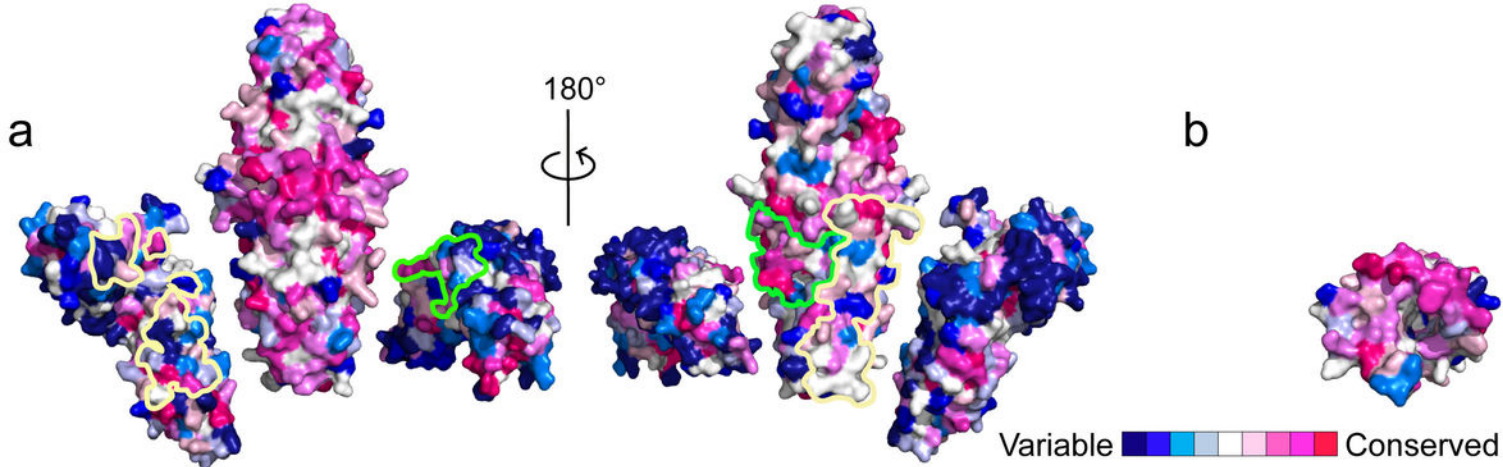


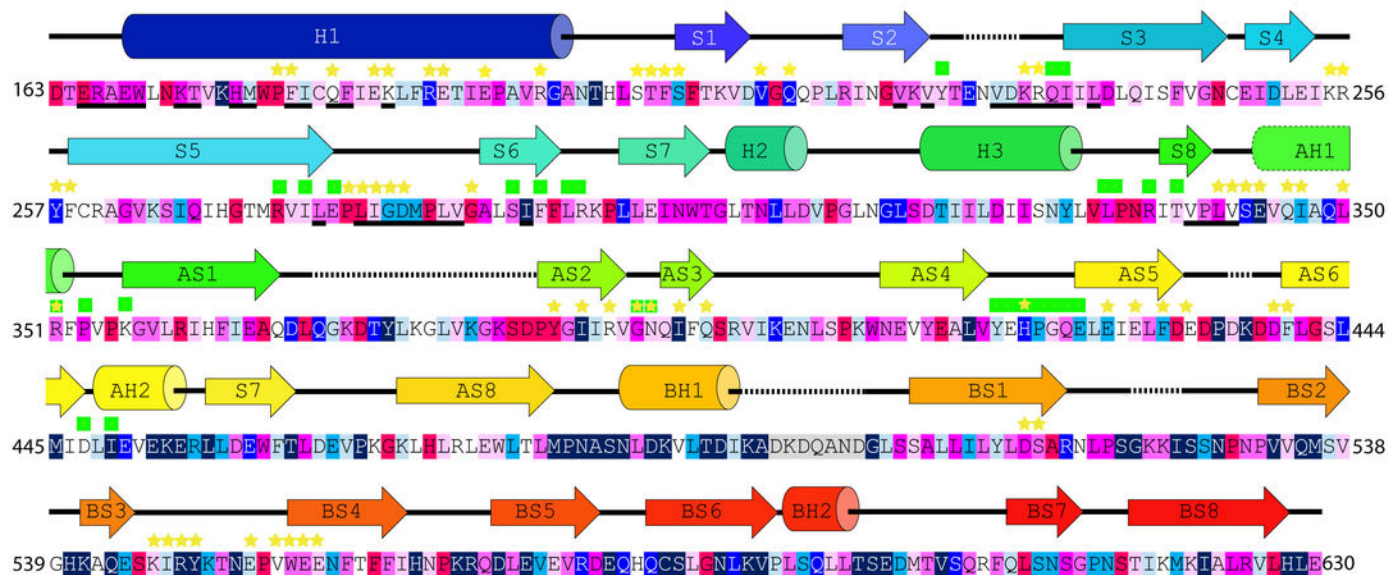
