

PHENYLALANINE METABOLISM

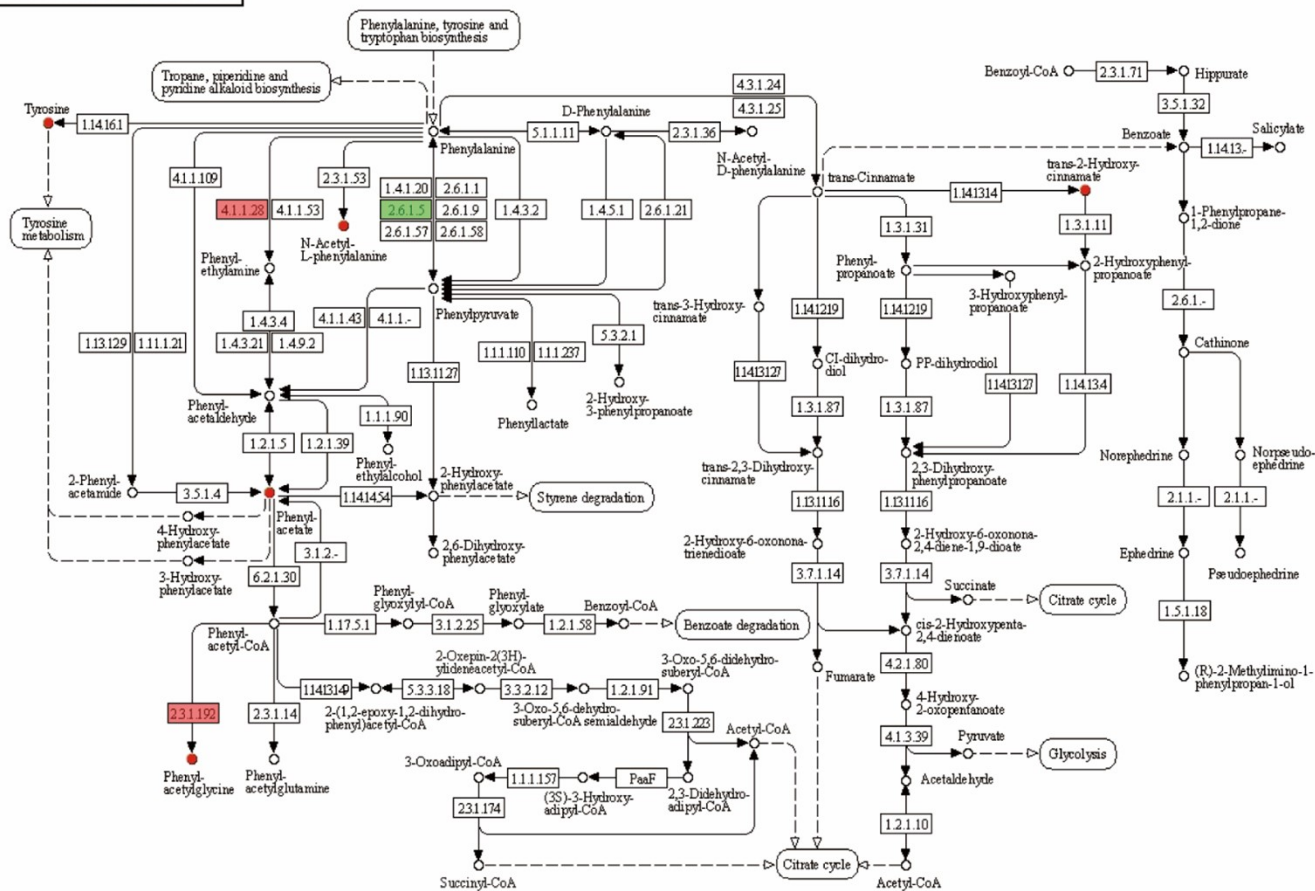


Fig. S1 Phenylalanine metabolism pathway. Red circles/boxes indicate upregulation of the metabolites/genes, while green circles/boxes indicate downregulation of the metabolites/genes.

