

Table S1 Composition of normal chow and high fat diet

Diet	Normal diet	High fat diet
Energy composition(%)		
Carbohydrate	63.9%	35%
Protein	20.3%	20%
Fat	15.8%	45%
Ingredients (g/kg)		
Casein	200	200
L-Cystine	3	3
Corn starch	397	72.8
Maltodextrin	132	100
Sucrose	100	172.8
Cellulose	50	50
Soybean Oil	70	25
t-Butylhydroquinone	0.014	25
Lard Oil	0	177.5
Mineral Mix	35	10
Di Calcium Phosphate	0	13
Calcium Carbonate	0	5.5
Potassium Bitartrate	0	16.5
Vitamin Mix	10	10
Choline Bitartrate	2.5	2
FD&C Red Dye	0	0.05

Table S2 Primer sequences of genes

Gene	Sequence
GSK-3 β	forward (5'-3') GCCGTCTGCTGGAGTA
	reverse (5'-3') CGCCCATTTGGTAGTT
Akt	forward (5'-3') CAAGCCCAAGCACCGT
	reverse (5'-3') GAATCACCTTCCCAAAGGTG
FAS	forward (5'-3') GGCATCATTGGGCACTCCTT
	reverse (5'-3') GCTGCAAGCACAGCCTCTCT
SREBP-1c	forward (5'-3') TGGCTTGGTGATGCTATGTT
	reverse (5'-3') TAAGGGGTTGGGAGTAGAGG

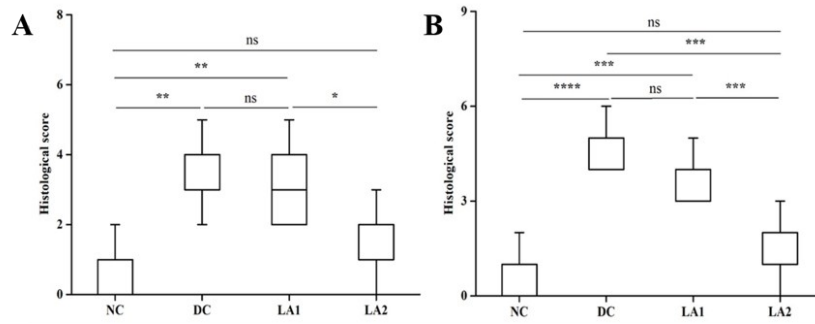


Figure S1 Effects of treatments on histological score of the liver and colon tissues. NC: normal control group; DC: diabetes control group; LA1: diabetes mice + 10^9 CFU/mL *L. acidophilus* KLDS1.1003; LA2; diabetes mice + 10^9 CFU/mL *L. acidophilus* KLDS1.0901. * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$, **** $P < 0.0001$ were regarded as statistically significant.