Type of file: figure

Label: ED Fig1

Filename: ED Fig1.pdf



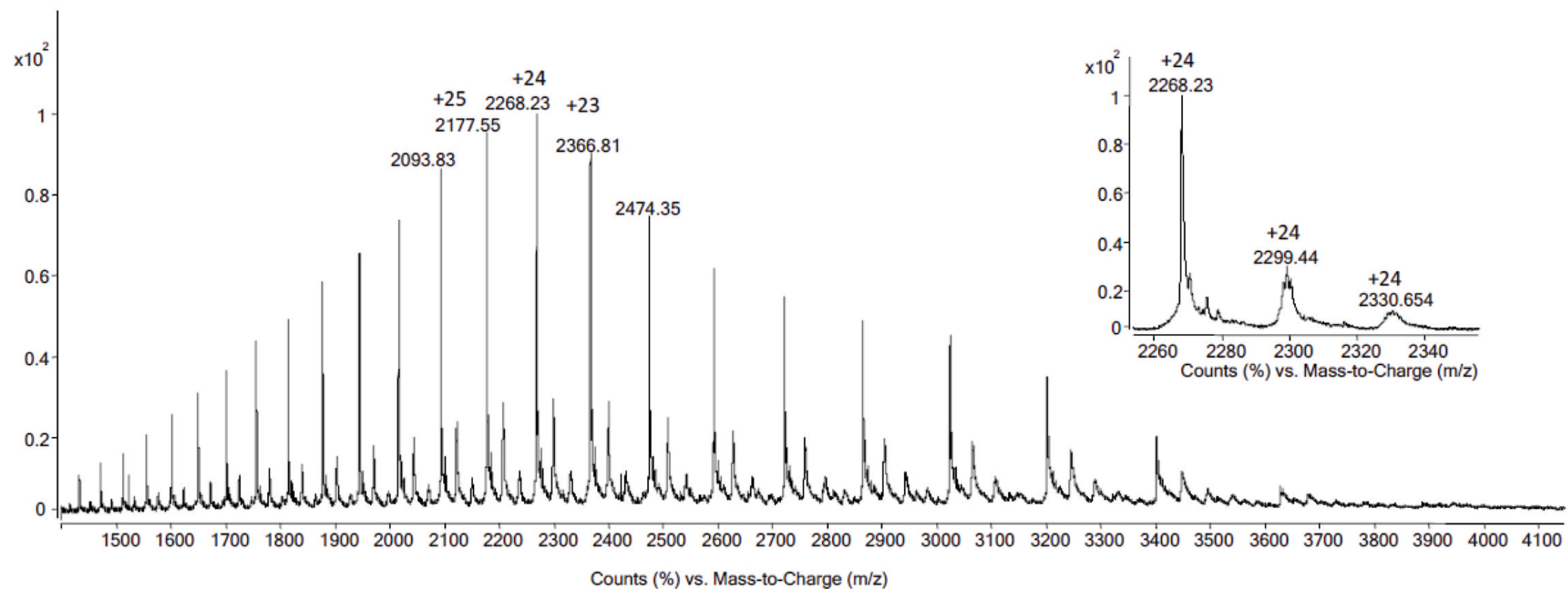
