Supplementary materials

Table S1. Composition and nutrient levels of basal diet

Ingredients	Percentage (%)	Nutrient levels	Percentage (%)
Corn	65.00	DE (MJ/kg)	13.35
Soybean meal	22.00	Crude protein	16.80
Wheat bran	9.25	NDF	11.88
Soybean oil	0.70	ADF	4.12
Lys	0.18		
Thr	0.01		
$CaHPO_3$	0.69		
Rock powder	0.87		
Salt	0.30		
Premix[a]	1.00		
Total	100		

Note: [a]Supplied the following per kg of diet: vitamin A, 10,800 IU; vitamin D3, 4,000 IU; vitamin E, 40 IU; vitamin K3, 4 mg; vitamin B1, 6 mg; vitamin B2, 12 mg; vitamin B6, 6 mg; vitamin B12, 0.05 mg; biotin, 0.2 mg; folic acid, 2 mg; niacin, 50 mg; D-calcium pantothenate, 25 mg; Fe, 100 mg as ferrous sulfate; Cu, 150 mg as copper sulfate; Mn, 40 mg as manganese oxide; Zn, 100 mg as zinc oxide; I, 0.5 mg as potassium iodide; and Se, 0.3 mg as sodium selenite.

Table S2. List of primers used in the present study

Target gene	Forward primer (5'-3')	Reverse primer (5'-3')	Reference
For host genes of pig			
FXR	TATGAACTCAGGCGAATGCCTGCT	ATCCAGATGCTCTGTCTCCGCAAA	[1]
FGF19	ACACCATCTGCCCGTCTCT	CCCCTGCCTTTGTACAGC	[2]
FGFR4	GCTCAGAGGTGGAGGTCCTA	GCCTGCCAGACAGGTGTATT	[3]
SHP	AGTGCTGCCTGGAGTCCTTA	CCTTTCAGGTAGGCGTATTCC	[2]
ASBT	TGGATCTGAGCATCAGCATGAC	GGCACAGCGGCATCATTC	[3]
IBABP	GCAAGAAGTTCAAGGCCACT	GGTGGTAGTTGGGGCTGTT	[2]
OSTα	CCTGTTTCTCATCCCTGACG	AGCAGCGCTCTCCTCAGA	[2]
OSTβ	CAGGAGCTGCTGGAAGAGAT	GACCATGCTTATAATGACCACCA	[2]
IL-1β	AGTGGAGAAGCCGATGAAGA	CATTGCACGTTTCAAGGATG	[4]
IL-6	TGGCTACTGCCTTCCCTACC	CAGAGATTTTGCCGAGGATG	[4]
TNF-α	CCACGCTCTTCTGCCTACTGC	GCTGTCCCTCGGCTTTGAC	[4]
NF-κB	CTCGCACAAGGAGACATGAA	ACTCAGCCGGAAGGCATTAT	[4]
β-Actin	AGAGCGCAAGTACTCCGTGT	ACATCTGCTGGAAGGTGGAC	[4]
For bacteria			
Total bacteria	GTGSTGCAYGGYYGTCGTCA	ACGTCRTCCMCNCCTTCCTC	[5]
BSH	ATGGGCGGACTAGGATTACC	TGCCACTCTCTGTCTGCATC	[6]

Note: FXR, farnesol x receptor; FGF19, fibroblast growth factor 19; FGFR4, fibroblast growth factor receptor 4; SHP, small heterodimer partner; ASBT, apical sodium-dependent bile acid transporter; IBABP, ileal bile acid-binding protein; OSTα/β, organic solute transporter α/β; IL, interleukin; TNF-α, tumor necrosis factor-α; NF-κB, nuclear factor kappa-B; BSH, bile-salt hydrolase.

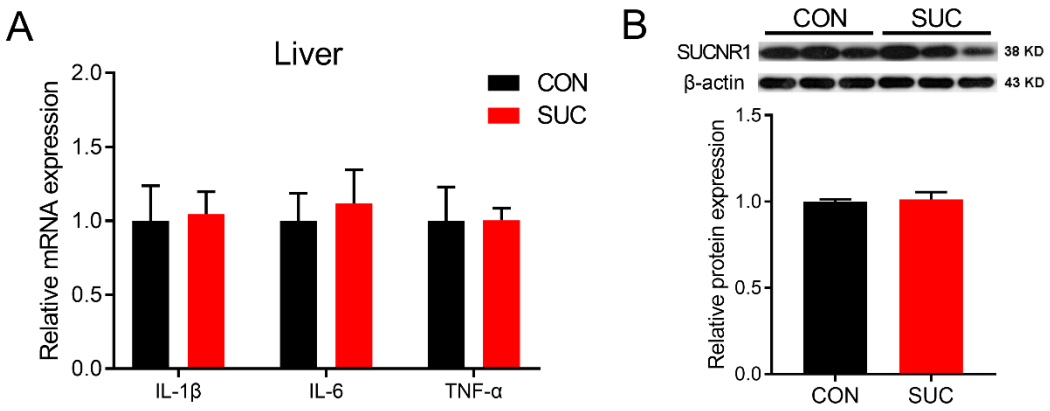

Fig. S1 Effects of dietary succinate on the expression levels of inflammatory cytokines and SUCNR1 in liver. The mRNA expression levels of IL-1β, IL-6 and TNF-α (A). The protein expression level of SUCNR1 (B). CON, control group; SUC, succinate supplemented group; IL, interleukin; TNF-α, tumor necrosis factor-α; SUCNR1, succinate receptor 1.

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