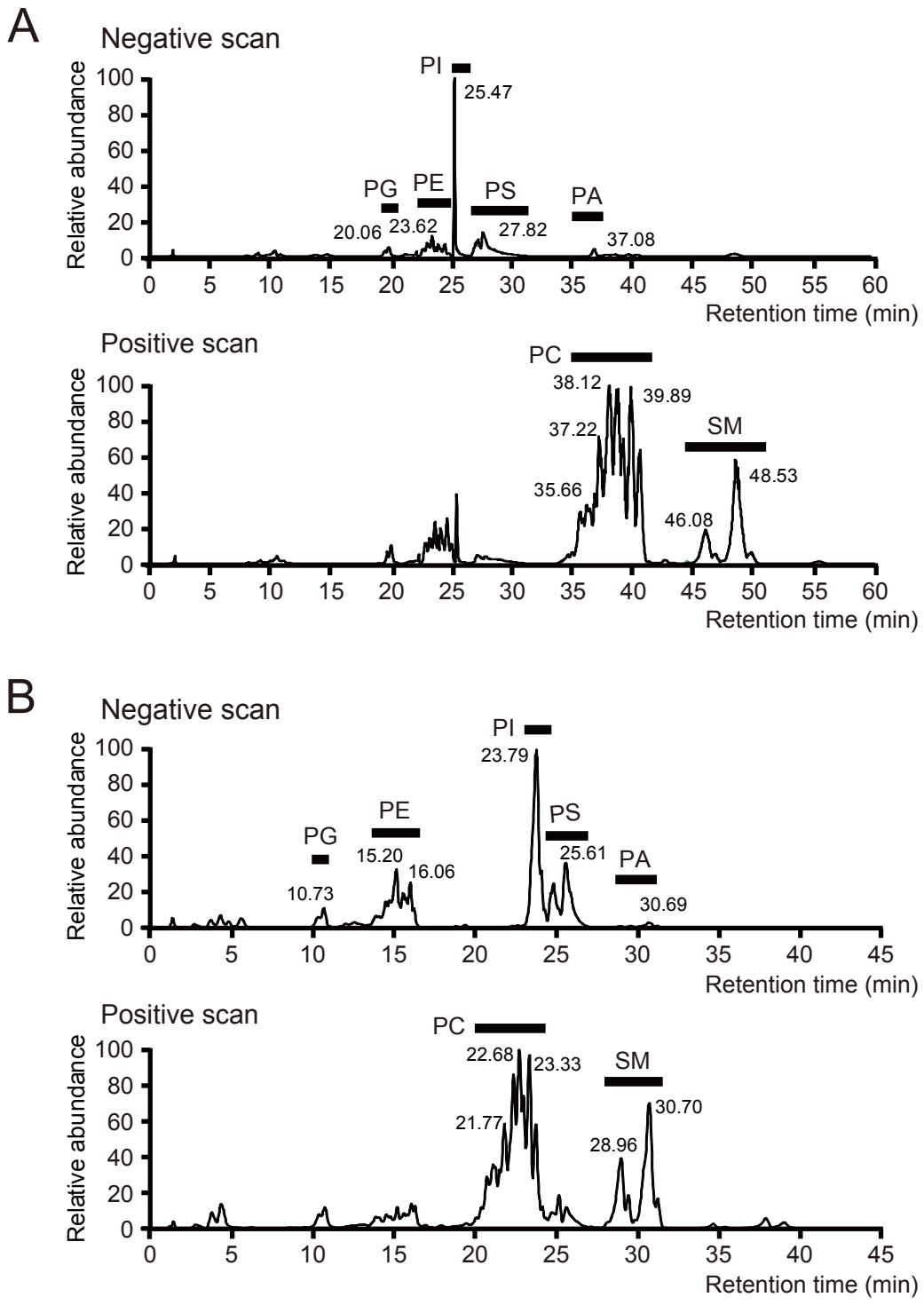
Supplementary Materials

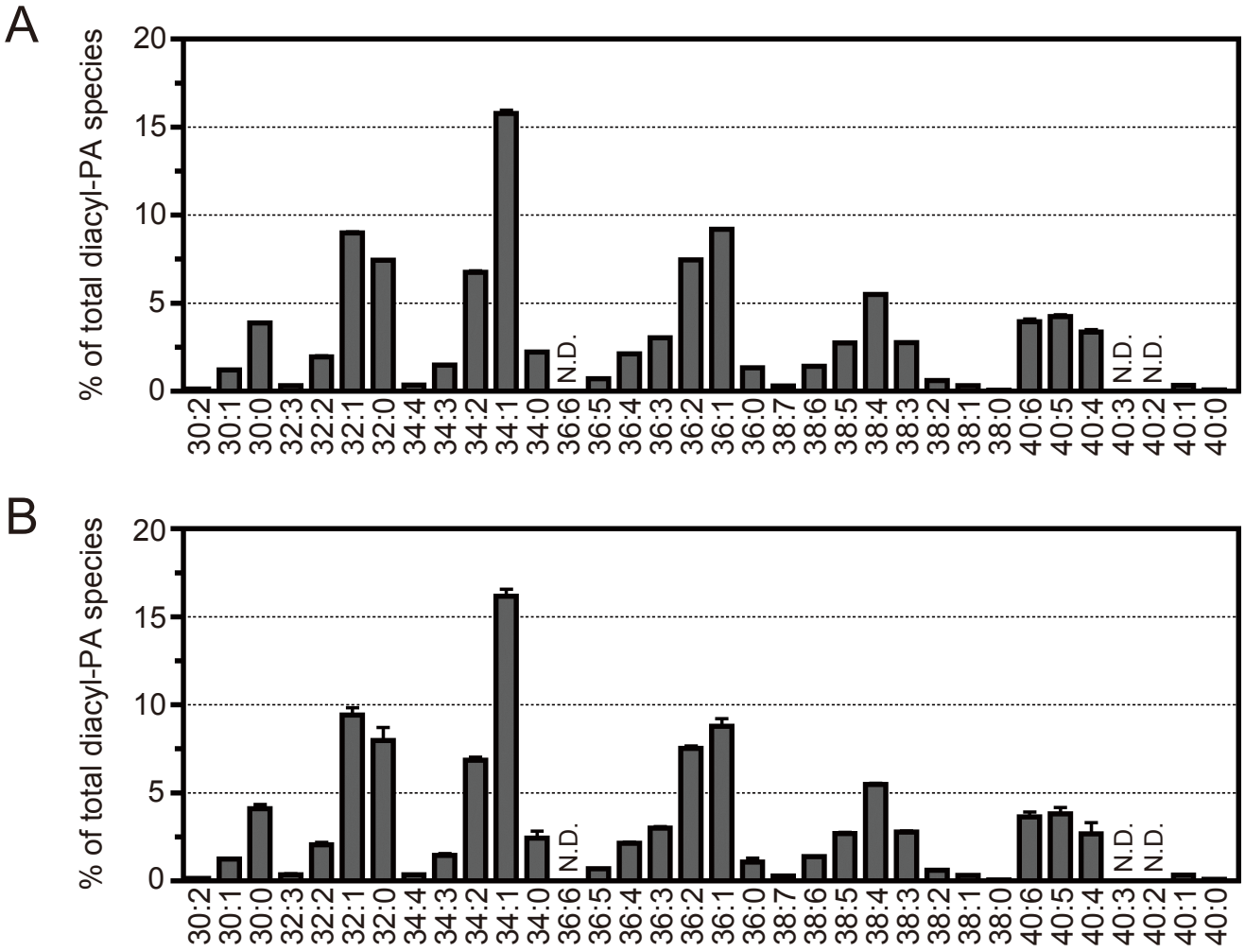
Suppl. Fig. 1. Separation of PA by LC/ESI-MS under previously reported conditions. (A and B) PAs in MEFs separated by the Accela LC System using mobile phases described in T.R. Pettitt *et. al.* [23] (A) and G. Shui *et. al.* [24] (B). Gradient elution programs were optimized for UK-Silica column. Abbreviations: I.S., internal standard, PA, phosphatidic acid; PC, phosphatidylcholine; PE, phosphatidylethanolamine; PG, phosphatidylglycerol; PI, phosphatidylinositol; PS, phosphatidylserine; SM, sphingomyelin.

Suppl. Fig. 2. The reproducibility of quantitative detection of cellular PA species in MEFs. (A and B) The repeated experiments between periods on a given study day (A, within-day reproducibility) and between the three study days (B, between-day reproducibility). The values are presented as the means ± S.D. (n = 3).