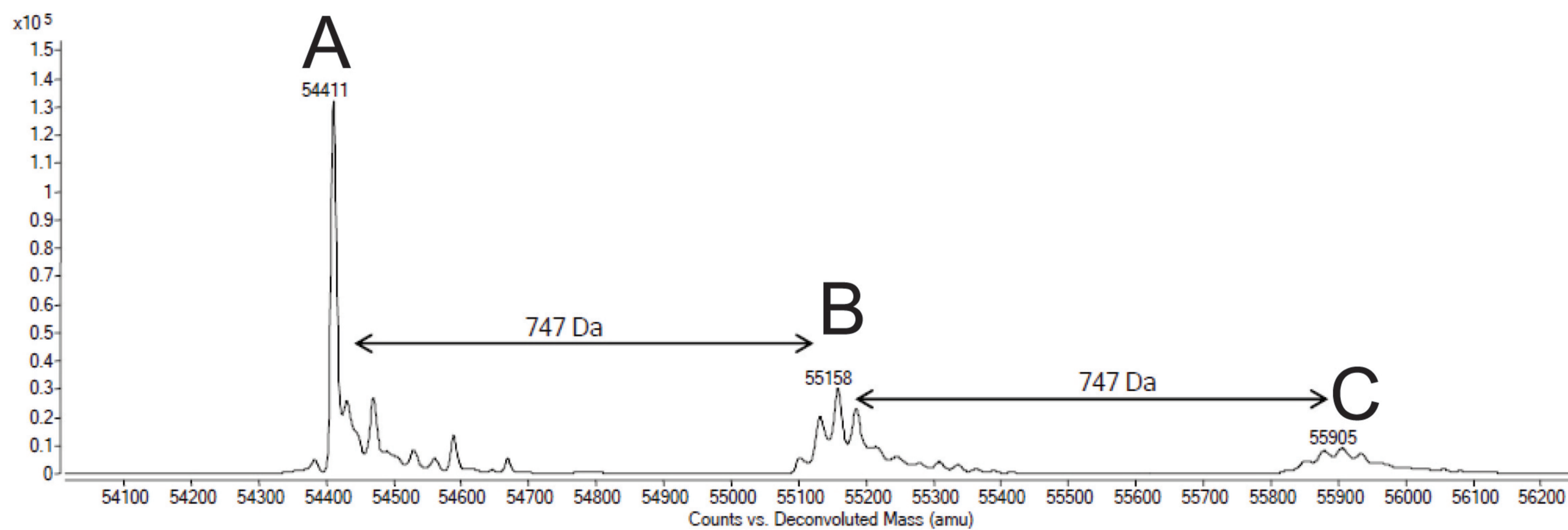
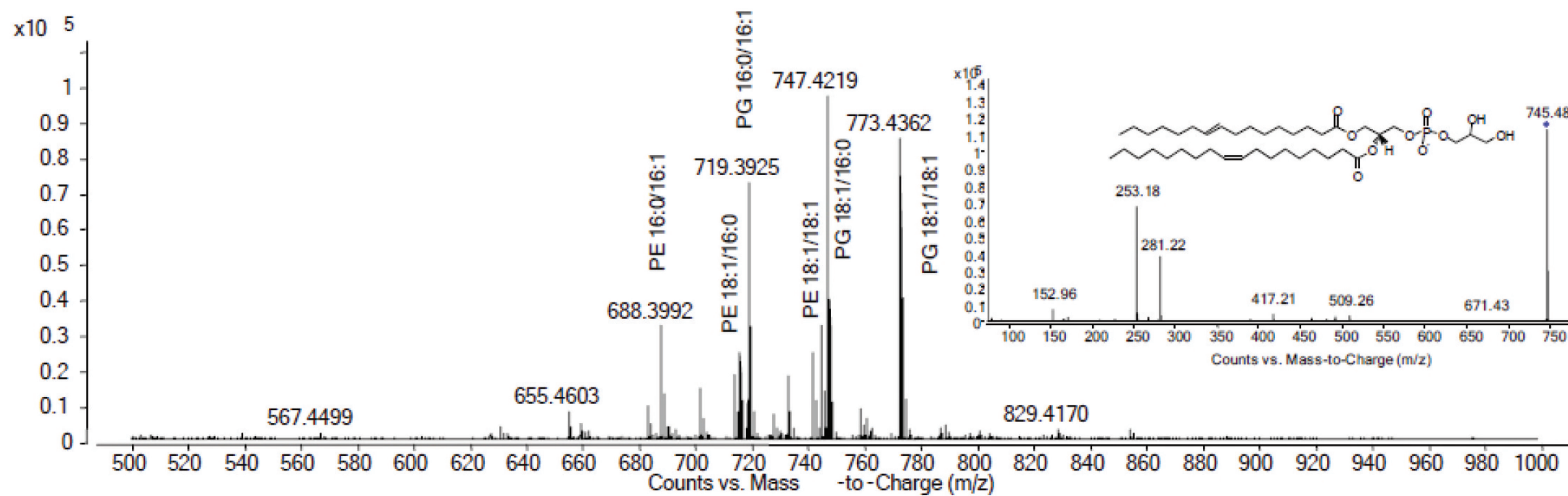
**c**



