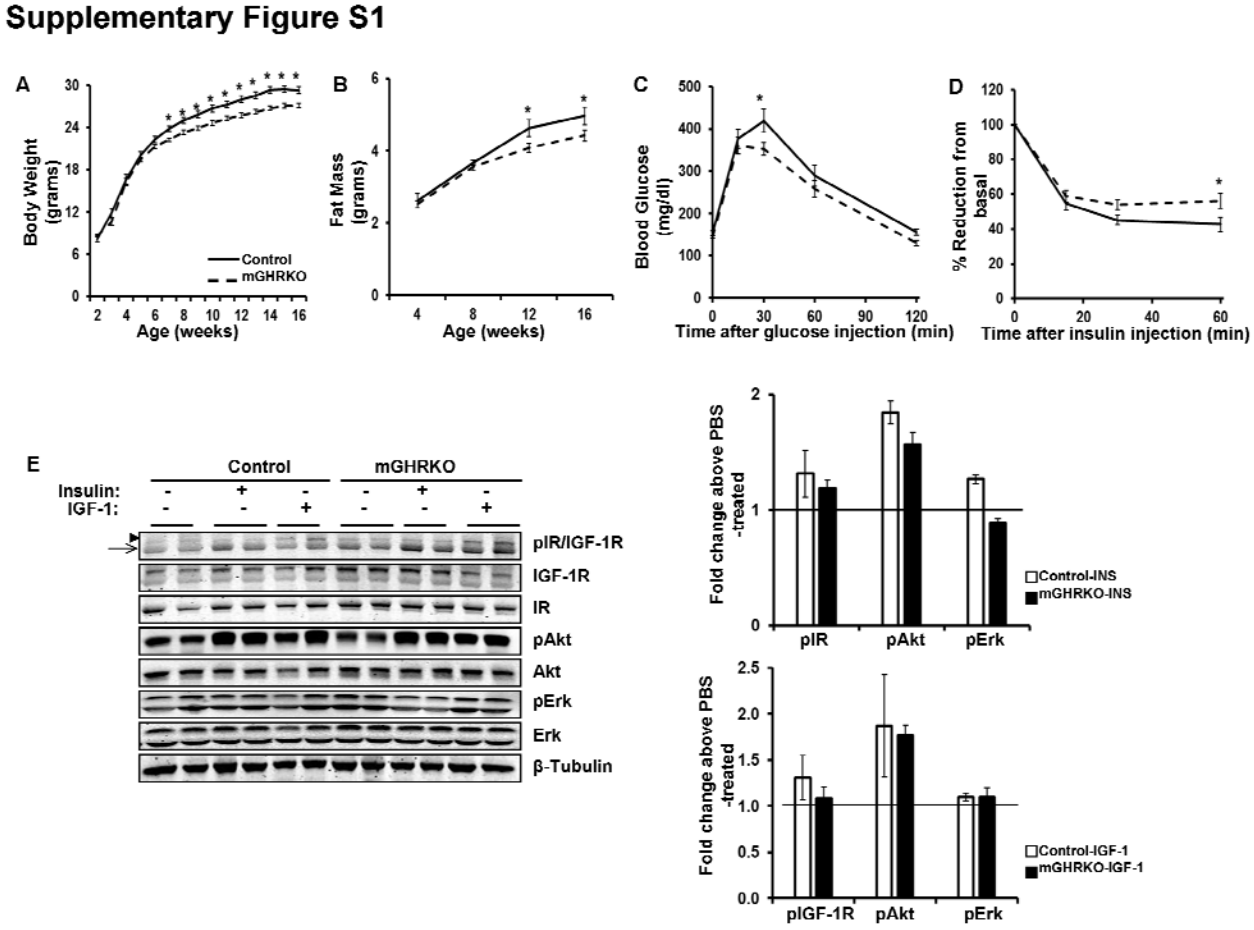
Supplementary Table 1. Real-time PCR primers

The following primers were used for gene expression studies;

Gene	Forward primer (5'->3')	Reverse primer (5'->3')
ghr	GCCTGGGGACAAGTTCTTCTG	GCAGCTTGTCGTTGGCTTTCC
igf-1	GGACCAGAGACCCTTTGCGGGG	GGCTGCTTTTGTAGGCTTCAGGTGG
fasn	AAGTTGCCCGAGTCAGAGAACC	ATCCATAGAGCCCAGCCTTCCATC
srebp-1	AAGCAAATCACTGAAGGACCTGG	AAAGACAAGGGGCATTGGGAG
dgat1	GTGCACAGTGGTGCATCAG	CAGTGGGACCTGAGCCATCA
dgat2	CAGCAAGAAGTTTCCTGGCAT	CTTCCCACCACGATGATGAT
cpt-1a	ATGGCAGAGGCTCACCAAGC	GATGAACTTCTTCTTCCAGGAGTGC
pgc-1a	ATGTGTCGCCTTGCTCT	ATCTACTGCCTGCCCACCTT
socs1	GTGGTTGTGGAGGGTGAGAT	CCCAGACACAAGCTGCTACA
socs2	TCAGCTGGACCGACTAACCT	CAGGTGAACAGTCCCATTCC
mstn	CAGCCTGAATCCAACTTAGGC	ACCTCTTGGGTGTGTCTGTCA
il-15	TCATTTTGGGCTGTGTCAGTGTAG	CTTTGCAACTGGGATGAAAGTCAC
gapdh	TGAAGGTCGGTGTCAACGGATTTGGC	CATGTAGGCCATGAGGTCCACCAC

SUPPLEMENTARY DATA

Supplementary Figure 1. A. Body weight and **B.** Fat mass measured from 2-16 weeks of age (n=9-18/ group/ age). **C.** Glucose tolerance (2g/kg dextrose) and **D.** Insulin tolerance (0.5U/kg Insulin) tests in 16-18 week old mice (n=13-17/ group). **E.** Immunoblot analysis of skeletal muscle response to an acute insulin (1U/kg, i.p, 5min) and IGF-1 (1mg/kg, i.p, 5min) stimulation of 16 week old mice as evaluated by phosphorylation of IGF-1R (pIGF-1R), IR (pIR), Akt (pAkt), and Erk (pErk), which were normalized to total protein levels (n=3-4 / group; representative blots are shown). The same antibody was used to detect pIGF-IR (arrowhead) and pIR (arrow) **(left).** Quantification of skeletal muscle response to acute insulin **(right top)** and IGF-1 **(right bottom)** stimulation. Phosphorylated levels of insulin receptor (pIR), IGF-1 receptor (pIGF-1R), Akt (pAkt), and Erk (pErk) were normalized to total protein levels and represented as extent of stimulation with respect to PBS-treated levels for each group (n=3-4 / group).



SUPPLEMENTARY DATA

Supplementary Figure 2. A. Food intake of HFD-fed mice was measured weekly for 4 weeks starting at 2 weeks of HFD treatment (n=10-11/ group). **B.** Acute GH stimulation (125μg/kg body weight, i.v, 15min) of 14 week HFD-fed mice and probing for STAT5 phosphorylation in the liver and quadriceps muscle by immunoblot analysis. Phosphorylated levels of STAT5 (pSTAT5) were normalized to total STAT5 levels (n=1-2/ group). **C.** Protein expression of indicated markers as assessed by western blot in muscles of obese control and mGHRKO mice **(left)**. Protein levels were normalized to β-tubulin, and are represented as fold change compared to controls **(right)** (n=6/ group). Values are shown as mean ± SEM.