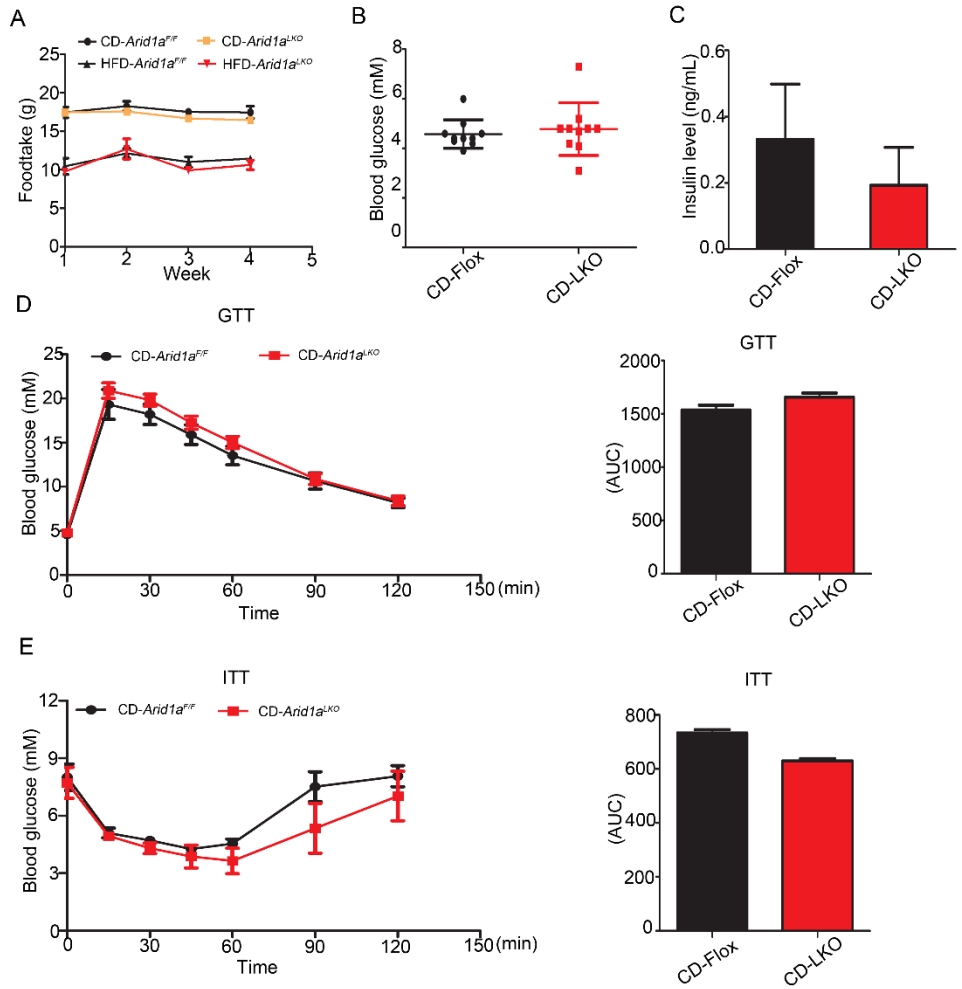
Supplementary Figure 1. *Arid1a* ^{LKO} mice does not exhibit insulin resistance phenotypes on normal chow diet.



Supplementary Fig 1. *Arid1a* ^{LKO} mice does not exhibit insulin resistance phenotypes on normal chow diet.

(A) Food intake (n=10).