Type of file: figure

Label: ED Fig2

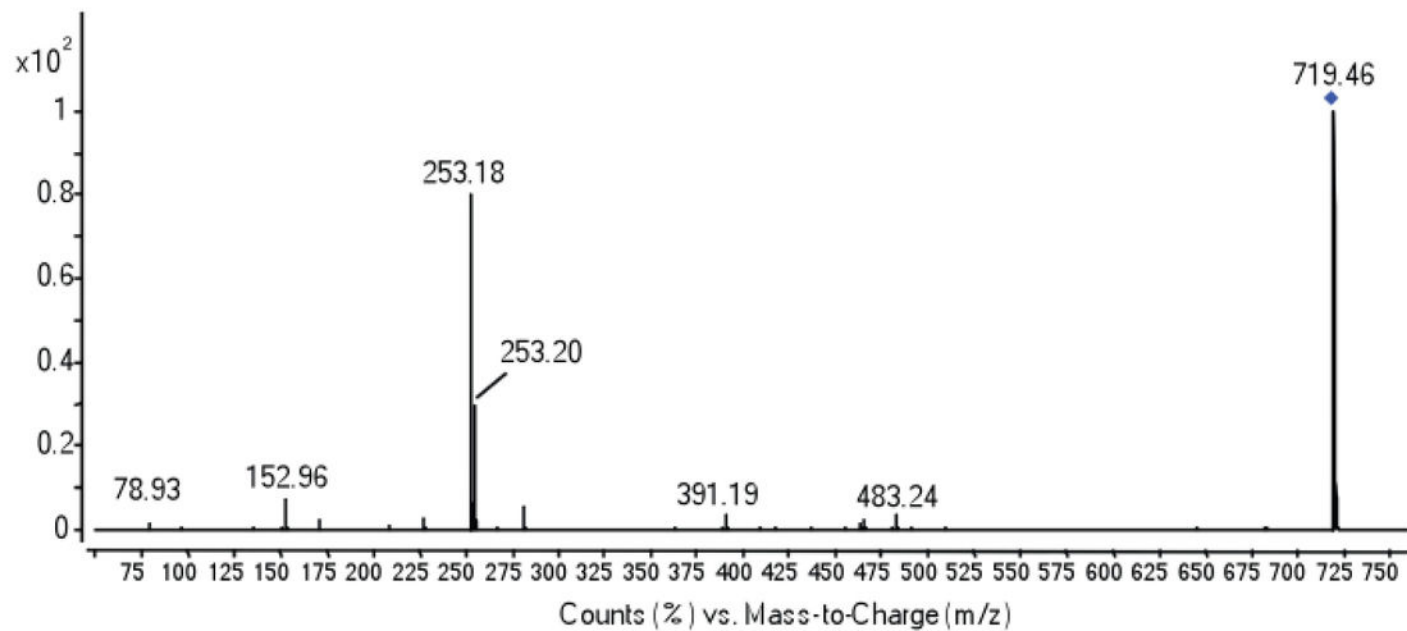
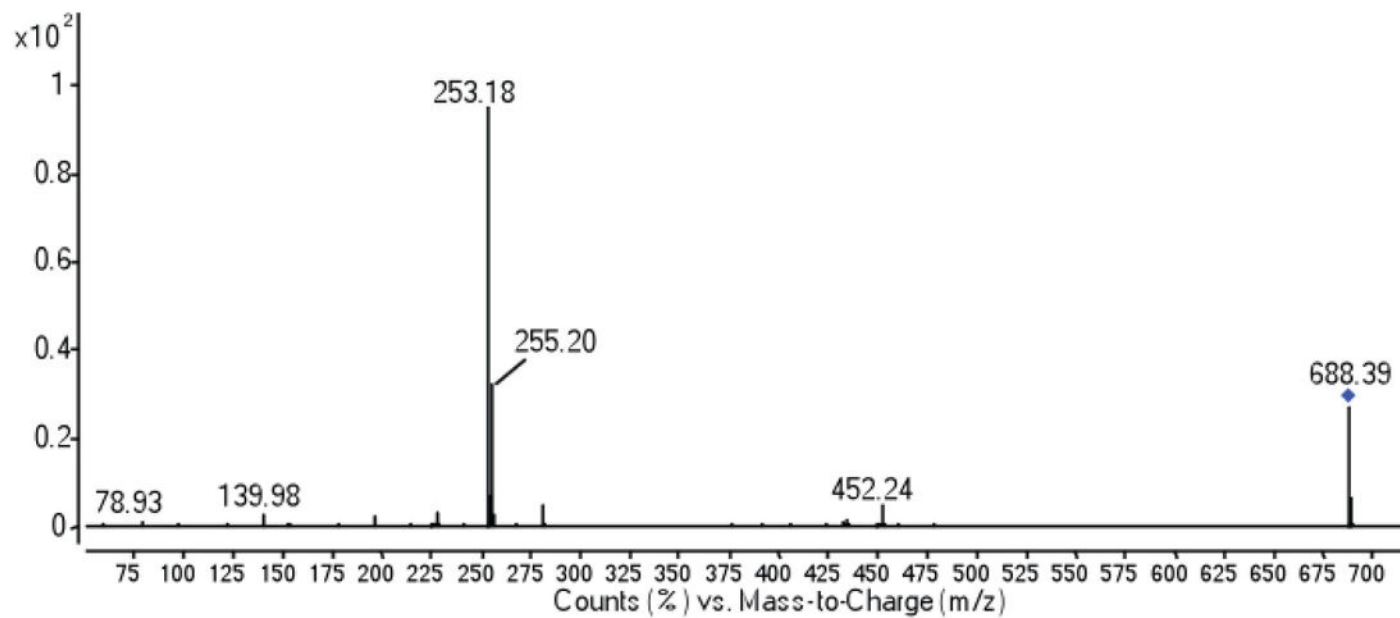
Filename: ED Fig2.pdf

