

Support Information

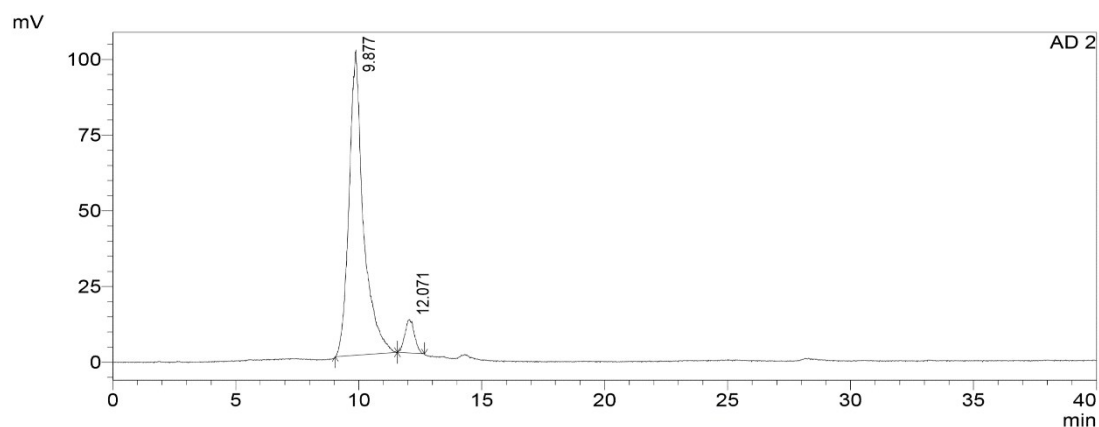


Figure 1. (GlcN)₂ liquid chromatogram. The liquid phase retention time of (GlcN)₂ was 9.877 min.
After comparing with the standard product, the purity of the (GlcN)₂ was 96.77%.

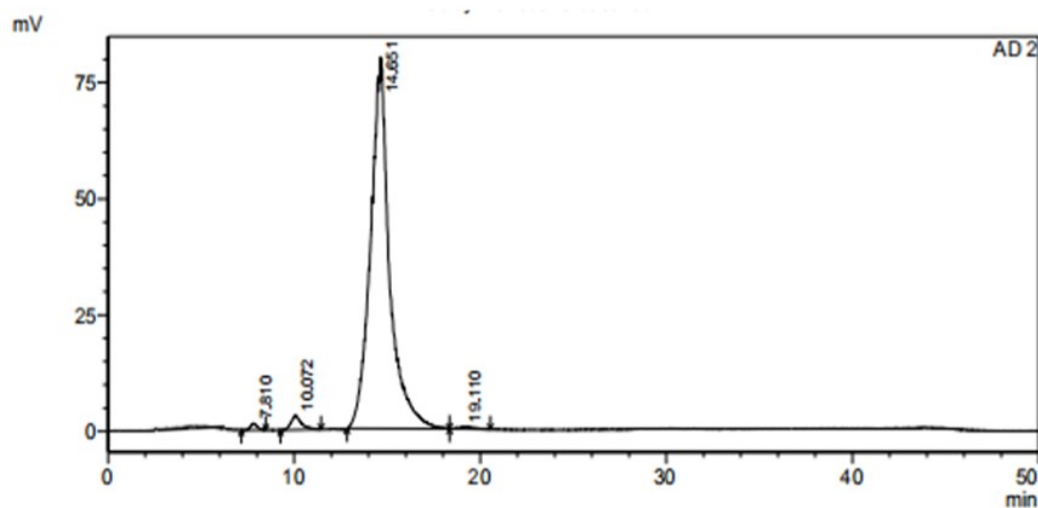


Figure 2. (GlcN)₃ liquid chromatogram. The liquid phase retention time of (GlcN)₃ was 14.65 min.
After comparing with the standard product, the purity of the (GlcN)₃ was 97.34%.

Table 1. Dietary nutrition composition of experimental mice

/	Standard diets (g/kg)
Moisture content	96
Protein	188
Lipid	52.6
Fiber	30.6
Ash content	54.9
Calcium	11.2
Total phosphorus	7.2
Lysine	14
Methionine+Cystine	11.5