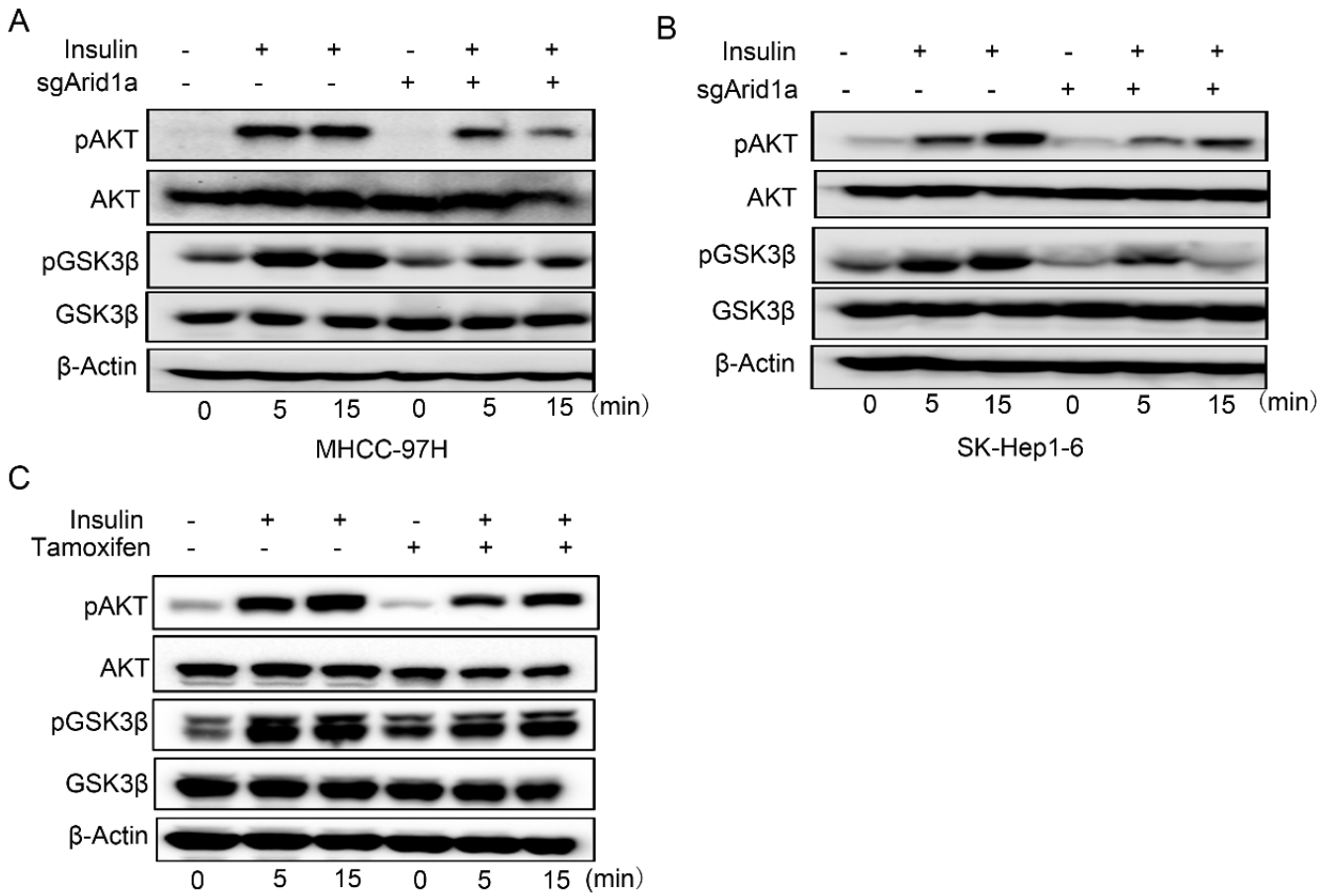
(B) Fasting blood glucose levels of mice on CD (n=10).

(C) ELISA-determined fasting insulin levels of mice on CD (n=8).

(D) Left, measurement of plasma glucose during glucose tolerance test of mice. Right, the calculated AUCs (area under cureves) in mice on CD (n=10).

(E) Left, measurement of plasma glucose during insulin tolerance test of mice. Right, the calculated AUCs (area under cureves) in mice on CD (n=6-7).