AMPK SIGNALING PATHWAY

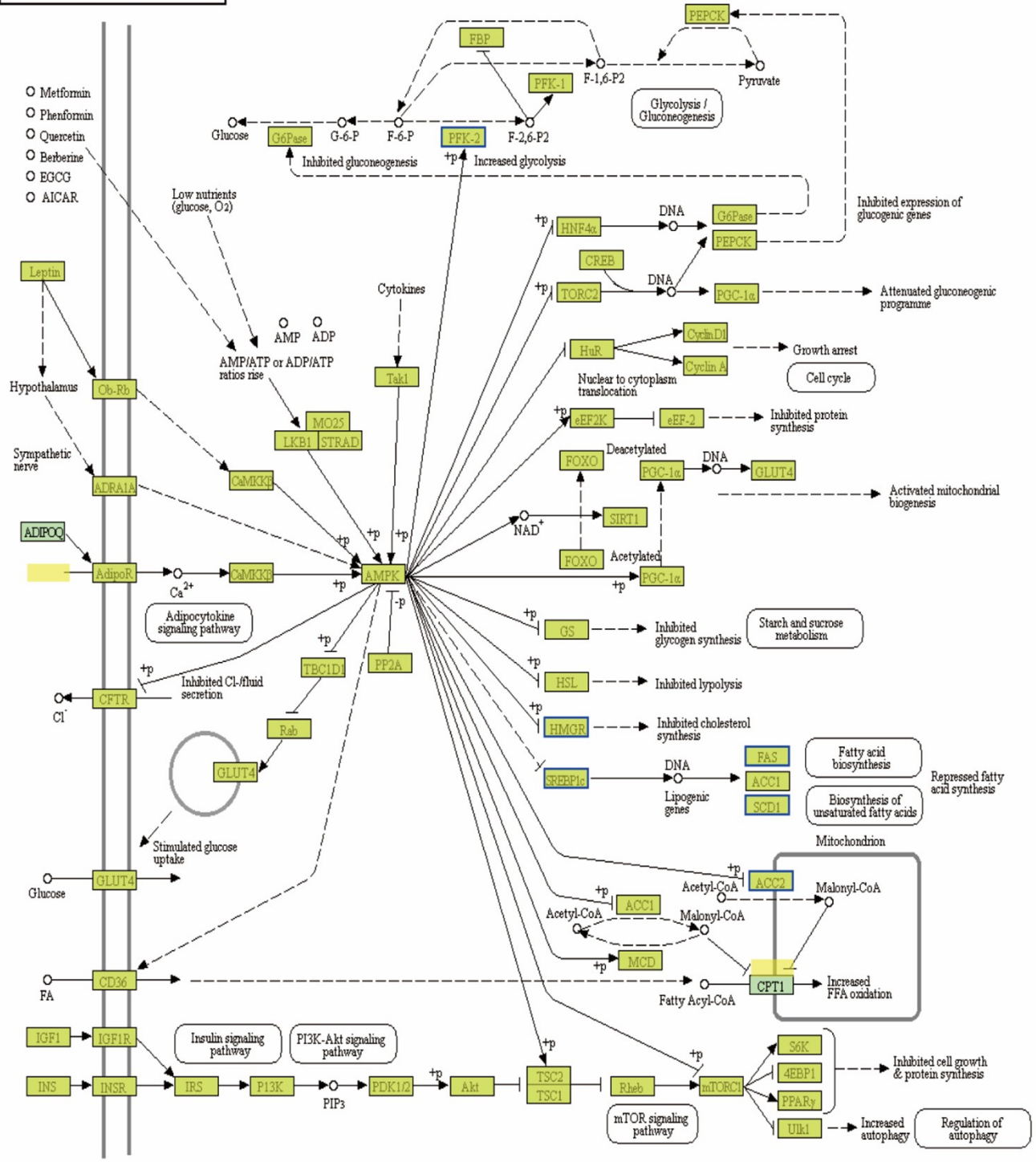


Fig. S4 AMPK signaling pathway. Blue boxes indicate downregulation of the genes.