**a****b****c**

Type of file: figure

Label: ED Fig3

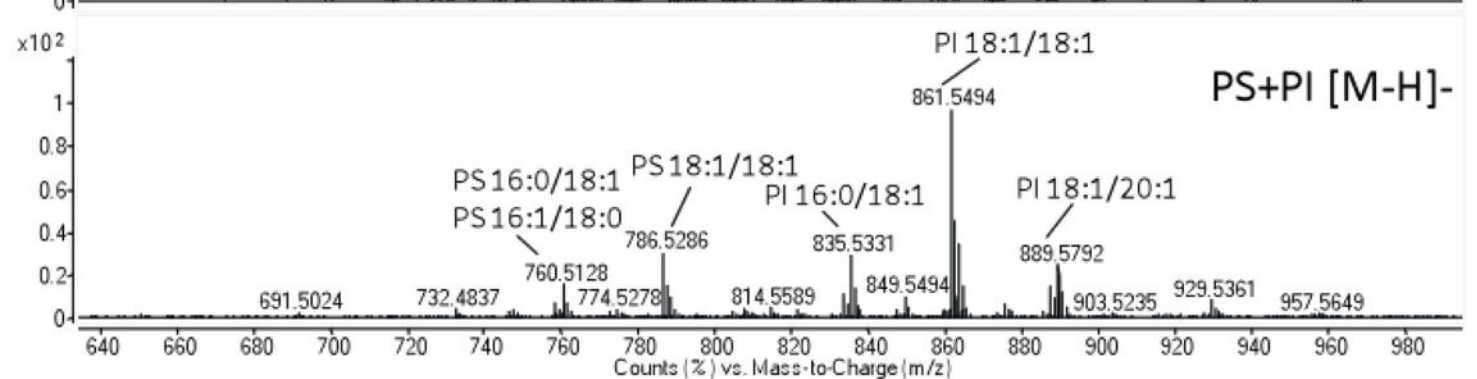
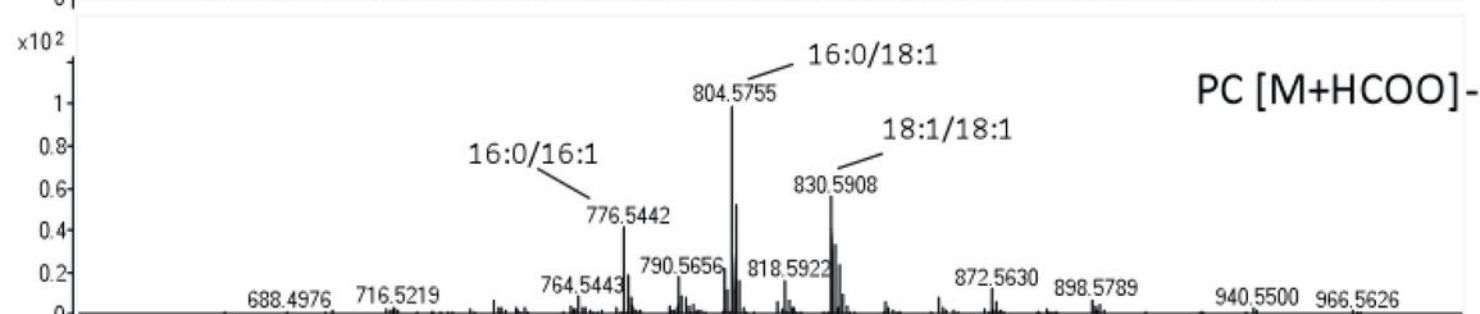
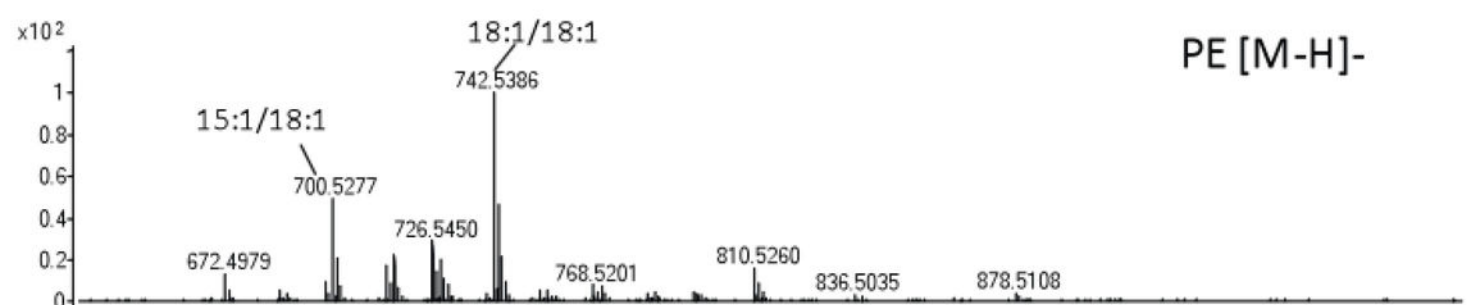
Filename: ED Fig3.pdf

