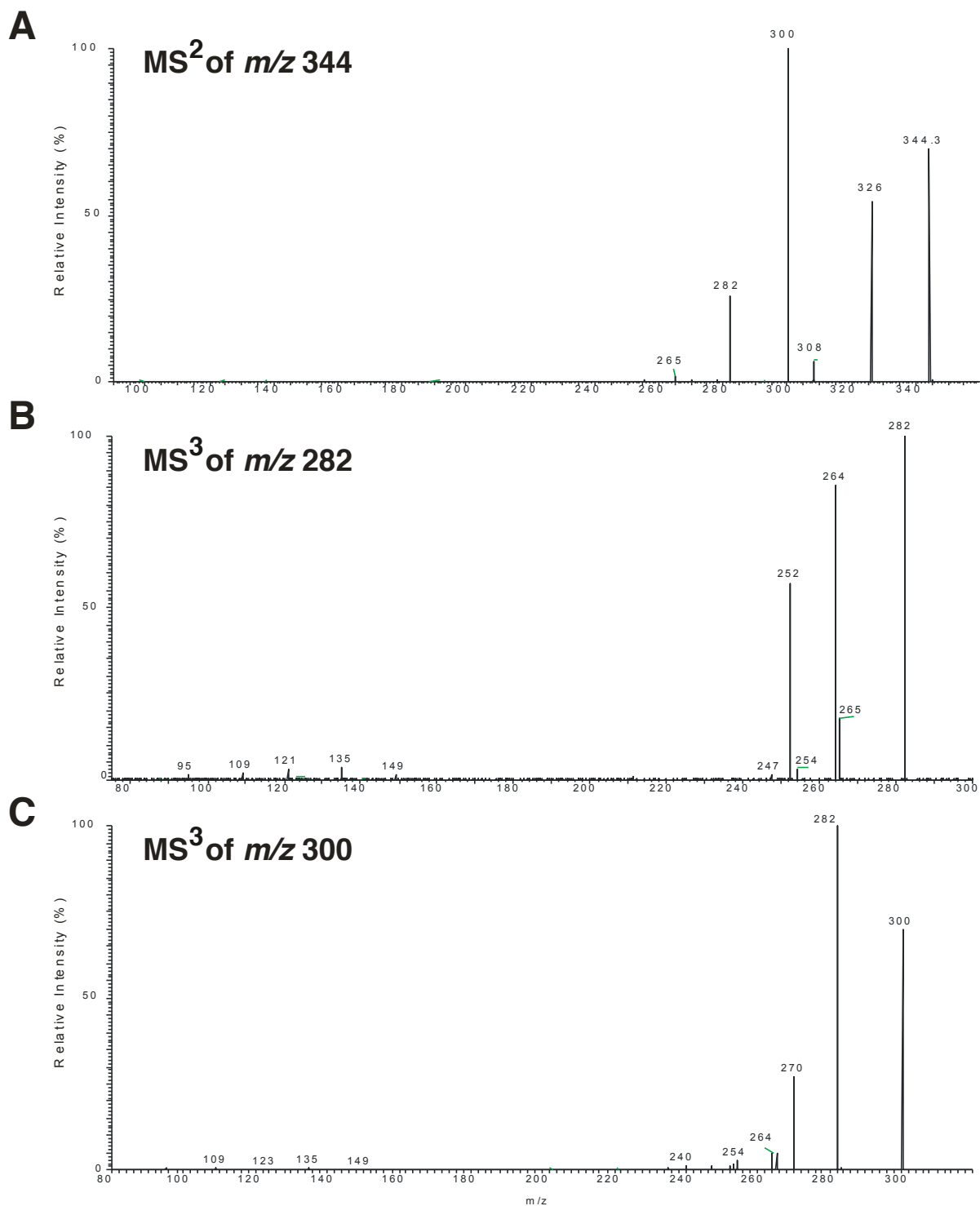


Supplementary Material

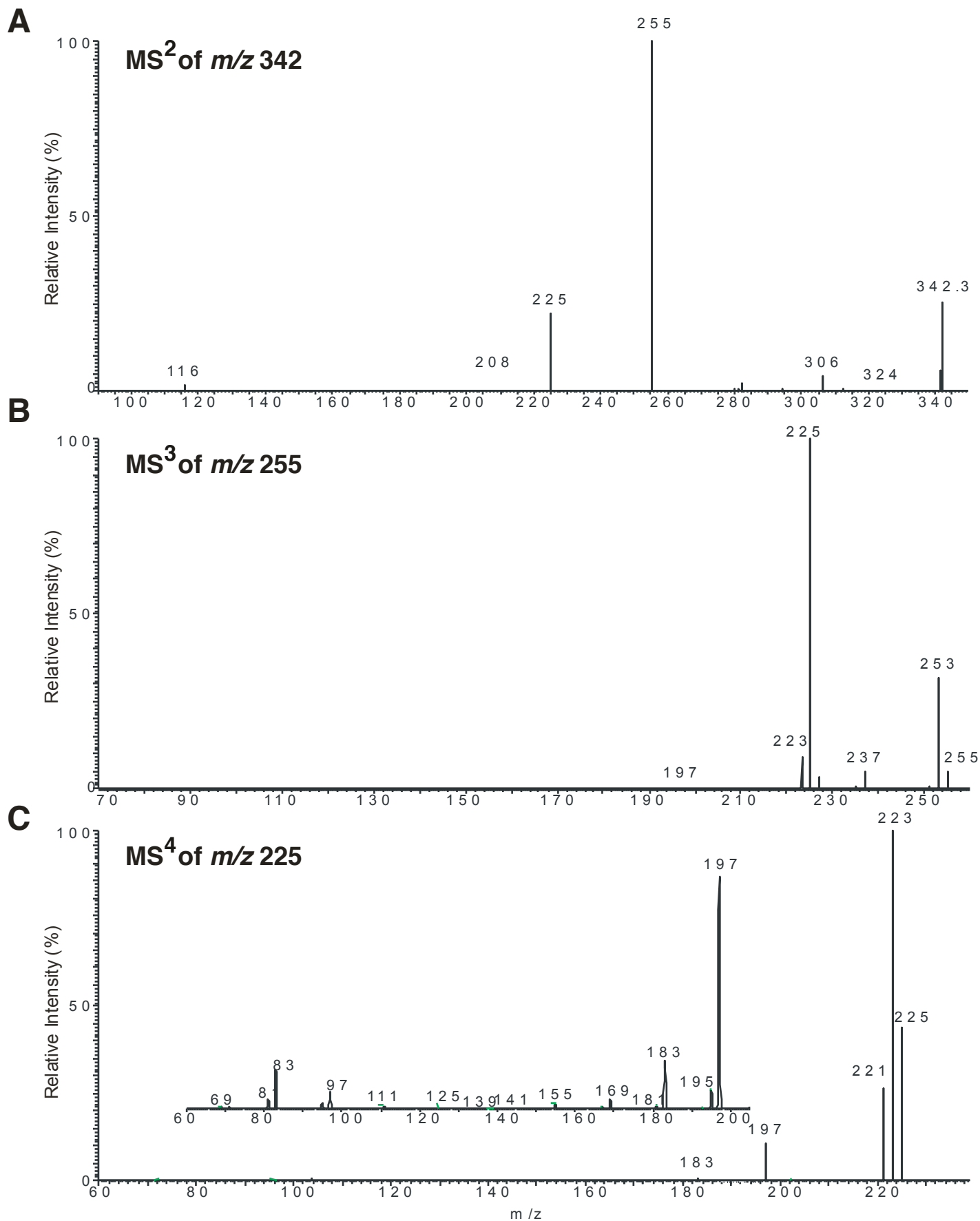
Table S1. *Saccharomyces cerevisiae* strains used in this study

Name	Relevant genotype	Source
BY4742	MAT α <i>his3Δ1 leu2Δ0 lys2Δ0 ura3Δ0</i>	EUROSCARF
<i>elo3Δ</i>	BY4742; MAT α <i>his3Δ1 leu2Δ0 lys2Δ0 ura3Δ0 elo3Δ::kan^r</i>	EUROSCARF
<i>elo3Δ sur2Δ</i>	BY4742; MAT α <i>his3Δ1 leu2Δ0 lys2Δ0 ura3Δ0 scs7Δ::kan^r</i>	Lab strain collection
W303-1A	W303-1A; MAT α <i>ade2-1; ura3-1; his3-11,15; trp1-1; leu2-3,112; can1-100</i>	Lab strain collection
<i>lag1Δ lac1Δ</i>	W303-1A; MAT α <i>ade2-1 ura3-1 his3-11,15 trp-1 leu2-3,112 can1-100 lac1::LEU2 lag1::TRP1</i>	Guillas et al, 2001
