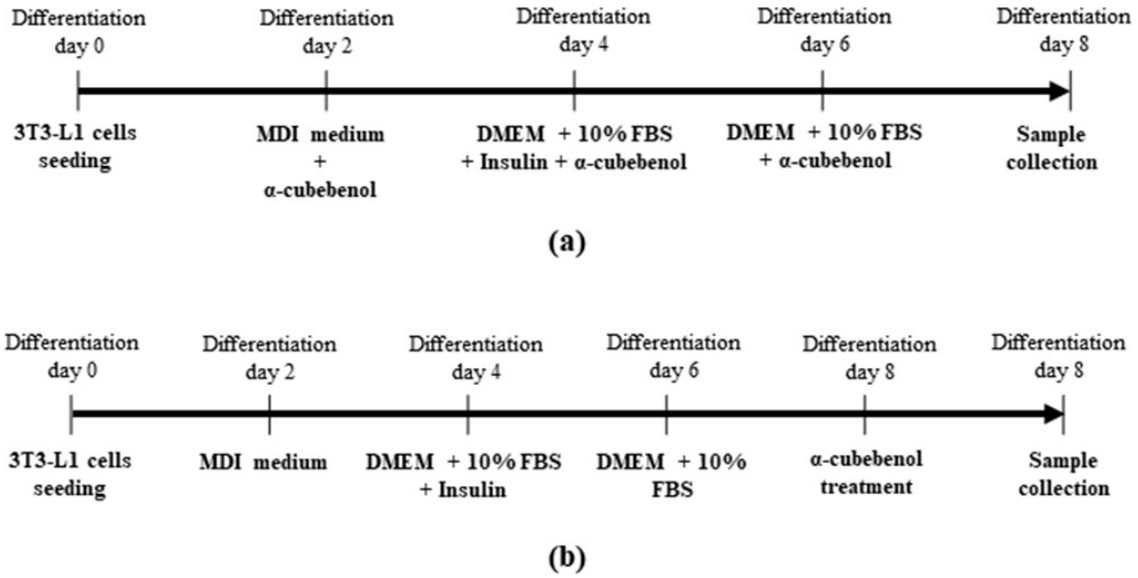


Figure S1. Schematic diagram of the lipogenesis and lipolysis procedure. (**a**) Schedule for the inhibitory effects of α-cubebenol on lipogenesis in 3T3-L1 cells. (**b**) Schedule for the stimulatory effect of α-cubebenol on lipolysis in 3T3-L1 cells.