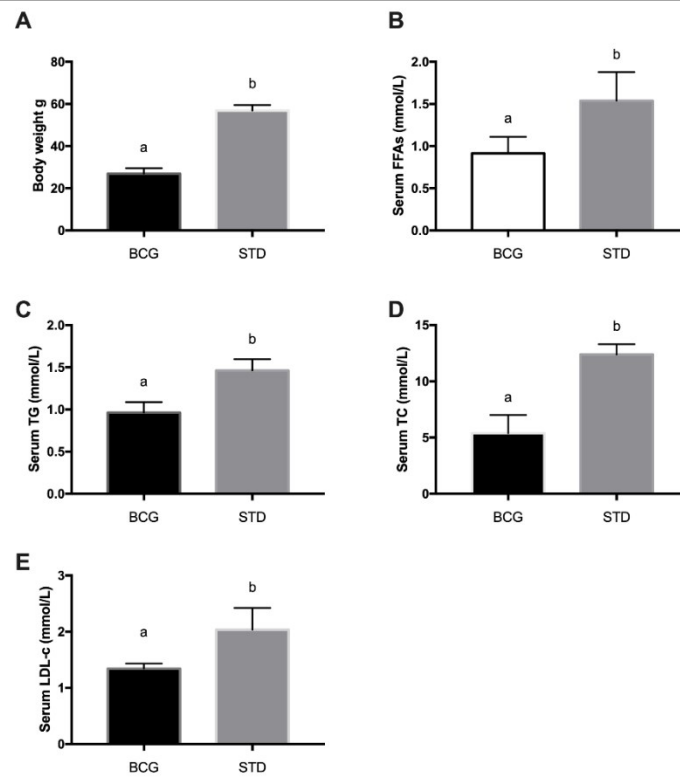


Figure 3. Body weight and serum lipid profiles in blank control group (BCG) mice and ob/ob^{-/-} mice (STD). A) Body weight. B) Serum FFAs. C) Serum TG. D) Serum TC. E) Serum low-density LDL-c. The data are presented as mean $\pm$ SD of eight samples per treatment. Different letters represent a significant difference of $p < 0.05$ between the groups with multiple comparisons.

Table 2. Primer sequences used in qPCR

Gene	Forward (5'-3')	Reverse (5'-3')
CD36	ATGGGCTGTGATCGGAACTG	TTTGCCACGTCATCTGGGTTT
DGAT2	GCGCTACTTCCGAGACTACTT	GGGCCTTATGCCAGGAAACT
GADPH	AGGTCGGTGTGAACGGATTTG	TGTAGACCATGTAGTTGAGGTCA
PPAR γ	TCGCTGATGCACTGCCTATG	GAGAGGTCCACAGAGCTGATT
LXR α	CTCAATGCCTGATGTTTCTCCT	TCCAACCCTATCCCTAAAGCAA
PXR	GATGGAGGTCTTCAAATCTGCC	GGCCCTTCTGAAAAACCCCT
FASN	AAGTTGCCCCGAGTCAGAGAA	TTCCAGACCGCTTGGGTAAT
SCD	GGCTTCCAGATCCTCCCTAC	ACCCTCGCATTCAAGTGGTTA
ACC1	GATGAACCATCTCCGTTGGC	GACCCAATTATGAATCGGGAGTG
Srebp-1c	CCAGCGGCTGCCTTCACACA	CCAGCCGAAAAGCGAGGCCA
CD36	GAGAACTGTTATGGGGCTAT	TTCAACTGGAGAGGCAAAGG
(HepG2 cells)		
DGAT2	CGAAAGCCACTTCTCATACA	TGCCTACTACTGCCCTCAC
(HepG2 cells)		

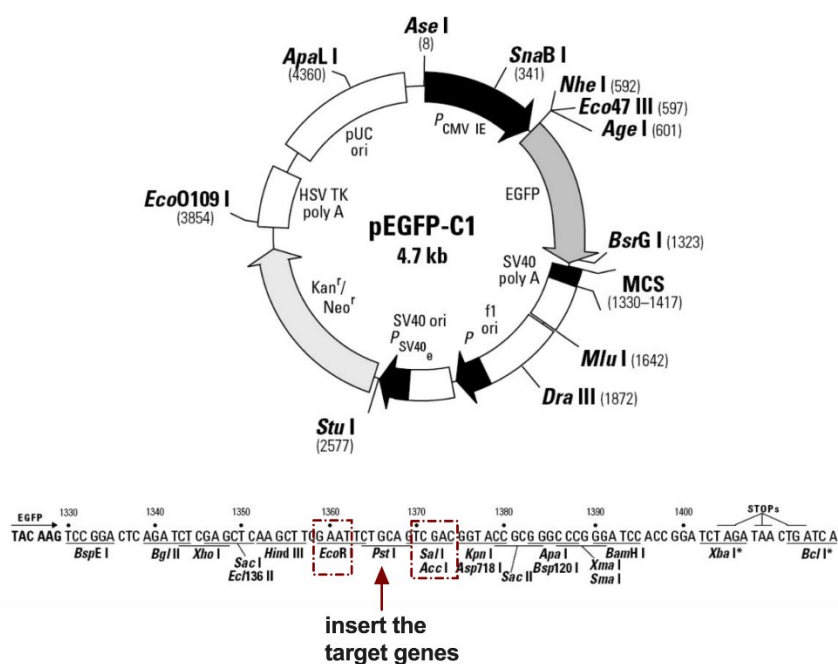


Figure 4. Schematic diagram of the plasmid design for the overexpression of CD36 and DGAT2. The red dots indicate the restriction enzyme cutting site.