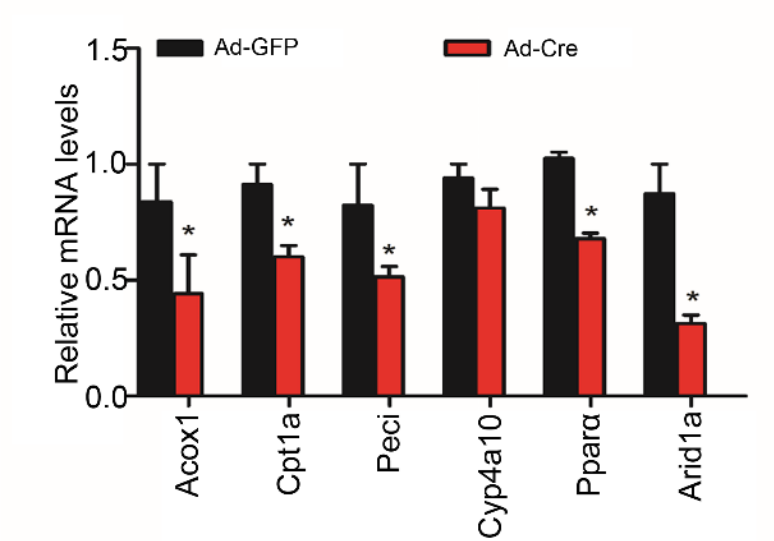
Supplementary Figure 2. *Arid1a* deficiency leads to insulin resistance.



Supplementary Figure 2. *Arid1a* deficiency leads to insulin resistance.

(A-C) MHCC-97H (A), SK-Hep1-6 (B) and primary hepatocytes isolated from tamoxifen-induced ***Arid1a*** ^{LKO} mice (C) were stimulated with insulin (10 nM) for the indicated times, and phosphorylation of AKT and GSK were determined.

Supplementary Figure 3. *Arid1a* deficiency leads to FAO defieciency.



Supplementary Figure 3. *Arid1a* deficiency leads to FAO defieciency.

Real-time analysis of genes involved in fatty acid oxidation in hepatocytes immortalizated with SV40 (*p<0.05). Values are mean ± SD.

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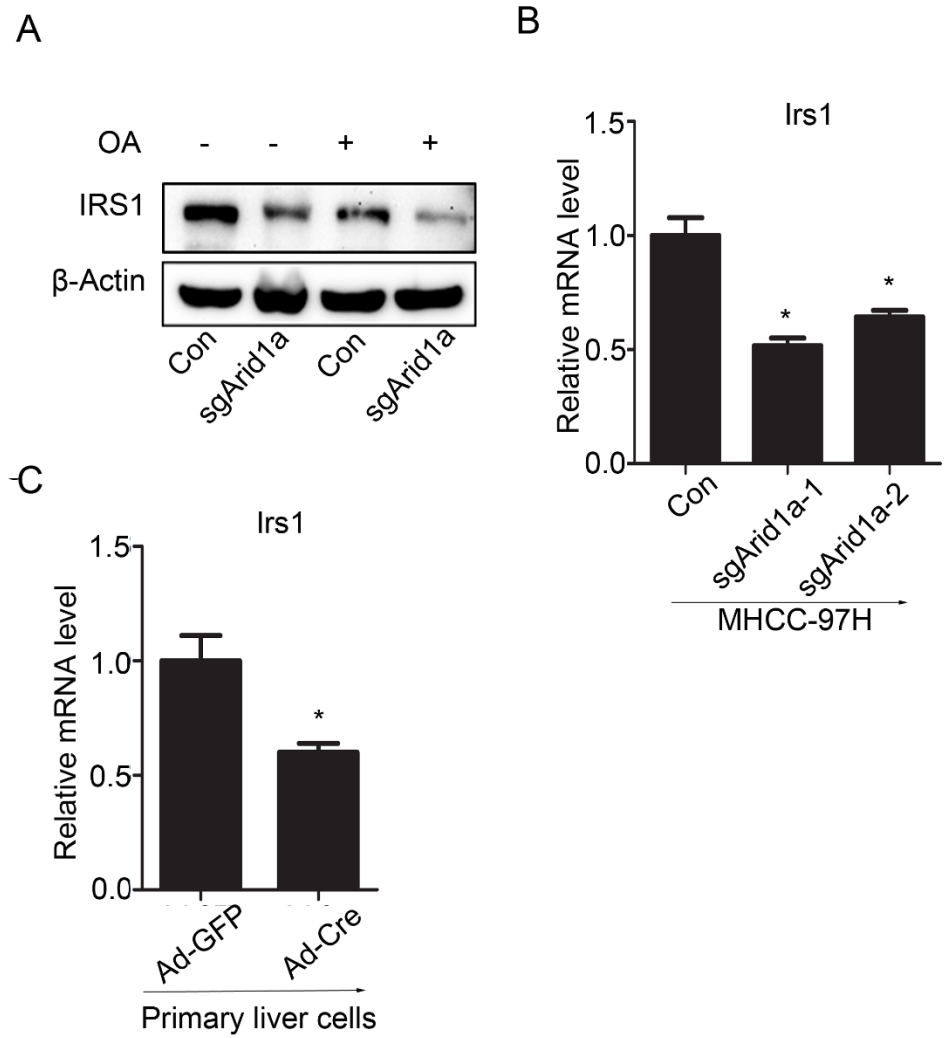
Supplementary Figure 4. *Arid1a* deletion downregulates Irs1 expression.