<i>tsc13-1 elo3Δ</i>	MAT α <i>ade2-101 ura3-52 trp1Δ leu2Δ elo3::TRP1 tsc13-1</i>	Kohlwein et al, 2001
<i>orm1Δ orm2Δ</i>	MAT α <i>his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 orm1::clonNAT orm2::kanMX4</i>	Han et al, 2010
<i>orm1Δ orm2Δ lcb3Δ</i>	MAT α <i>his3Δ1 leu2Δ0 met15Δ0 ura3Δ0 orm1::clonNAT orm2::kanMX4 lcb3::kanMX4</i>	Han et al, 2010
<i>TET-PHS1</i>	MAT α <i>his3Δ1 leu2Δ0 met15Δ0 URA3::CMV-tTA pYJL097W::kanR-tet07-TATA</i>	Hughes et al, 2000
<i>elo3Δ lcb4Δ</i>	BY4742; MAT α <i>his3Δ1 leu2Δ0 lys2Δ0 ura3Δ0 lcb4::kanMX4 elo3::His5</i>	This study
<i>elo3Δ lcb5Δ</i>	BY4742; MAT α <i>his3Δ1 leu2Δ0 lys2Δ0 ura3Δ0 lcb5::kanMX4 elo3::His5</i>	This study
<i>elo3Δ +vector</i>	BY4742; MAT α <i>his3Δ1 leu2Δ0 lys2Δ0 ura3Δ0 elo3::kanMX4 [pRS426-ADH1-URA3]</i>	This study
<i>elo3Δ dpl1Δ +vector</i>	BY4742; MAT α <i>his3Δ1 leu2Δ0 lys2Δ0 ura3Δ0 dpl1::kanMX4 elo3::His5 [pRS426-ADH1-URA3]</i>	This study
<i>elo3Δ dpl1Δ +pLCB3</i>	BY4742; MAT α <i>his3Δ1 leu2Δ0 lys2Δ0 ura3Δ0 dpl1::kanMX4 elo3::His5 [pRS426-ADH1-LCB3-URA3]</i>	This study

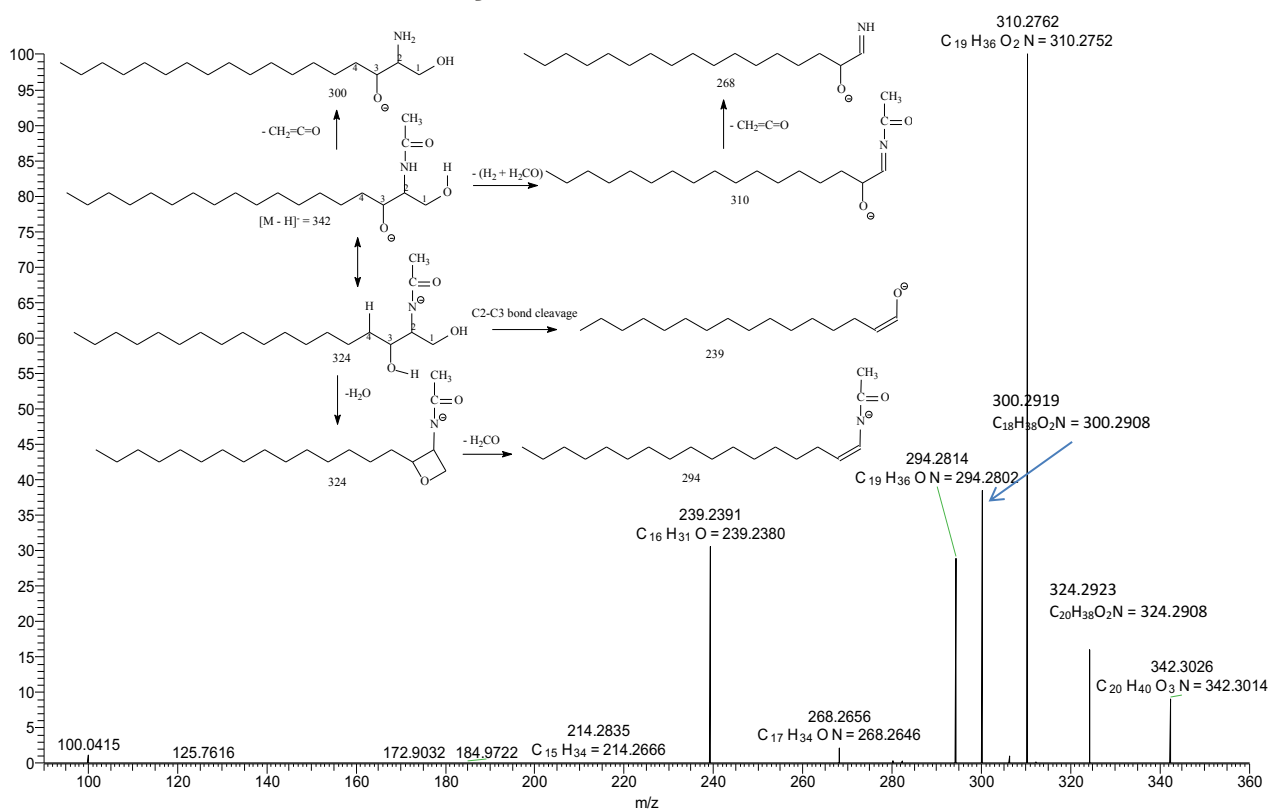
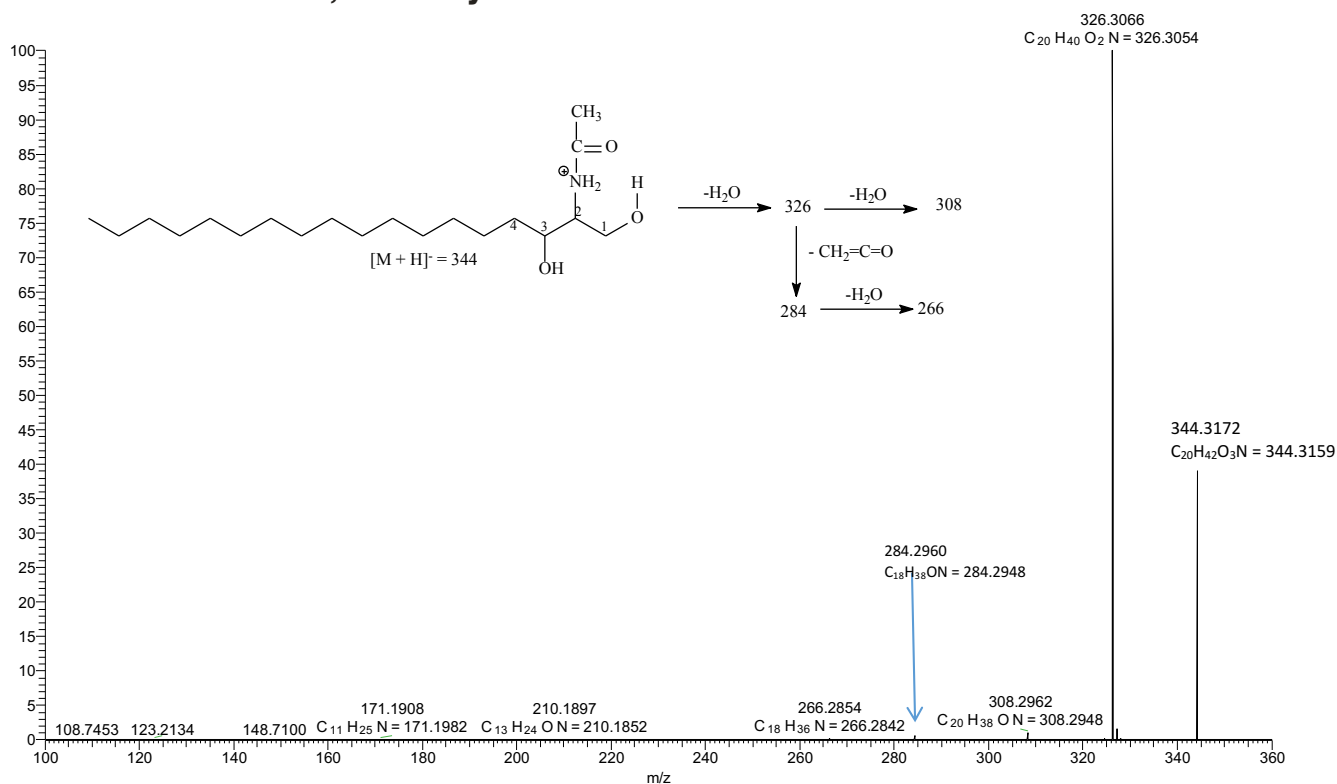
Wild Type +vector	BY4741; <i>MATa his3Δ1 leu2Δ0 met15Δ0 ura3Δ0</i> [pRS416, CEN-URA3]	This study
<i>acs2Δ</i> + <i>pACS2</i>	BY4741; <i>acs2::HygMX</i> [pHT112-1, ACS2-CEN-URA3]	Takahashi et al, 2006
