

Supplementary Table 1: qRT-PCR primers used.

Gene	Sense primer	Antisense primer	Accession n^o
Actb	CTGGGACGACATGGAGAAGA	ACCAGAGGCATACAGGGACA	NM_007393
Hprt	CAGTCAACGGGGGACATAAA	AGAGGTCTTTTCACCAGCAA	NM_013556
Ppia	TGGTCTTTGGGAAGGTGAAAG	TGTCCACAGTCGGAATGGT	NM_008907
Ghr	TCTGGAAAGCCTCGATTAC	TCAGGGCATTCTTTCCATT	NM_001286370
Gh	CCTCAGCAGGATTTTCACCA	CTTGAGGATCTGCCAACAC	NM_008117.3
Igf1	TCGTCTTCACACCTCTTCTACCT	ACTCATCCACAATGCCTGTCT	NM_010512
Igfals	GCTCAGCGTCTTTTGCAGTT	AGGGGATGGAGGACAGGTT	NM_008340
Igfbp1	ATTAGCTGCAGCCCAACAGA	GAGTCCAGCTTCTCCATCCA	NM_008341.4
Socs2	CAGCTGTCTGGGACGTGTT	TTCCCCAGTACCATCCTGTTT	NM_007706.4
Ghsr	TCAGGGACCAGAACCACAAA	CCAGCAGAGGATGAAAGCAA	NM_177330.4
Ghrhr	ACCCGTATCCTCTGCTTGCT	AGGTGTTGTTGGTCCCCTCT	NM_001003685.3
Gck	AAACTACCCCTGGGCTTTCAC	ATTGCCACCACATCCATCTC	NM_010292
Khk	GCAGCCTCATGGAAGAGAAG	AAGGACAGTGCAGGAGTTGG	NM_001310524.1
Pck1	TGGGGTGTTTGTAGGAGCAG	CCAGGTATTTGCCGAAGTTG	NM_011044.3
G6pc	TCGAGGAAAGAAAAGCCAAC	CAATGCCTGACAAGACTCCA	NM_008061.4
Pklr	AGGAGTCTTCCCCTTGCTCTAC	GGAGAGGCGTTTCAGGATATG	NM_013631
Tkfc	ATGAGTTCCAAGAAGATGGTGAA	AAACACAGATCCTGCGATGAC	NM_145496.1
Pdk4	GACCCCGTTACCAATCAAAA	TTTGCACACTCAAAGGCATC	NM_013743.2
Acaca	ATCCTGCGAACCTGGATTCT	CCCACCAGAGAAACCTCTCC	NM_133360.2
Acacb	GCAGTATACGGTGGAGGACG	TTGATGTACTTCACCCGGCC	NM_133904.2
Fasn	TGAGCACACTGCTGGTGAAC	CAGGTTTCGGAATGCTATCCA	NM_007988.3
Scd1	ATCGCCCCTACGACAAGAAC	GTTGATGTGCCAGCGGTA	NM_009127.4
Elovl6	TCCAATGGATGCAGGAAAAC	AAGAGTCAGCGACCAGAGCA	NM_130450.2
Srebf1	GGAGCCATGGATTGCACATT	GGCCAGGGAAGTCACTGT	NM_001276708.1
Cd36	GGAGCCATCTTTGAGCCTTC	TGGATCTTTGTAACCCCAACAAG	NM_001159555.1
Bcl6	GGACTCTACCATCCCCCAAG	GAGGCACATCTCTGTATGCTGT	NM_009744.4

Supplementary Table 2: Antibodies used for Western Blot.

Antibody	Reference	Company	Dilution
GHR	AL47	provided by Dr. SJ Frank	1:2000
GCK	ab88056	Abcam	1:1000
KHK	ab197593	Abcam	1:1000
CHREBP	NB400-135	Novus Biologicals	1:500
SREBP1	MABS1987	Sigma-Aldrich	1:500
CD36	ab133625	Abcam	1:1000
GAPDH	5174S	Cell Signaling	1:1000
LAMIN A/C	2032S	Cell Signaling	1:1000
AKT	9272S	Cell Signaling	1:1000
p-AKT (S473)	9271S	Cell Signaling	1:1000
FOXO1	ab52857	Abcam	1:1000
Goat Anti-Rabbit IgG HRP-linked	7074S	Cell Signaling	1:2000

Supplementary Table 3: Endpoints measured in male and female control and aHepGHRkd mice with or without rIGF1 or STAT5b^{CA} replacement. Exp 1: food was removed at 0600h, male and female mice were injected with deuterated water at 1200h and sacrificed at 1600h. Exp 2: male mice were fasted overnight (from 1700h to 0900h for 16h) and after that, half of the mice were sacrificed at 0900h and the other half were refed for 6h. Values represent mean \pm SEM Values that do not share a common letter (a, b, c) are statistically different ($p < 0.05$). NEFA: non-esterified fatty acid; TG: triglycerides; 3-HB: 3-hydroxybutyrate; (F): fasting; (R) refed.