**a****b**

Type of file: figure

Label: ED Fig4

Filename: ED Fig4.pdf



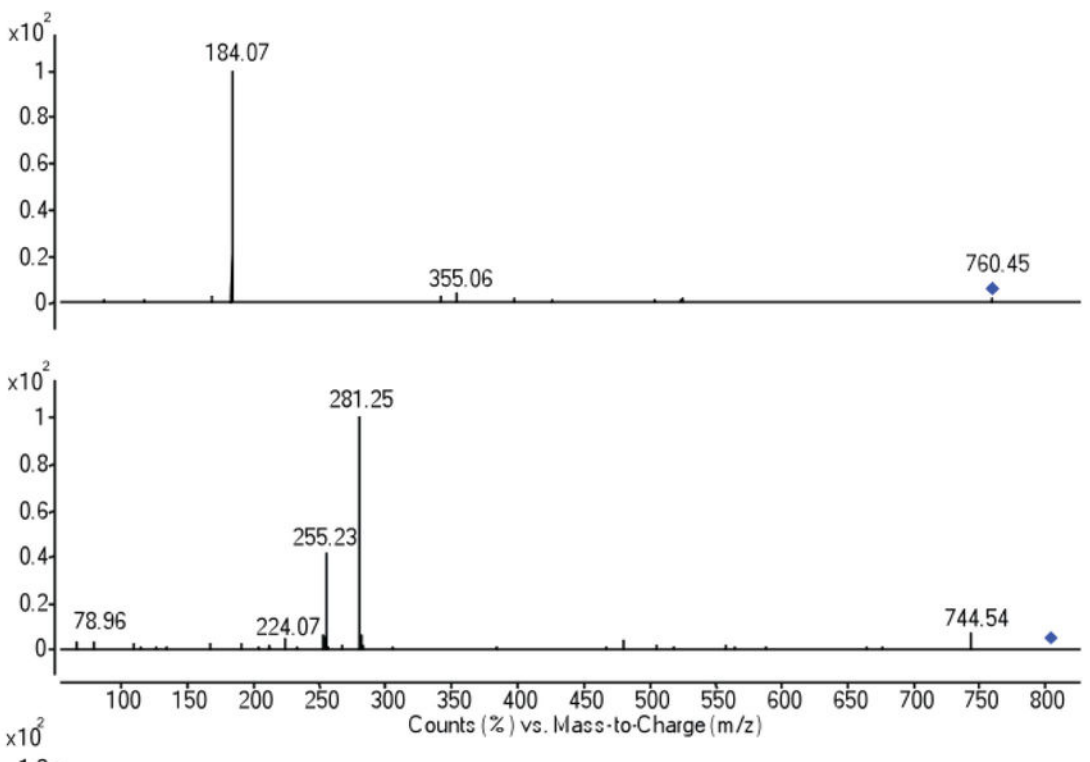


Type of file: figure

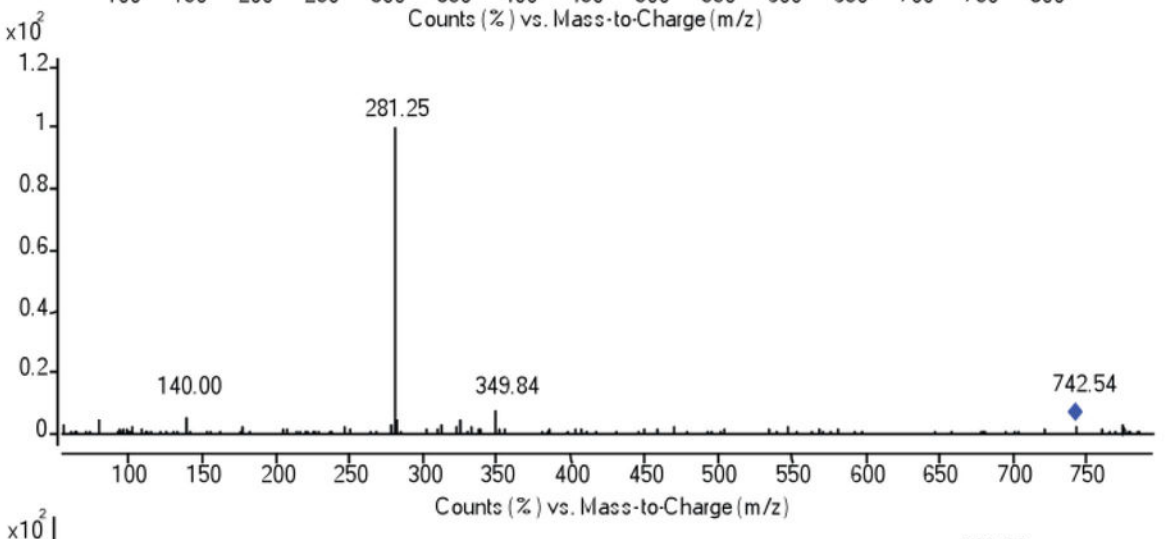
Label: ED Fig5

Filename: ED Fig5.pdf

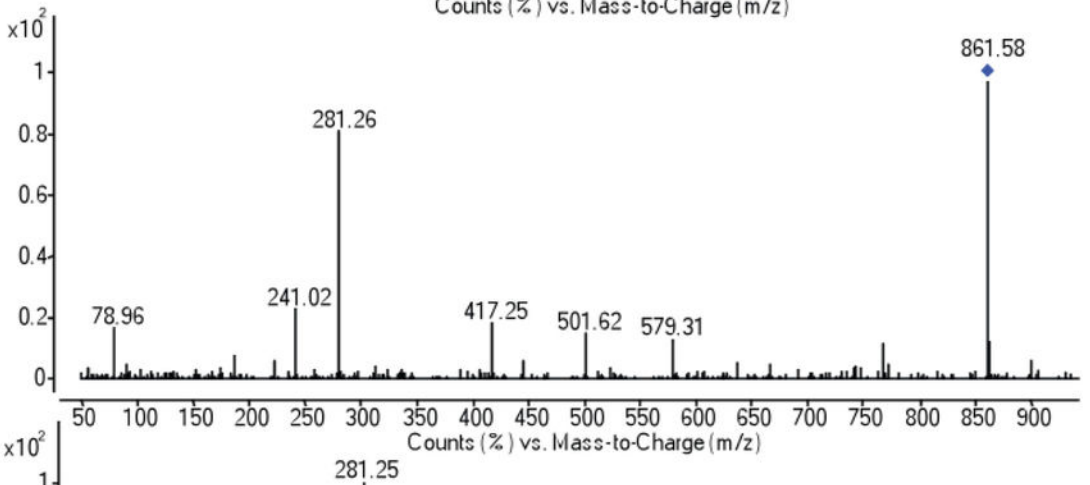
a



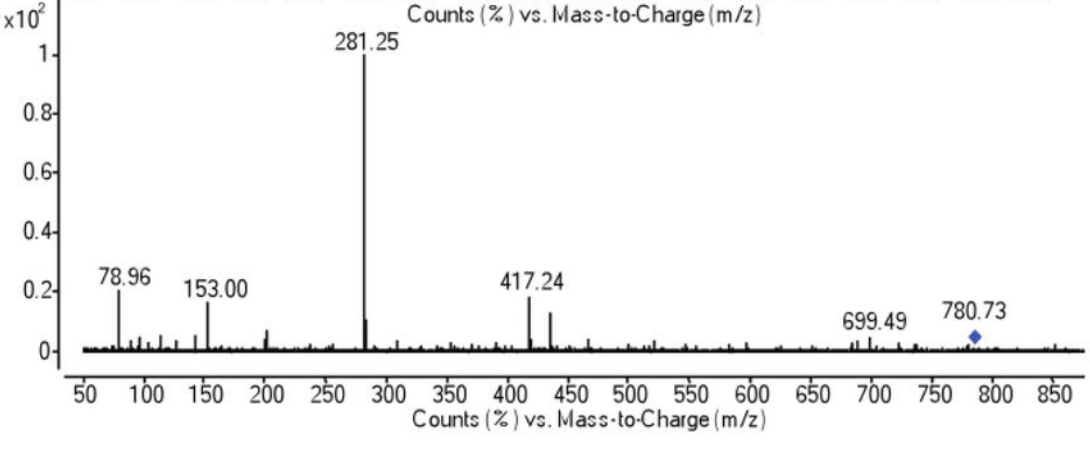
b



c



d

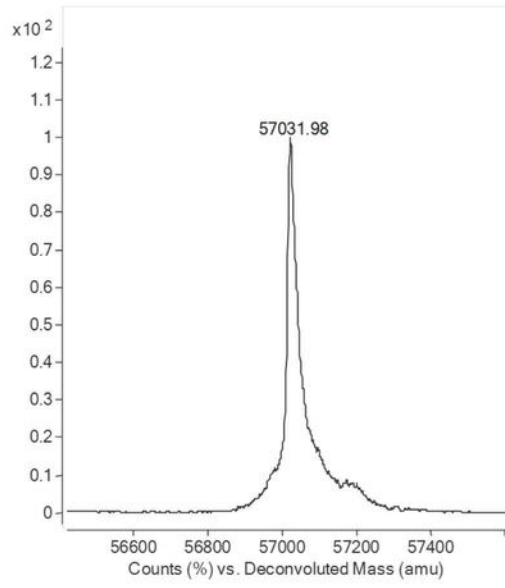


Type of file: figure