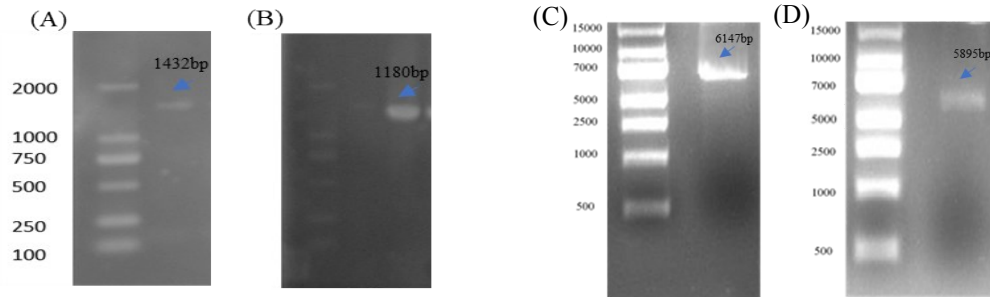


Figure 5. The CD36 and DGAT2 genes and plasmid nucleic acid electrophoresis. (A) The CD36 gene. (B) The DGAT2 gene. (C) pEGFP-C1-CD36. (D) pEGFP-C1-DGAT2.

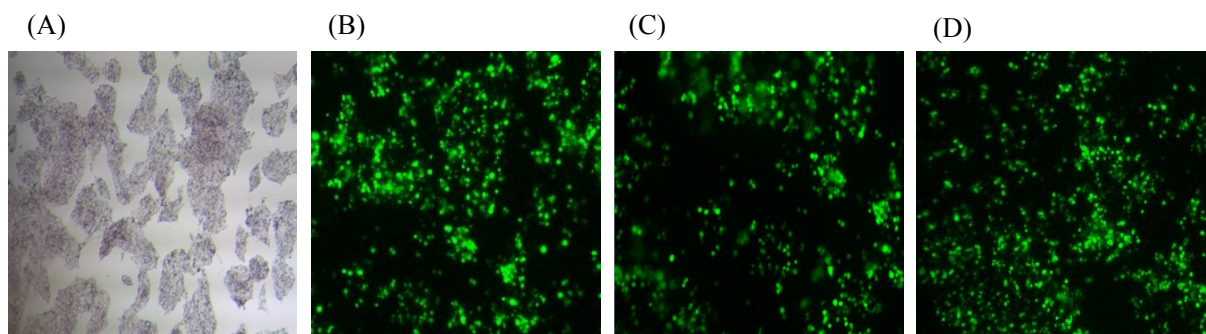
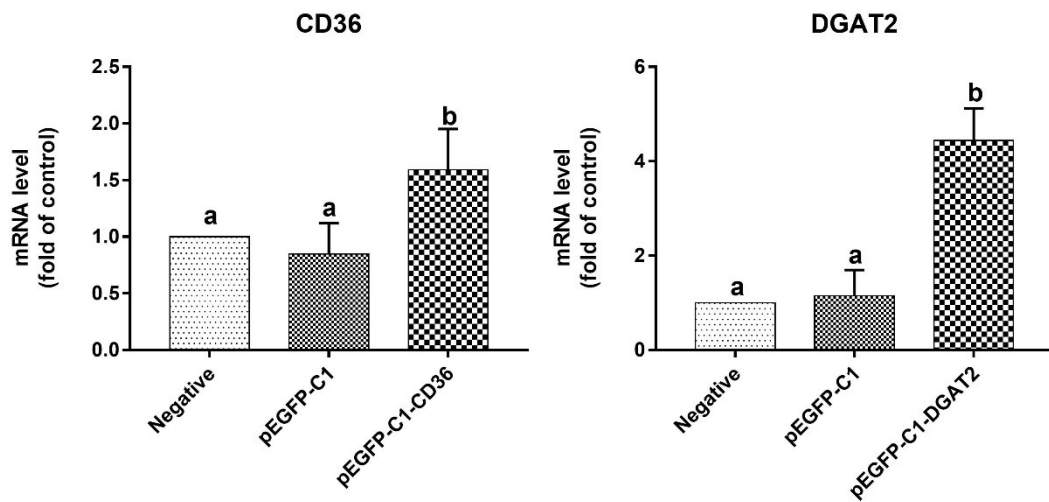


Figure 6. The fluorescent expression of the plasmid after transfection into the HepG2 cells (100 μm); (A) Negative control. (B) pEGFP-C1. (C) pEGFP-C1-CD36. (D) pEGFP-C1-DGAT2.