AMINOACYL-tRNA BIOSYNTHESIS

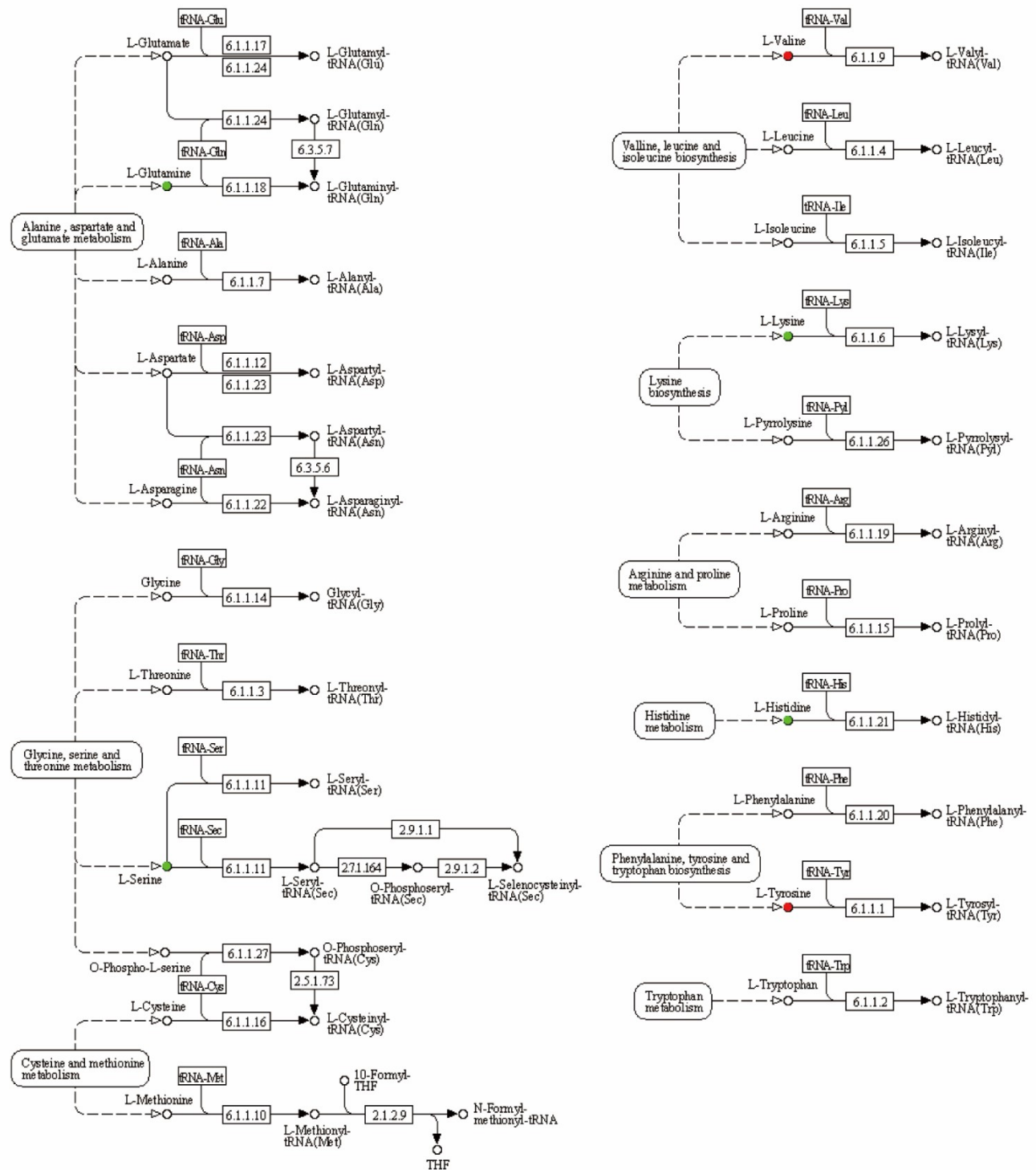


Fig. S5 Aminoacyl-tRNA biosynthesis pathway. Red circles indicate upregulation of the metabolites, while green circles indicate downregulation of the metabolites.

