Polysaccharide from *Rosa roxburghii* Tratt fruit attenuates hyperglycemia, hyperlipidemia and regulates colon microbiota in diabetic *db/db* mice

Supplementary data

Table S1 Chemical components of RTFP

Composition (%, g/g)	RTFP
Carbohydrates	63.79 ± 0.73
Proteins	4.10 ± 0.58
Uronic acids	14.78 ± 0.06
Moisture	11.10 ± 0.25
Monosaccharide composition (molar %)	
Arabinose	33.8 ± 1.03
Galactose	37.3 ± 1.65
Glucose	20.7 ± 0.84
Mannose	1.74 ± 0.03
Xylose	3.43 ± 0.06
Fucose	2.95 ± 0.16

Table S2 Composition of commercial solid diet

Nutrient	g	kcal
Casein	200	800
L-Cystine	3	12
Corn Starch	397	1590
Maltodextrin	132	528
Sucrose	100	400
Cellulose	50	0
Soybean Oil	70	630
t-Butylhydroquinone	0.014	0
Mineral Mix	35	0
Vitamin Mix	10	40
Choline Bitartrate	2.5	0
Total	1000	4000

Table S3 Primer Sequences for Quantitative RT-PCR

Genes	Forward	Reverse	Length of product
GAPDH	5′-GCTGGAGTCTTGTCAGGCAT-3′	5′-CCCTGTACATGCTGGAGTTGAG-3′	146
FAS	5′-GGCCCCTCTGTTAATTGGCT-3′	5′-GGATCTCAGGGTTGGGGTTG-3′	149
ACC-1	5′-CGTGTAATGAGTAGCCAGTTAGAG-3′	5′- CGATCTATCCGTCGGTGGTC-3′	250
SREBP-1c	5′-GGGGCCTGACAGGTGAAATC-3′	5′-GGAGGCCAGAGAAGCAGAAG-3′	247
PPAR-γ	5′-ATTGAGTGCCGAGTCTGTGG-3′	5′-ACCTGATGGCATTGTGAGACA-3′	220
G6Pase	5′-GCTGGAGTCTTGTCAGGCAT-3′	5′- ATCCAAGCGCGAAACCAAAC-3′	121

Table S4 Biological information statistics of gut microbiota of normal and *db/db* mice*

Groups	Reads	Good's coverage	Mean length
Control	46276±1948[b]	0.9974±0.0002[b]	440±2 [a]
Model	56457±3420[a]	0.9975±0.0001[ab]	441±4 [a]
RTFP-300	52892±3531[ab]	0.9978±0.0001[a]	440±3 [a]
RTFP-600	51880±3915[ab]	0.9975±0.0004[ab]	437±2 [a]
RTFP-900	57847±4387[a]	0.9973±0.0003[b]	440±2 [a]

* Different letters in the same column indicate significant differences at $p < 0.05$.
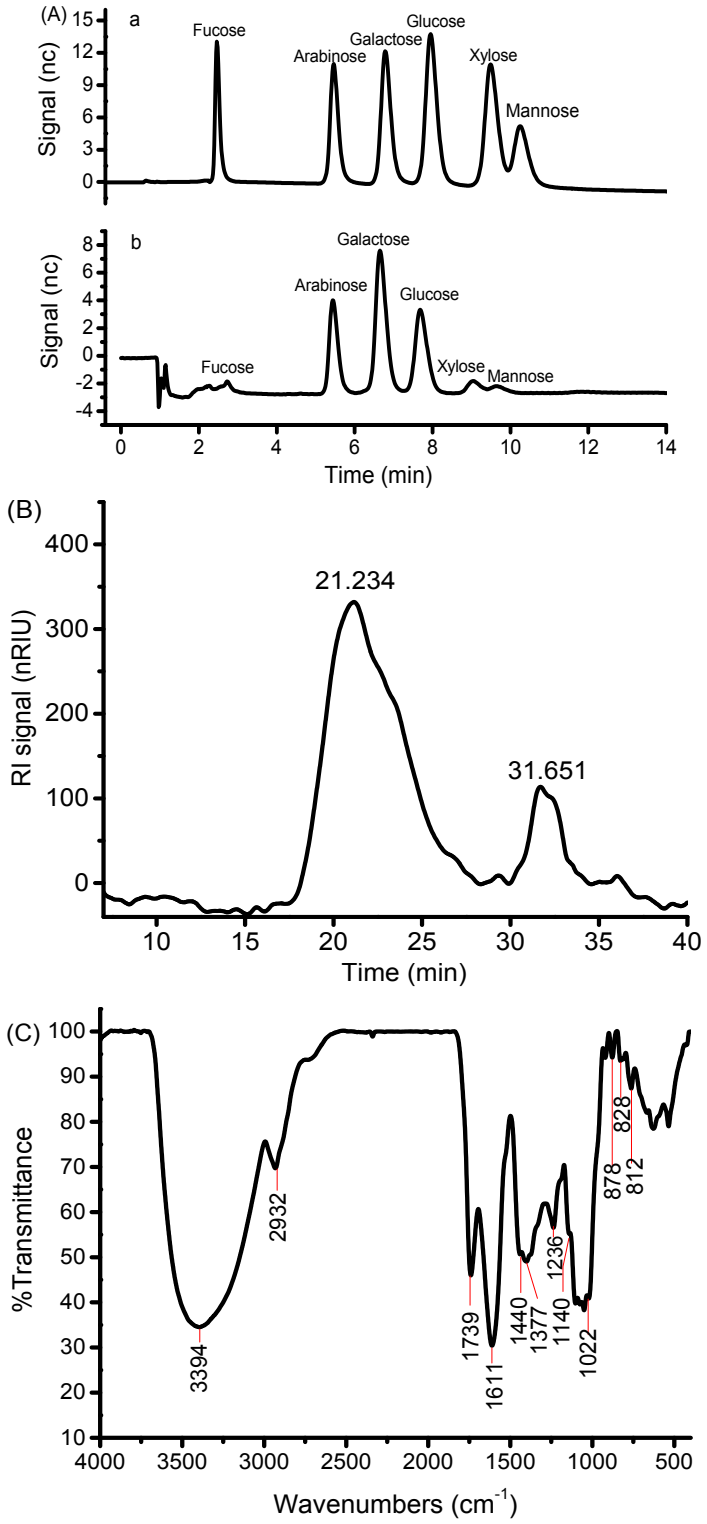
Fig. S1 (A) The chromatograms of the mixture of monosaccharide standards (a) and RTFP hydrolyzate (b); (B) The molecular weight distribution of RTFP; (C) The FT-IR spectrum of RTFP (Published data).