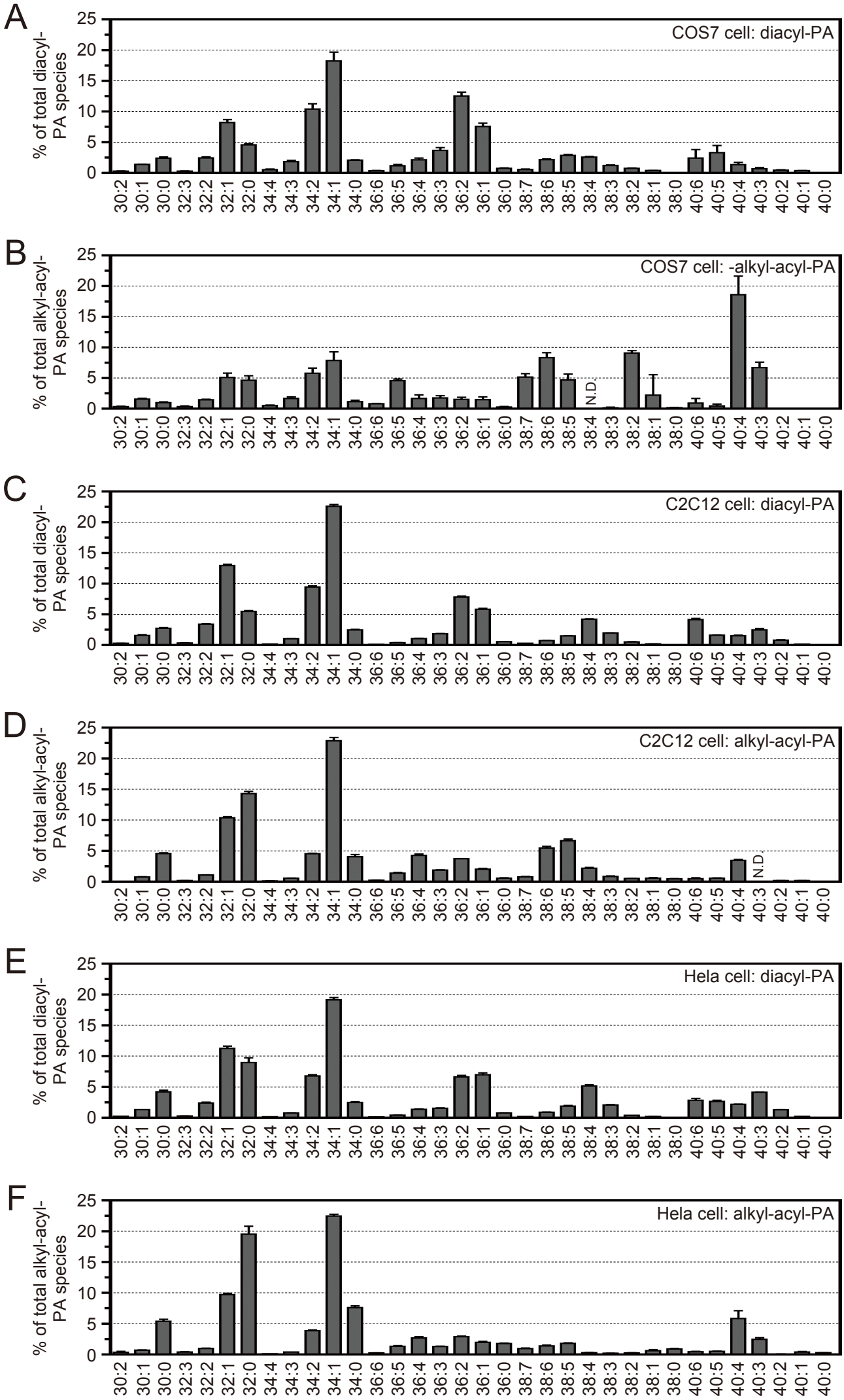
Suppl. Fig. 3. Profiles of PA species in mammalian cells (COS7, C2C12 and HeLa). (A, C, E) Molecular composition of diacyl-PAs in COS7 cells (A), C2C12 cells (C) and HeLa cells (E). (B, D, F) Molecular composition of alkyl-acyl-PAs in COS7 cells (B), C2C12 cells (D) and HeLa cells (F). The values are presented as the means ± S.D. (n = 3). N.D., not detected.


A
Negative scan
Relative abundance
PI
25.47
PG
PE
PS
PA
20.06
23.62
27.82
37.08
Retention time (min)
Positive scan
PC
38.12
39.89
37.22
SM
48.53
35.66
46.08
Retention time (min)
B
Negative scan
Relative abundance
PI
23.79
PE
PS
PG
15.20
16.06
25.61
PA
10.73
30.69
Retention time (min)
Positive scan
PC
22.68
23.33
SM
30.70
21.77
28.96
Retention time (min)

Suppl. Fig. 1


A
% of total diacyl-PA species
20
15
10
5
0
30:2 30:1 30:0 32:3 32:2 32:1 32:0 34:4 34:3 34:2 34:1 34:0 36:6 36:5 36:4 36:3 36:2 36:1 36:0 38:7 38:6 38:5 38:4 38:3 38:2 38:1 38:0 40:6 40:5 40:4 40:3 40:2 40:1 40:0
N.D.
B
% of total diacyl-PA species
20
15
10
5
0
30:2 30:1 30:0 32:3 32:2 32:1 32:0 34:4 34:3 34:2 34:1 34:0 36:6 36:5 36:4 36:3 36:2 36:1 36:0 38:7 38:6 38:5 38:4 38:3 38:2 38:1 38:0 40:6 40:5 40:4 40:3 40:2 40:1 40:0
N.D.

Suppl. Fig. 2


A
COS7 cell: diacyl-PA
% of total diacyl-PA species
B
COS7 cell: -alkyl-acyl-PA
% of total alkyl-acyl-PA species
N.D
C
C2C12 cell: diacyl-PA
% of total diacyl-PA species
D
C2C12 cell: alkyl-acyl-PA
% of total alkyl-acyl-PA species
N.D
E
Hela cell: diacyl-PA
% of total diacyl-PA species
F
Hela cell: alkyl-acyl-PA
% of total alkyl-acyl-PA species
0 5 10 15 20 25
30:2 30:1 30:0 32:3 32:2 32:1 32:0 34:4 34:3 34:2 34:1 34:0 36:6 36:5 36:4 36:3 36:2 36:1 36:0 38:7 38:6 38:5 38:4 38:3 38:2 38:1 38:0 40:6 40:5 40:4 40:3 40:2 40:1 40:0

Suppl. Fig. 3