

Supplementary Materials

Supplementary table 1. Purified diet composition of experiment 1

Ingredient(g)	PD-LO	PD-SO
Casein	251.2	251.2
Dextrin	281.9	281.9
Sucrose	249.0	249.0
Lard	112.7	0
Soybean oil	0	112.7
Cellulose	53.9	53.9
Mineral, Vitamin	51.2	51.2
TBHQ	0.00	0.02
Total	1000	1000
Calorie		
Caloric density (Kcal/g)	4.1	4.1
Protein (%)	22.2	22.2
Carbohydrate (%)	52.7	52.7
Fat (%)	25	25
Total (%)	100	100

The different diets were prepared in accordance to the guidelines of Laboratory Animals Nutrients for Formula Feeds [GB 14924.3-2010] of China. PD-LO, purified diet including lard; PD-SO, purified diet including soybean oil;

Supplementary table 2. Whole foods diet composition of experiment 1

Ingredient(g)	WFD-LO	WFD-SO
Basic feed	886	886
Casein	43	43
Sucrose	1	1
Lard	59	0
Soybean oil	0	59
Cellulose	3	3
Mineral, Vitamin	9	9
TBHQ	-	-
Total	1000	1000
Calorie		
Caloric density (Kcal/g)	3.7	3.7
Protein (%)	22	22
Carbohydrate (%)	53	53
Fat (%)	25	25
Total (%)	100	100

The composition of basic feed ingredients: corn starch, wheat bran, soybean meal, fish meal, brewer yeast, vegetable oil, salt, lysine, methionine. The different diets were prepared in accordance to the guidelines of Laboratory Animals Nutrients for Formula Feeds [GB 14924.3-2010] of China. WFD-LO, whole foods diet including lard; WFD-SO, whole foods diet including soybean oil.

Supplementary table 3. Purified diet composition of experiment 2

Ingredient(g)	PD-L	PD-H
Casein	251.2	284.9
Dextrin	281.9	198.6
Sucrose	249.0	167.3
Lard	112.7	230.0
Cellulose	53.9	61.2
Mineral, Vitamin	51.2	58.1
TBHQ	0.00	0.00
Total	1000	1000
Calorie		
Caloric density (Kcal/g)	4.1	4.6
Protein (%)	22.2	22.2
Carbohydrate (%)	52.7	32.7
Fat (%)	25	45
Total (%)	100	100

The different diets were prepared in accordance to the guidelines of Laboratory Animals Nutrients for Formula Feeds [GB 14924.3-2010] of China. PD-L, low-fat purified diet; PD-H, high-fat purified diet.

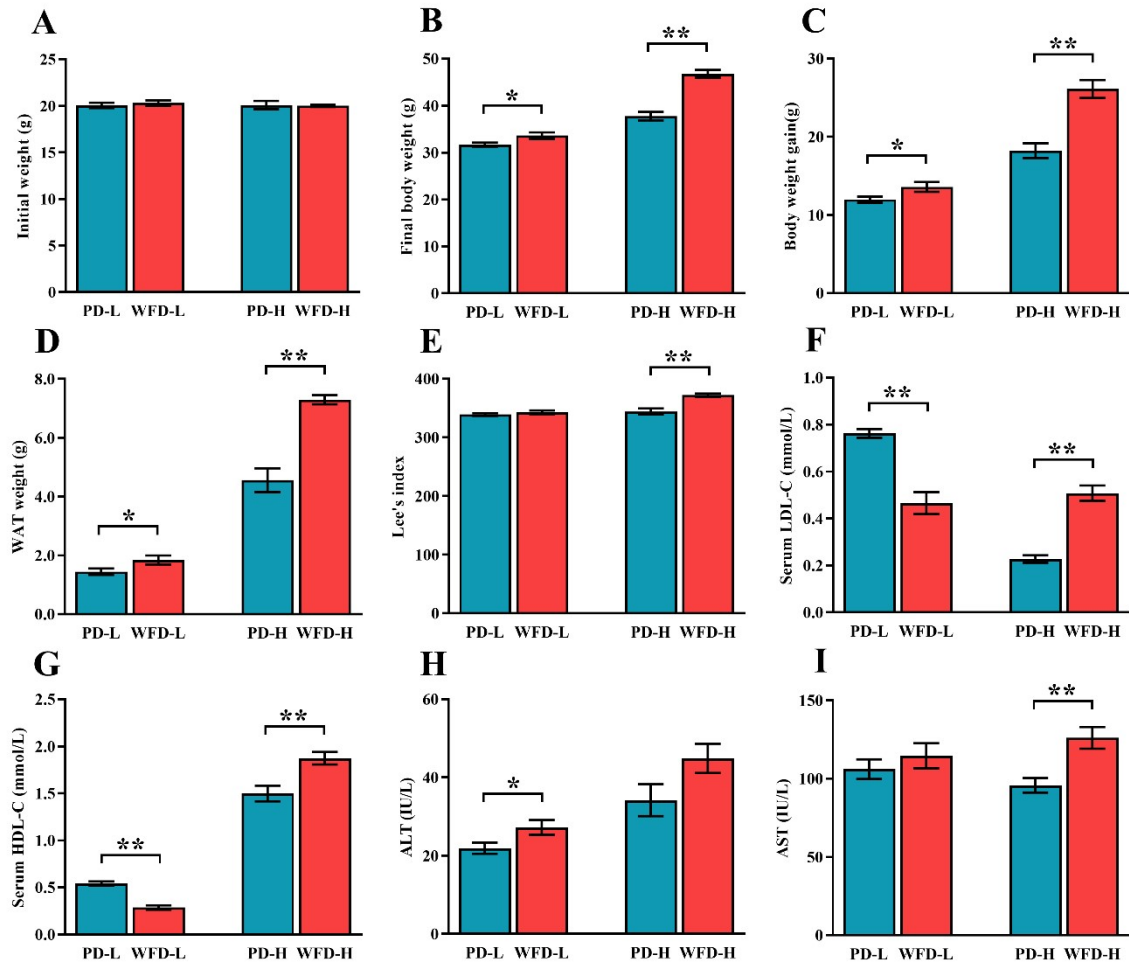
Supplementary table 4. Whole foods diet composition of experiment 2