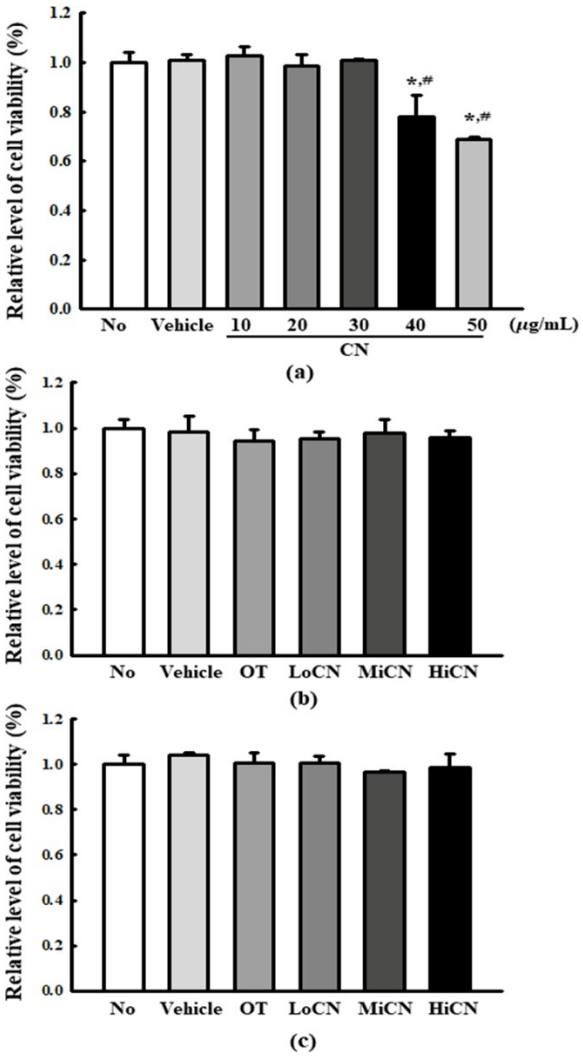
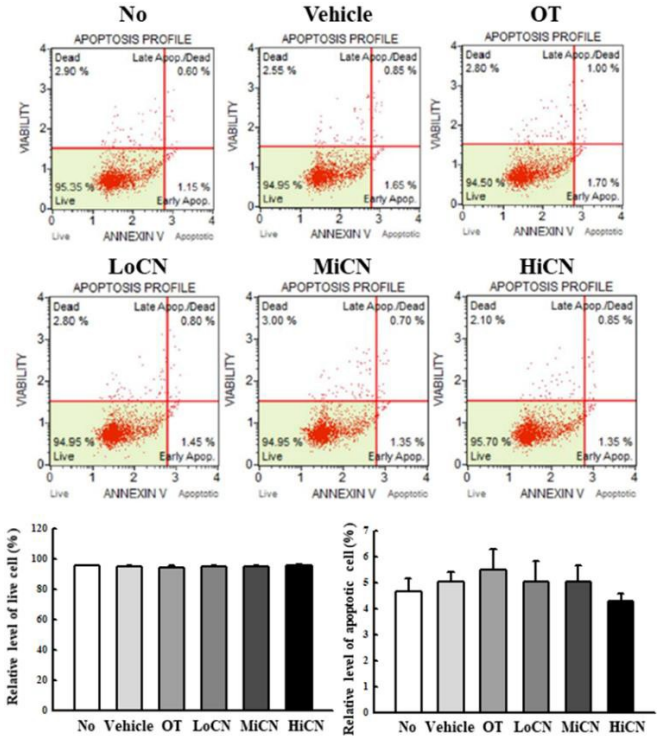
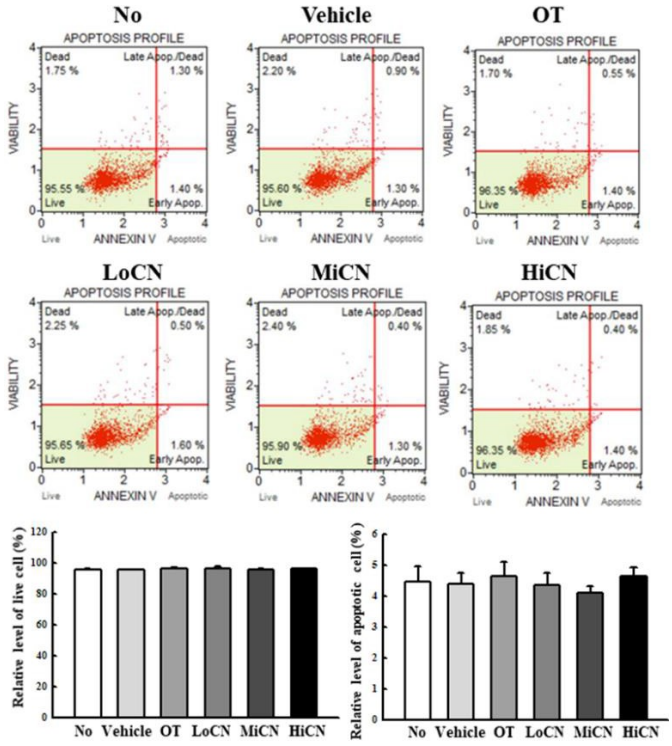


