

Appendices

Formulas of perfusates

1. 10 × EBSS without Ca^{2+} and Mg^{2+}

Sodium chloride: 32.85 g

$\text{Na}_3\text{PO}_4 \cdot \text{H}_2\text{O}$: 1.455 g

Potassium chloride: 1.95 g

D-glucose: 4.85 g

Distilled water: 500 mL

2. 10 × EBSS with Ca^{2+} and Mg^{2+}

Calcium chloride: 1.325 g

Potassium chloride: 2.0 g

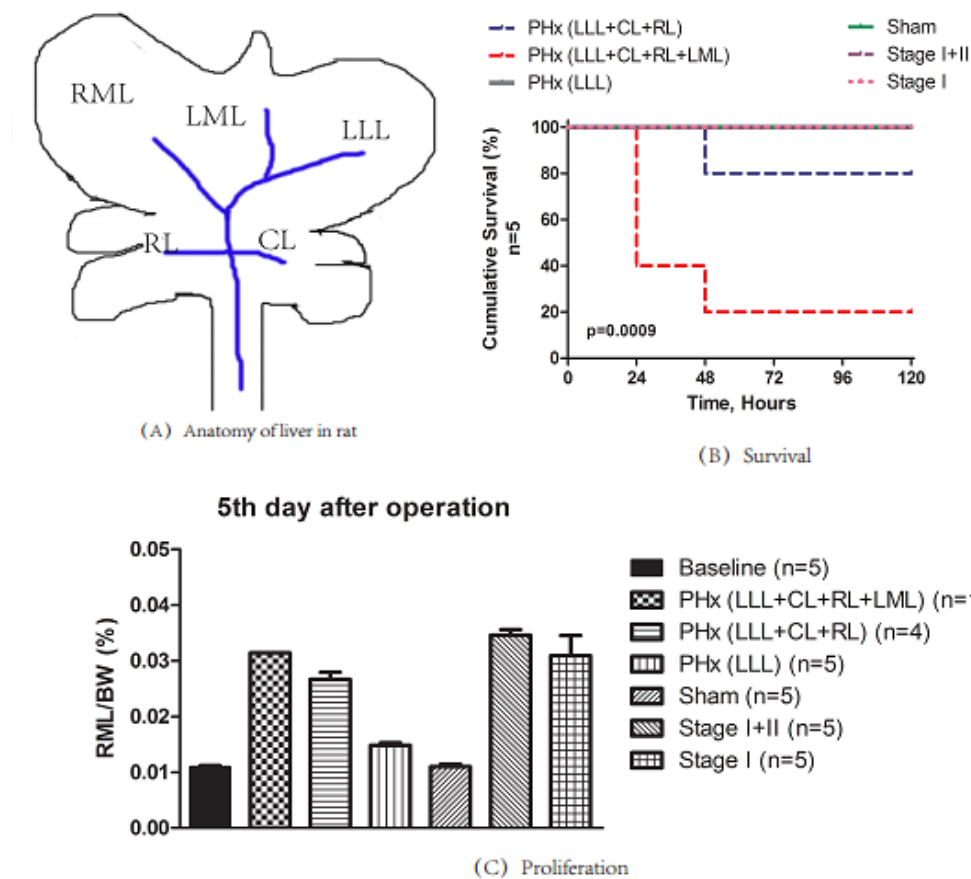
MgSO_4 : 0.985 gram

Sodium chloride: 34.0 g

$\text{NaH}_2\text{PO}_4 \cdot 2\text{H}_2\text{O}$: 0.78 g

D-glucose: 5.0 g

Distilled water: 500 mL



Supplement Figure 1 Survival and proliferation of different groups. A: The anatomy of rat liver. B: Survival of different groups, three PHx group represent the different extent of resection; C: Proliferation of each group. LLL: Left lateral lobe; CL: Caudate lobe; RL: Right lobe; LML: Left middle lobe; RML: Right middle lobe; BW: Body weight.