Experiment 1: post-absorptive state								
	MALES				FEMALES			
	Ctrl	Kd	Kd+rIGF1	Kd+STAT5b ^{CA}	Ctrl	Kd	Kd+rIGF1	Kd+STAT5b ^{CA}
Glucose (mg/dL)	178 \pm 12.33	178.9 \pm 10.77	168.3 \pm 9.003	180.6 \pm 7.165	134.6 \pm 7.269	166.9 \pm 14.67	138.2 \pm 10.41	139 \pm 15.44
NEFA (mEq/L)	1.015 \pm 0.082	1.142 \pm 0.076	1.219 \pm 0.049	1.182 \pm 0.089	0.601 \pm 0.038	0.699 \pm 0.051	0.548 \pm 0.050	0.585 \pm 0.075
TG (mg/dL)	18.76 \pm 3.724	21.01 \pm 2.492	20.01 \pm 2.231	18.99 \pm 2.586	9.93 \pm 1.42	11.84 \pm 1.90	9.16 \pm 2.22	13.08 \pm 1.29
3-HB (μ M)	221.6 \pm 25.98 ^a	98.19 \pm 21.87 ^b	181.6 \pm 35.86 ^{a,b}	177.2 \pm 25.37 ^{a,b}	76.75 \pm 11.97	55.26 \pm 14.97	77.63 \pm 21.92	44.41 \pm 9.92
Insulin (μ g/L)	0.414 \pm 0.108 ^{a,c}	1.282 \pm 0.151 ^b	0.287 \pm 0.06 ^a	0.749 \pm 0.11 ^c	0.403 \pm 0.05 ^a	0.778 \pm 0.13 ^b	0.488 \pm 0.06 ^a	0.57 \pm 0.09 ^a
GH (ng/ml)	0.831 \pm 0.344 ^a	15.04 \pm 3.394 ^b	1.891 \pm 0.515 ^a	2.015 \pm 0.468 ^a	3.592 \pm 0.936 ^{a,b}	6.64 \pm 0.944 ^b	3.484 \pm 0.726 ^{a,b}	3.242 \pm 0.664 ^a
IGF1 (ng/ml)	420.7 \pm 26.34 ^a	42.04 \pm 0.29 ^b	378.9 \pm 12.44 ^{a,c}	267 \pm 20.59 ^{b,c}	435.5 \pm 13.47 ^a	98.30 \pm 19.57 ^b	386.1 \pm 39.32 ^a	311.5 \pm 23.76 ^{a,b}

Experiment 2: overnight fast and refeeding 6h								
	Overnight fast				Refed			
	Ctrl	Kd	Kd+rIGF1	Kd+STAT5b ^{CA}	Ctrl	Kd	Kd+rIGF1	Kd+STAT5b ^{CA}
Food intake (g)	-	-	-	-	1.774 \pm 0.07	1.608 \pm 0.09	1.954 \pm 0.07	1.944 \pm 0.11
Glucose (mg/dL)	82.57 \pm 2.77	97.14 \pm 6.34	92.57 \pm 6.83	83.88 \pm 2.60	158.3 \pm 6.18 ^a	136.6 \pm 4.42 ^{a,b}	129.1 \pm 6.49 ^{b,c}	145.9 \pm 8.09 ^{a,c}
NEFA (mEq/L)	1.41 \pm 0.103	1.67 \pm 0.24	1.65 \pm 0.33	1.58 \pm 0.099	0.23 \pm 0.05 ^a	0.52 \pm 0.04 ^b	0.42 \pm 0.08 ^{a,b}	0.34 \pm 0.06 ^{a,b}
TG (mg/dL)	106.9 \pm 9.52	131.6 \pm 14.52	85.71 \pm 11.08	93.27 \pm 8.79	81.68 \pm 7.11 ^a	180.6 \pm 27.53 ^b	131.6 \pm 18.51 ^a	110.7 \pm 18.47 ^a
3-HB (μ M)	1019 \pm 68.42	898.7 \pm 101.4	931.6 \pm 54.45	927.2 \pm 97.6	51.13 \pm 4.39	66.17 \pm 8.26	68.17 \pm 8.06	59.65 \pm 6.43
Insulin (μ g/L)	0.144 \pm 0.05	0.395 \pm 0.16	0.11 \pm 0.03	0.236 \pm 0.06	3.285 \pm 0.38	3.448 \pm 0.62	2.569 \pm 0.56	3.808 \pm 0.63
GH (ng/ml)	3.15 \pm 1.15	24.53 \pm 7.69	0.92 \pm 0.54	1.51 \pm 0.32	14.30 \pm 4.74	34.03 \pm 11.77	10.19 \pm 5.35	9.16 \pm 2.33
IGF1 (ng/ml)	448.4 \pm 58.07 ^a	17.52 \pm 4.87 ^b	560.9 \pm 55.33 ^a	356.1 \pm 60.91 ^a	464.2 \pm 72.98 ^a	33.04 \pm 6.38 ^b	391.1 \pm 69.7 ^a	415.5 \pm 41.75 ^a