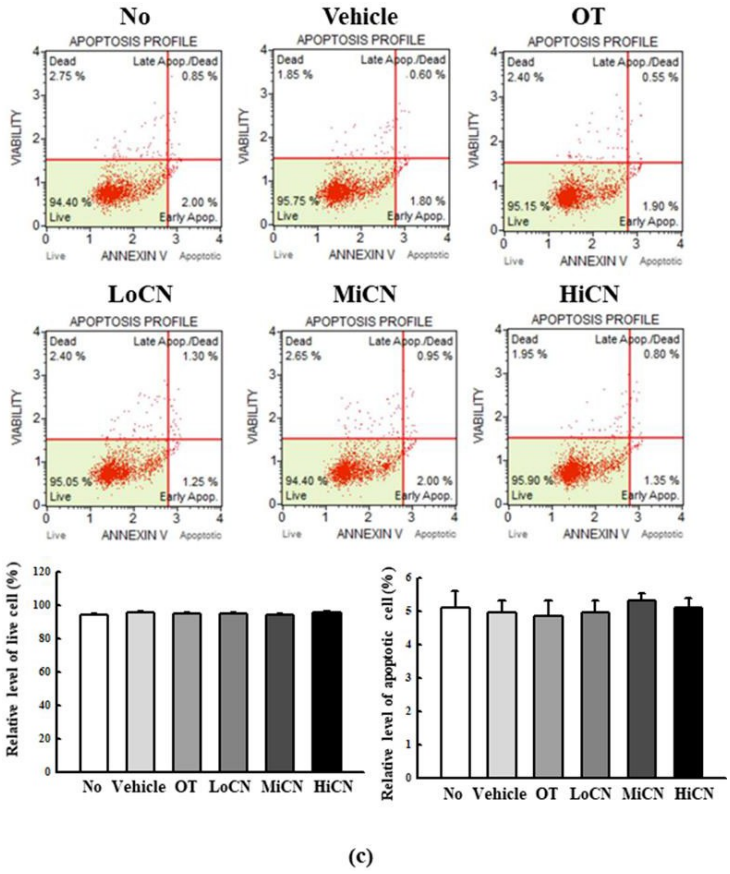
Figure S2. Determination of the optimal concentration of CN and cytotoxicity assessment. (**a**) Viability of 3T3-L1 pre-adipocytes against α-cubebenol against six different doses of α-cubebenol (10, 20, 30, 40, and 50 μg/mL) for 24 h. (**b**) and (**c**) Viability of 3T3-L1 pre-adipocytes against α-cubebenol. After the treatment of 7.5, 15, and 30 μg/mL of α-cubebenol for 48 h (**b**) and 72 h (**c**). The cell viability was determined using the MTT assay. Three wells per group were used in the MTT assay, and the optical density was measured in triplicates. The data are reported as the means ± SD.


No
Vehicle
OT
LoCN
MiCN
HiCN
APOPTOSIS PROFILE
VIABILITY
ANNEXIN V
Dead
Late Apop./Dead
Live
Early Apop.
Apoptotic
2.90 %
0.60 %
95.35 %
1.15 %
2.55 %
0.85 %
94.95 %
1.65 %
2.80 %
1.00 %
94.50 %
1.70 %
2.80 %
0.80 %
94.95 %
1.45 %
3.00 %
0.70 %
94.95 %
1.35 %
2.10 %
0.85 %
95.70 %
1.35 %
Relative level of live cell (%)
Relative level of apoptotic cell (%)
No Vehicle OT LoCN MiCN HiCN

(a)


No
Vehicle
OT
LoCN
MiCN
HiCN
APOPTOSIS PROFILE
VIABILITY
ANNEXIN V
Dead
Late Apop./Dead
Live
Early Apop.
Apoptotic
1.75 %
1.30 %
95.55 %
1.40 %
2.20 %
0.90 %
95.60 %
1.30 %
1.70 %
0.55 %
96.35 %
1.40 %
2.25 %
0.50 %
95.65 %
1.60 %
2.40 %
0.40 %
95.90 %
1.30 %
1.85 %
0.40 %
96.35 %
1.40 %
Relative level of live cell (%)
Relative level of apoptotic cell (%)
No Vehicle OT LoCN MiCN HiCN

(b)



(c)

Figure S3. Apoptosis analysis of 3T3-L1 pre-adipocytes. After treatment with α-cubebenol or OT for 24 h (**a**), 48 h (**b**), 72 h (**c**), the distribution of apoptotic cells was analyzed subsequent to staining with annexin V and 7-AAD. Initial cell population gating was placed on cell size vs. Annexin V. Subsequently, the most obvious debris was gated out from the total cell population. Two to three wells per group were used for Annexin V staining, and the number of dead cells and live cells was measured in duplicate. Data are reported as the mean ± SD. Abbreviations: 7-AAD, 7-aminoactinomycin D.