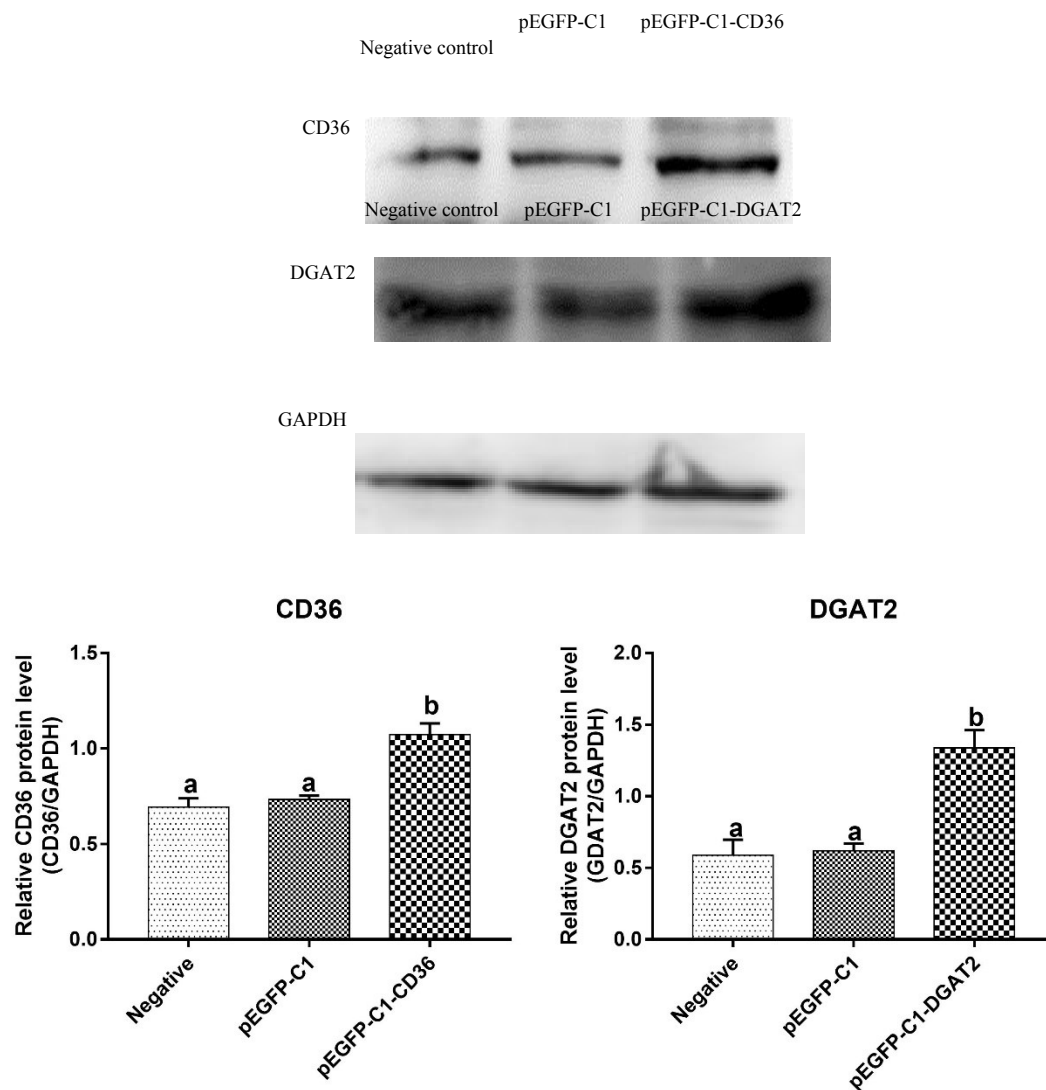


Figure 7. The mRNA and protein expression of CD36 and DGAT2 in the HepG2 cells after transfection, $p < 0.05$ indicates a significant difference and is represented by different letters, while the presence of the same letter indicates that there are no significant differences between the groups.