Ingredient(g)	WFD-L	WFD-H
Basic feed	886	644
Casein	43	134
Sucrose	1	1
Lard	59	185
Cellulose	3	1
Mineral, Vitamin	9	27
TBHQ	-	-
Total	1000	1000
Calorie		
Caloric density (Kcal/g)	3.7	4.3
Protein (%)	22	22
Carbohydrate (%)	53	33
Fat (%)	25	45
Total (%)	100	100

The composition of basic feed ingredients: corn starch, wheat bran, soybean meal, fish meal, brewer yeast, vegetable oil, salt, lysine, methionine. The different diets were prepared in accordance to the guidelines of Laboratory Animals Nutrients for Formula Feeds [GB 14924.3-2010] of China. WFD-L, low-fat whole foods diet; WFD-H, high-fat whole foods diet.

Supplementary table 6. Antibody information

Reagent	Manufacturer	Article number
SREBF1 Antibody (SREBP-1c)	CUSABIO BIOTECH CO.,Ltd	CSB-PA022657LA01HU
FABP2 Antibody	CUSABIO BIOTECH CO.,Ltd	CSB-PA133408
DGAT2 Antibody	CUSABIO BIOTECH CO.,Ltd	CSB-PA850407LA01HU
SLC5A1 Antibody (SGLT1)	CUSABIO BIOTECH CO.,Ltd	CSB-PA021675LA01HU
HMGCS1 Polyclonal Antibody	Proteintech Group, Inc.	17643-1-AP
GLUT2 Polyclonal Antibody	Proteintech Group, Inc.	20436-1-AP
HRP-conjugated goat anti-rabbit universal secondary antibody	DAKO	K5007



Supplementary Figure 1. Effect of dietary patterns on growth and metabolic performance in mice. (A) Initial weight; (B) body weight; (C) body weight gain; (D) perirenal fat and epididymal fat pads weight at the end of the 16-week period; (E) lee's index; (F and G) serum LDL-cholesterol (LDL-C) and HDL-cholesterol (HDL-C); (H) the serum enzyme activity of alanine aminotransferase (ALT); (I) the serum enzyme activity of aspartate aminotransferase (AST). All data are represented as mean \pm SEM. Data were analyzed using independent sample t-tests. * $p < 0.05$; ** $p < 0.01$ for PD-L versus WFD-L or PD-H versus WFD-H. PD-L, low-fat purified diet, $n = 15$; WFD-L, low-fat whole foods diet, $n = 14$; PD-H, high-fat purified diet, $n = 12$; WFD-H, high-fat whole foods diet, $n = 15$; WAT, white adipose tissue.