Supplemental Table 1. Primers used for determination of the gene expression of key enzymes of fatty acid metabolism.

	sense	antisense
18S	CCATCCAATCGGTAGTAGCG	GTAACCCGTTGAACCCCATT
CPT1A	TCTTGCAGTCGACTCACCTT	TCCACAGGACACATAGTCAGG
DGAT2	AGTGGCAATGCTATCATCGTCGT	AAGGAATAAGTGGGAACCCAGATCA
PGC1α	CCGAGAATTCATGGGAGCAAT	TTTCTGTGGGTTTGGTGTGA
SCD1	CCGGAGACCCTTAGATCG A	TAGCCTGTAAAAGATTTCTGCAAA

SUPPLEMENTAL EXPERIMENTAL PROCEDURES

Octanoate metabolic fate– Sodium salt of octanoic acid (SIGMA) was conjugated with FA- and endotoxin-free BSA, and a stock solution of 6mM was made up in serum free DMEM containing 20% (w/v) BSA. Incubation conditions were similar as for palmitate and oleate.
Flow cytometry– Caspase-3 activity was measured using the « caspase-3 intracellular activity assay Kit 1 » (Calbiochem) according to the manufacturer's instructions. Stained myotubes were analyzed on a Cytomics TM FC 500 measuring fluorescence at 505nm ex/530nm em and 550nm ex/620nm em for cleaved caspase-3 substrate (PhiPhiLux G1D2 substrate) and propidium iodide (PI), respectively. Data were analyzed using the cytomics RXP Analysis software.

Supplemental Fig. S1. CPT1mt expression does not modify octanoate metabolic fate. Uninfected (C) or Ad-LacZ- and Ad-CPT1mt-infected C2C12 myotubes were cultured for 24h in the presence of G5, and 0.3mM [1-^{14}C]octanoate bound to 1% (w/v) BSA was added during the last 3h of culture. *A.* Octanoate oxidation to CO_2, ASP and Total. *B.* Octanoate esterification into TG, DAG and PL. Data are means ± S.E.M. of three experiments performed in triplicate.

Supplemental Fig. S2. Palmitate induces apoptosis in C2C12 myotubes in a concentration- and time-dependent manner. C2C12 myotubes were exposed to either different concentrations of palmitate in the presence of 1% (w/v) BSA for 24h (*A*), 0.8mM palmitate in the presence of 1% (w/v) BSA for different time periods (*B*), or 0.8mM palmitate in the presence of different BSA concentrations (*C*). *A-C.* Immunoblot analysis of protein extracts using specific antibodies against caspase-3 precursor and cleaved caspase-3. Tubulin was used as a control loading. Western blots are representative of three independent experiments. *D.* Quantitative assessments of caspase-3 cleavage and propidium iodide (PI) fluorescence by FACS analysis following a 24h-exposure in the absence or presence of 0.8mM palmitate plus 1% (w/v) BSA.