Supplement Table 1 Primer sequences

Name	Forward primer	Reverse primer	Name	Forward primer	Reverse primer
ABL	AAGGCCTAGTCCTGA TTGCC	ACACTCGTTTCTTTTCG GGCT	PCK2	ACCATGCCGTAGCATC CAAA	TGGGGAGCTTCCGGAT AAGA
AAT	ATATAGACGCACCAC CAGCC	GGTGCCATTTTCCTTG GCAAT	PDK3	TAGGTGGTGGAGTCCC ACTT	ACCAAATCCAGCCAA GGGAG
TTR	CGCAGAGGTGGTTTT CACAG	GGCATCTTCCCGAGT TGCTA	GALM	CGCAGATGCATACTTG CCTG	GTGATGCACCCTTGCA CAAA
Transferrin	TGCTTCAGAGTGCTC CCTTG	AGCCCAGGTAGCCGA TCATA	ALDOB	CTCCCTTGGCTGTACC TGTC	TGGAAAAGGATCACT CCGCC
CK18	GATATCCGTGTCCCG CTCTG	TTCGCAAAGATCTGA GCCCT	BPGM	GGTTTCCTTGCAGCTG TACT	CCTCCAGTCCGTCCT GTTA
Sox9	TCTGGAGACTGCTGA ACGAG	ATGTGAGTCTGTTCG GTGGC	APOA1	GTCTTCCTGACAGGTT GCCA	GCTGTTTGCCCAAAGT GGAG
Epcam	CGGGGATTGTTGTCCT GGTTA	AAGCAGTGACCCTCG AAAGG	ALDH2	GCTGACAAGTACCAC GGGAA	CGGGAAGTTCCACGG AATGA
DLK1	CAATGTCTGCAGGTG TGAGC	CACGCAAGTCCCATT GTTGG	ACAD M	ACCCCAGTTCGCTTAG CTTC	AACGGGTATTCCCCGC TTTT

LGR5	CACCTCCTACCTGGA CCTCA	GCATTTCCAGCAAGA CGCAA	APOE	CCGGAGGCTAAGGAG TTGTTT	CCAGGCATCCTGTCAG CAAT
AFP	GGGACTGGCCGACAT TTACA	GTGGAGGGACGTAGG TTTCG	PRKAG 3	TCTTTGTGGACCGACG AGTG	ACCAGCCTATGCACCT GTTC
CK19	CCTTCCGTGATTACA GCCAGT	GTTCTGTCTCAAACCT GGTCCG	BDH1	CCTGAGAAGGGAATG TGGGG	CATAGCGTAGGCAGT CCGAG
ICAM1	GCCTGGGGTTGGAGA CTAAC	ATGAGGTTCTTGCCC ACCTG	LDLR	AGGAGTGCAAGACCA ACGAG	TACGTACCTCATGGCG GTTG
CYP3A1	CCCAGAAAGGTTTCAG CAAGG	TTCAGCAGAACTCCT TGAGGG	ACOX3	TTGGGGGACACGGCT ATCTA	AGCTCCGTCTTGGAGA GGAT
CYP1A1	GGTTCTGGATACCCA GCTGAC	TGTGTCAAACCCAGC TCCAA	HSD3B7	AATGGAAGGAAGGGA CTGCG	GAAATACACCTGGCC ACCCA
CYP2D6	GCTAAAGGTGTGGTG CTTGC	GGTCTCCATAGTCGA AGCGG	NPC1	TACCGAGAGCTGTAG CCCC	TGGACAGAGTTCCTGC ACTAAG
CYP2B6	TCCAGCCAGATGTTT GAGGTC	AAAGTCTCGGGGAGC ATTGG	ACOX2	CTTGATCCGGAAGGAT GCCA	TGCTTCTCGGTCCCAA ATCC
CYP7B1	TGCGTGACGAAATTG ACAGC	GAATAGCGCTTTCCA GGCAG	BAAT	TCGAACTACGGTTTTG GCGA	ACCCCCATGTAGTCTC CTCC