Table S1 Primers for qRT-PCR validation of differential gene expression levels in mouse liver

Genes	Primers	Primer sequence (5'-3')
<i>Ehhadh</i>	Ehhadh-F	ATGTGGGTTGGAAAGTTCGC
	Ehhadh-R	ACCAGCCCTTACCTGTCTTC
<i>Ddc</i>	Ddc-F	CTACTGGCTGCTCGGACTAA
	Ddc-R	GGAATGCGCCTGATCAGATG
<i>Gm4952</i>	Gm4952-F	TGCTCCATTTGCGAAGTTCA
	Gm4952-R	GGTTTCCCTGGTTCATGTGG
<i>Tat</i>	Tat-F	CAATCCCATCCGAGCCATTG
	Tat-R	CTTGGGTCACTTCAGGGTCT
<i>Acmsd</i>	Acmsd-F	TTCTCTGTTCGTGCATCCCT
	Acmsd-R	AACACCCCACCCATGATCAT
<i>Hmgcr</i>	Hmgcr-F	AGTGGGAACTATTGCACCGA
	Hmgcr-R	ACACCTCTCTCACCACCTTG
<i>Pfkfb3</i>	Pfkfb-F	TGACTCGCTACCTCAACTGG
	Pfkfb-R	AAGGCACACTGTTTTTCGGAC
<i>Srebf1</i>	Srebf-F	GCAGTGGTGGTAGTACTCT
	Srebf-R	AGGATTGCAGGTCAGACACA
<i>Fasn</i>	Fasn-F	GCTTCGCCAACTCTACCATG
	Fasn-R	CCATCGCTTCCAGGACAATG
<i>Scd1</i>	Scd1-F	CGAGAGAAGGTGAAGACGGT
	Scd1-R	GCAGCAGGACCATGAGAATG

<i>Acacb</i>	Acacb-F	AGAGGCCGAGAACACAAGAA
	Acacb-R	GGATGGAGCGCATACTTG
<i>β-Actin</i>	β-actin-F	TGTCCACCTTCCAGCAGATGT
	β-actin-R	AGCTCAGTAACAGTCCGCCTAG

Table S2 The blood lipid indices and body weight in mice.

Group	T C (mmol/L)	TG (mmol/L)	HDL-C (mmol/L)	LDL-C (mmol/L)	body weight (g)
ND	2.44±0.34 ^b	0.98±0.17 ^b	2.68±0.28 ^a	0.63±0.04 ^a	42.77±1.69 ^b
HFD	3.81±0.62 ^a	1.32±0.24 ^a	2.92±0.37 ^a	0.77±0.22 ^a	47.76±2.35 ^a

Note: The data in the table are the mean ± standard deviation, and the different superscripts in the same column indicate significant differences ($p < 0.05$).

Table S3 The detection results of RNA samples.

Samples	Concentration (ng/ μ L)	Total amount (μ g)	RQN	Quality testing results
ND1	1870.70	65.47	9.80	A
ND2	2258.60	79.05	9.90	A
ND3	1076.10	37.66	9.90	A
ND4	2457.30	86.01	9.90	A
HFD1	2201.30	77.05	9.90	A
HFD2	1967.70	68.87	10.00	A
HFD3	2151.50	75.30	9.90	A
HFD4	2035.00	71.23	10.00	A
LOV1	1373.80	116.77	10.00	A
LOV2	2306.10	80.71	10.00	A
LOV3	2418.70	84.65	9.90	A
LOV4	1843.30	64.52	10.00	A
MFQ1	1341.60	46.96	9.90	A
MFQ2	1531.50	53.60	9.90	A
MFQ3	1973.00	69.06	10.00	A
MFQ4	2181.60	76.36	9.80	A

RQN: RNA Quality Number.