Figure S1

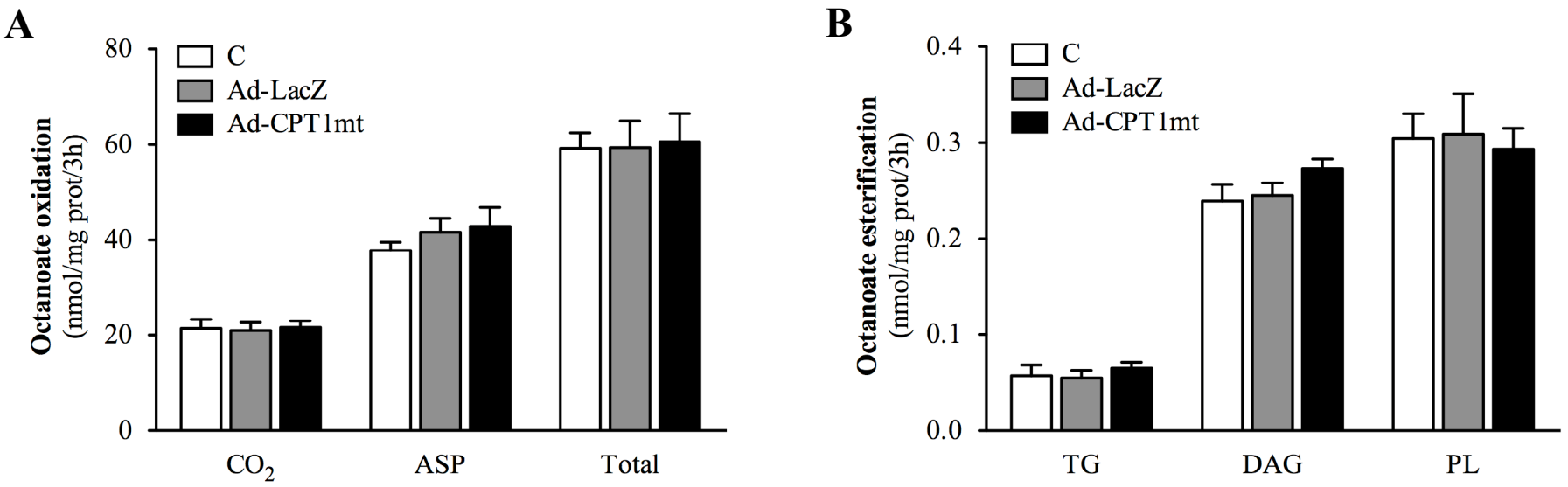
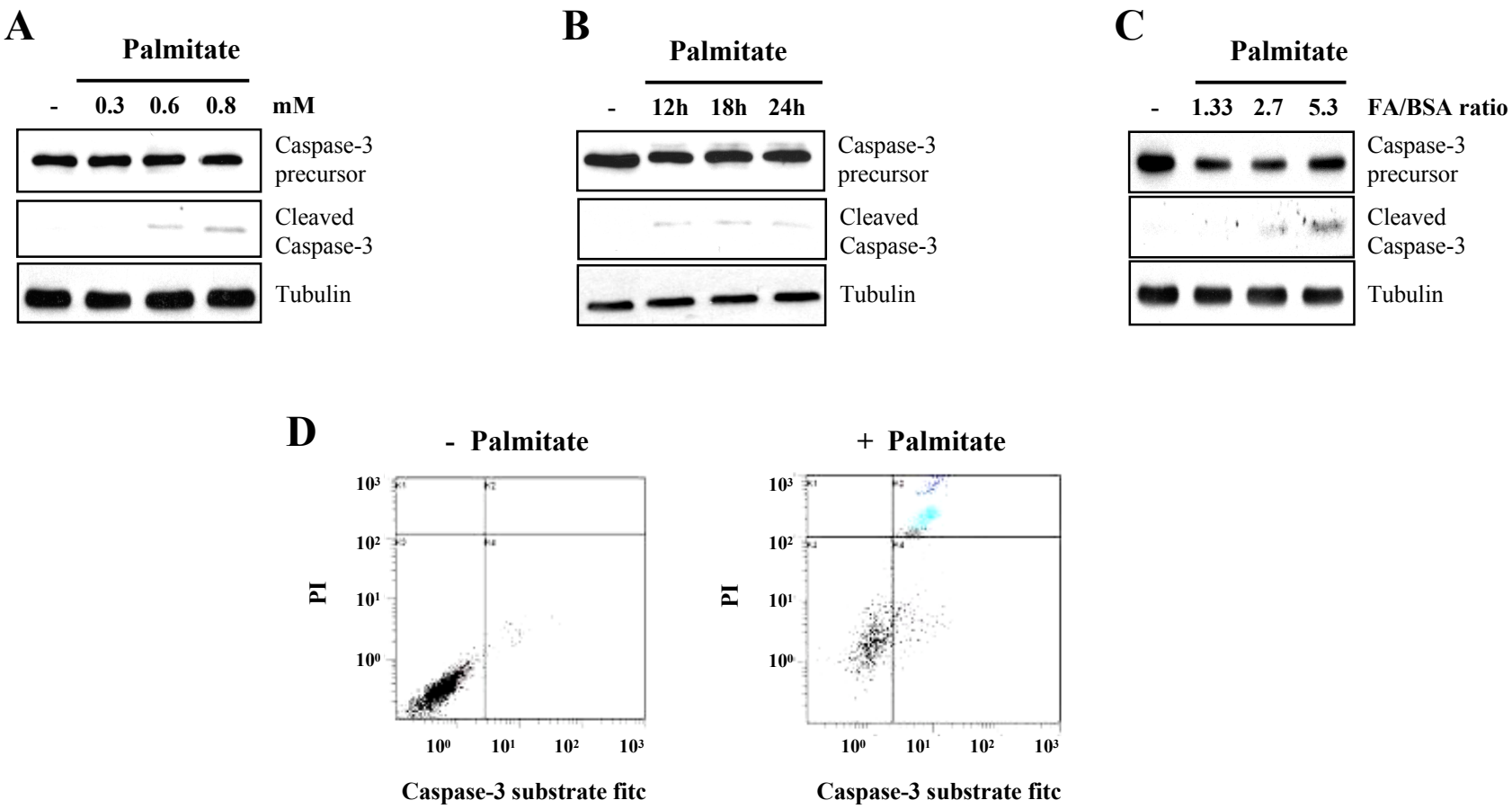

A
Octanoate oxidation
(nmol/mg prot/3h)
80
60
40
20
0
C
Ad-LacZ
Ad-CPT1mt
CO2
ASP
Total
B
Octanoate esterification
(nmol/mg prot/3h)
0.4
0.3
0.2
0.1
0.0
C
Ad-LacZ
Ad-CPT1mt
TG
DAG
PL

Figure S2


A
Palmitate
- 0.3 0.6 0.8 mM
Caspase-3 precursor
Cleaved Caspase-3
Tubulin
B
Palmitate
- 12h 18h 24h
Caspase-3 precursor
Cleaved Caspase-3
Tubulin
C
Palmitate
- 1.33 2.7 5.3 FA/BSA ratio
Caspase-3 precursor
Cleaved Caspase-3
Tubulin
D
- Palmitate
+ Palmitate
PI
Caspase-3 substrate fitc
PI
Caspase-3 substrate fitc