Supplementary Figure 4. *Arid1a* deletion downregulates Irs1 expression.

(A) Protein expression level of Irs1 in MHCC-97H.

(B-C) mRNA expression levels of Irs1 in MHCC-97H (B) and hepatocytes (C) (*$p<0.05$). Values are mean ± SD.

Table 1. List of primer sequences used in real-time PCR

Gene name	sequence (5'to3')
Acox1-F	CCTGATTCAGCAAGGTAGGG
Acox1-R	TCGCAGACCCTGAAGAAATC
Cpt1a-F	AGTGGCCTCACAGACTCCAG
Cpt1a-R	GCCCATGTTGTACAGCTTCC
Hmgcs2-F	ATACCACCAACGCCTGTTATG
Hmgcs2-R	CAATGTCACCACAGACCACCA
Ppara-F	TTTCGGCGAACTATTCGGCTG
Ppara-R	GGCATTTGTTCCGGTTCTTCTT
Cyp4a10-F	AAGGGTCAAACACCTCTGGA
Cyp4a10-R	GATGGACGCTCTTTACCCAA
Pparr-F	GCTGTTATGGGTGAAACTCT
Pparr-R	TGGCATCTCTGTGTCAACCA
Cox7a1-F	GTCTCCCAGGCTCTGGTCCG
Cox7a1-R	CTGTACAGGACGTTGTCCATTC
Peci-F	CGAGTTGGCTGAATGGAGTA
Peci-R	CCAGCTGTGGGAATCTCTGT
Pgc1a-F	TCCTCCTCATAAAGCCAACC
Pgc1a-R	GCCTTGGGTACCAGAACACT
Mcad-F	CCAGAGAGGAGATTATCCCCG
Mcad-R	TACACCCATACGCCAACTCTT
Mttp-F	GACCACCCTGGATCTCCATA
Mttp-R	AGCGTGGTGAAAGGGCTTAT
Mcp1-F	TTTTTGTCACCAAGCTCAAGAGA
Mcp1-R	ATTTGGTTCCGATCCAGGTT
Tnfa-F	CATCTTCTCAAAATTCGAGTGACAA
Tnfa-R	TGGGAGTAGACAAGGTACAACCC
Cd11b-F	ATCAACACAACCAGAGTGGATTC
Cd11b-R	GTTCCTCAAGATGACTGCAGAAG
Arg1-F	AGACCACAGTCTGGCAGTTG
Arg1-R	CCACCCAAATGACACATAGG
IL6-F	TTCCATCCAGTTGCCTTCTTGG
IL6-R	TTCTCATTTCCACGATTTCCCAG
Srebp1c-F	GTTACTCGAGCCTGCCTTCAGG
Srebp1c-R	CAAGCTTTGGACCTGGGTGTG
Acc1-F	GGACAGACTGATCGCAGAGAAAG
Acc1-R	TGGAGAGCCCCACACACA
Fas-F	GCTGCGGAAACTTCAGGAAAT
Fas-R	AGAGACGTGTCACTCCTGGACTT
Pepck-F	GTGGGAGTGACACCTCACAGC
Pepck-R	AGGACAGGGCTGGCCGGGACG
G6p-F	ATGAACATTCTCCATGACTTTGGG
G6p-R	GACAGGGAACTGCTTTATTATAGG