HNF1	GTCCAGTTTTCCCAG	GAGGTGAAGACCTGC	AKR1D	TACCGGCATATTGATG	CTCTCCAGGCTTAAAG
	CCACT	TTGGT	1	GGGC	GCCA
HNF4	CCAGCTGGGTATACT	TTCAGATGGGGATGT	GBA2	GGACAGTGGACCCCA	CACTTCAAGTACCTCA
	TGGTCA	GTCTGG		GAATG	AGCCCA
CEBPA	GGGAGCAAACATGTG	TCTAAGGACAGGGAC	GPX3	TCCTGAAGAACTCCTG	TTGACGTTGCTGACTG
	CCTTG	GGAGG		CCCT	TGGT
GATA4	GCGGAAGGAGGGGA	TGAATGTCTGGGACA	ADH6	AAGTGGGCAATGTATC	TGCCATTGGAGCATCT
	TTCAAA	TGGAGC		CGCT	TGGT
FOXA1	GTTCCGCACAGGGTT	CTGACCGGGACAGAG	ABCC1	AACTGTCCGTGACCCG	AATCCGTACAGGCTGC
	GGATA	GAGTA		AATC	TTCC
KLF15	AGCTGCAGACAAGTC	TATCCCCTGGGCAT	ADH1C	CACCATGACTTCTGCC	AGCCATGAAGTCAGC
	ACCAC	TTCGG		CTGT	GACAA
PCBD1	GACTTCAACAGGGCT	CAGAAAGACCGGCA	NAT2	ACTTGTGCAATTGACT	CCCGCAATGGATGTTC
	TTTGGC	CATTCTG		GGAAACC	AAGTT
HNF6	CATGCGTGCACACGT	TGCATTTAGGTTGTGG	FAAH	GTTACCTTGGACCCT	AGAAGGGAATCAGCG
	AAACA	GCCT		ACCG	TGTGG
G6PC	GCTGGAGTCTTGTC	TTGCGGTACATGCTG	HK2	GGCGAGAGGAGTTTG	GCAGCCATTGTCCCA
	GGCAT	GAGTT		ACCTG	AATG

PDK4	AAAACCGCCCTTCC	AAACCAGCCAAAGG
	TGACA	GGCATT

Primers are designed by BLAST online.

Supplement Table 2 Data of quantitative polymerase chain reaction of functional genes

Name/Group	Day2 ALPPS	Day2 PHx	Day2 Sham	Day5 ALPPS	Day5 PHx	Day5 Sham
G6PC	1.08	1.26	0.65	0.41	0.68	1.91
PDK4	0.45	1.44	1.12	0.02	0.14	2.84
PDK3	0.31	1.92	0.77	0.74	1.62	0.64
PCK2	0.30	1.57	1.12	0.38	0.54	2.08
GALM	0.91	1.38	0.72	0.87	1.38	0.75
ALDOB	1.00	1.27	0.73	0.87	1.23	0.90
BPGM	0.41	1.91	0.68	1.02	1.35	0.63
APOA1	0.40	1.84	0.76	0.37	2.15	0.48
ALDH2	1.05	1.24	0.70	0.75	1.01	1.24
ACADM	0.66	1.57	0.77	0.26	2.32	0.42
APOE	0.86	1.50	0.65	0.80	1.01	1.19
PRKAG3	0.87	1.46	0.67	0.95	0.96	1.09
BDH1	1.27	1.20	0.53	0.87	1.26	0.86
LDLR	1.71	0.75	0.54	0.68	1.34	0.98
ACOX3	1.48	1.01	0.51	0.58	1.02	1.40
HSD3B7	1.46	1.12	0.42	0.40	1.13	1.47

ACOX2	1.00	1.52	0.48	0.55	0.99	1.45
BAAT	1.42	1.12	0.46	0.58	1.28	1.14
AKR1D1	1.72	1.03	0.25	0.67	1.59	0.74
GBA2	1.33	1.37	0.30	0.88	1.36	0.76
NPC1	1.34	1.49	0.17	0.33	1.18	1.50
GPX3	0.93	1.50	0.56	0.90	0.91	1.19
ADH6	0.81	1.91	0.28	0.80	1.42	0.77
ADH1C	1.50	1.24	0.27	0.68	1.54	0.78
NAT2	1.35	1.22	0.43	0.66	0.91	1.43
FAAH	0.90	0.85	1.24	0.45	2.16	0.39
HK2	1.33	1.10	0.57	0.20	0.40	2.41
ABCC1	1.28	0.70	1.02	0.19	0.56	2.26

Data are presented as relative expression of corresponding sham group at day 2 or 5 respectively, at RNA level.