<i>acs2Δ</i> + <i>pACS2-1^{ts}</i>	BY4741; <i>acs2::HygMX</i> [pHT215, ACS2-1 ^{ts} CEN-URA3]	Takahashi et al, 2006
<i>acs1Δ acs2Δ</i> + <i>pACS2-1^{ts}</i>	BY4741; <i>acs1::HIS3 acs2::HygMX</i> [pHT215, ACS2-1 ^{ts} CEN-URA3]	Takahashi et al, 2006
<i>dpl1Δ</i> + <i>pRSB1</i>	BY4742; <i>MATα his3Δ1 leu2Δ0 lys2Δ0 ura3Δ0 dpl1::kanMX4</i> [pRS426, ADH1-RSB1-URA3]	This study



Supplementary Figure S1. High resolution mass spectra of $[M + H]^+$ ions at m/z 344 of PHS vinyl ether. A) High resolution MS² mass spectrum of $[M + H]^+$ ions at m/z 344 of PHS vinyl ether. B) MS³ spectra of ions at m/z 282 ($344 \rightarrow 282$). C) MS³ spectra of ions at m/z 300 ($344 \rightarrow 300$).



Supplementary Figure S2. High resolution mass spectra of [M - H]⁻ ions at *m/z* 342 of PHS vinyl ether.
 A) High resolution MS² mass spectrum of the [M - H]⁻ ions at *m/z* 342 of PHS vinyl ether. B) MS³ spectrum of ions at *m/z* 255 (342 → 255). C) MS⁴ spectra of ions of *m/z* 225 (342 → 255 → 225).

A**MS² of *m/z* 342, C2-dihydroceramide****B****MS² of *m/z* 344, C2-dihydroceramide****Supplementary Figure S3. High resolution mass spectra of C2-dihydroceramide.**

A) High resolution MS² mass spectrum of the [M - H]⁻ ions at *m/z* 342 of C2-dihydroceramide and proposed fragmentation scheme. B) High resolution MS² mass spectrum of the [M + H]⁺ ions at *m/z* 344 of C2-dihydroceramide and proposed fragmentation scheme.