Table S1. Primer sequences for RT-PCR.

Primer name	Sequence (from 5' to 3')	Product size (bp)
PPARγ ForwardReverse	CCC CTG CTC CAG GAG ATC TAC GCA ATC AAT AGA AGG AAC ACG TTG T	80
C/EBPα Forward Reverse	GAC CAT TAG CCT TGT GTG TAC TGT ATGTGG ATC GAT TGT GCT TCA AGT T	71
Fas ForwardReverse	CAA GCA GAA TTT GTC CAC CTT TAATCT CTA GAG GGC TTG CAC CAA	128
aP2 ForwardReverse	TGG ACT TCA GAG GCT CAT AGC ACCT TCG AGG AGG AGC TGT CTT	72
Adenylyl cyclaseForward Reverse	CGG AGG TTG CTG CAT AAC ATT ACA CAT TCA CAC GAC TGG TAG TAC AG	106
PDE4 Forward Reverse	TTC CCT CAT CAC CCT ACC TAT CAGGC AGA GCA GAG GTT CAA GCT	98
CPT1 Forward Reverse	GGC AGA GCA GAG GTT CAA GCTGCC AGC GCC CGT CAT	81
PPARα Forward Reverse	TGG CAA AAG GCA AGG AGA AG CCC TCT ACA TAG AAC TGC AAG GTT T	104
TNF-α Forward Reverse	CCT GTA GCC CAC GTC GTA GCTTG ACC TCA GCG CTG ACT TG	374
IL-6 Forward Reverse	TTG GGA CTG ATG TTG TTG ACA TCA TCG CTG TTG ATA CAA TCA GA	200
IL-1β Forward Reverse	CAG TTC TGC CAT TGA CCA T TCT CAC TGA AAC TCA GCC GT	218
NF-κB Forward Reverse	GTA ACA GCA GGA CCC AAG GAAGC CCC TAA TAC ACG CCT CT	501
β-actin Forward Reverse	TGG AAT CCT GTG GCA TCC ATG AAA CTAA AAC GCA GCT CAG TAA CAG TCC G	349

Table S2. Antibodies list for Western blot analyses.

Name	Cat. No.	Company
Anti-iNOS	PA3-030A	Thermo Fisher Scientific, MA, USA
Anti-Cox-2	4842	Cell Signaling, Danvers, MA, USA
Anti-ASC	67824	Cell Signaling, Danvers, MA, USA
Anti-Cas-1	24232	Cell Signaling, Danvers, MA, USA
Anti-NLRP3	15101	Cell Signaling, Danvers, MA, USA
Anti-ATGL	2138s	Cell Signaling, Danvers, MA, USA
Anti-Perilipin	9349s	Cell Signaling, Danvers, MA, USA
Anti-p-Perilipin	9621s	Cell Signaling, Danvers, MA, USA
Anti-HSL	4107s	Cell Signaling, Danvers, MA, USA
Anti-p-HSL	PA5-64494	Thermo Fisher Scientific, MA, USA
Anti-ACADs	PA5-54580	Thermo Fisher Scientific, MA, USA
Anti-ACO1	PA5-41753	Thermo Fisher Scientific, MA, USA
Anti-ATP Citrate Lyase	#4332s	Cell Signaling, Danvers, MA, USA
Anti-p-ATP Citrate Lyase	#4331s	Cell Signaling, Danvers, MA, USA
Anti-βactin	87809	Cell Signaling, Danvers, MA, USA