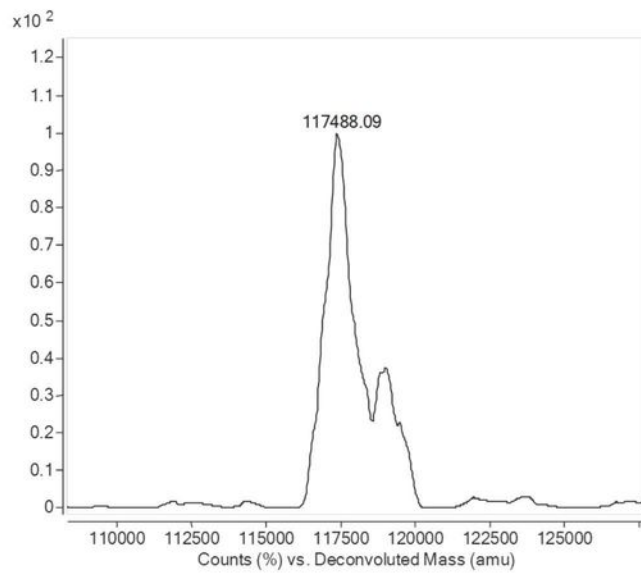
Label: ED Fig6

Filename: ED Fig6.pdf

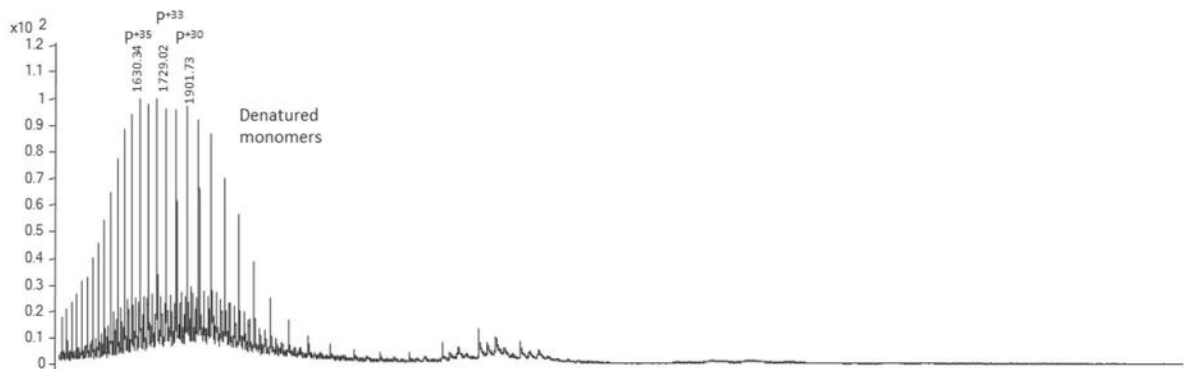
a



b



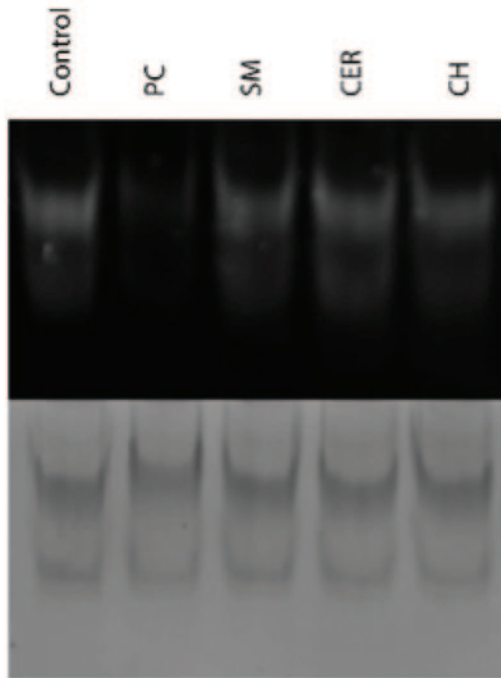
c



Type of file: figure

Label: ED Fig7

Filename: ED Fig7.pdf



n=5	PC	SM	CER	CH
Mean	0.71249	0.052743	-0.00708	0.143559
STDEV	0.046558	0.049667	0.086397	0.135668

Type of file: figure

Label: ED Table1

Filename: ED Table1.pdf

<b>Data collection</b>		E-Syt2(163-634)	
Crystal	Native	SeMet, Iodide	
Space group	P2 <sub>1</sub> 2 <sub>1</sub> 2 <sub>1</sub>	P2 <sub>1</sub> 2 <sub>1</sub> 2 <sub>1</sub>	
Unit cell dimensions			
<i>a, b, c</i> (Å)	74.33, 88.38, 167.19	73.54, 88.33, 166.24	73.39, 88.17, 165.87
		Peak	Remote
Wavelength (Å)	0.9792	0.9792	1.9074
Resolution (Å)	47.14–2.44 (2.57-2.44)	46.94–2.8 (2.95-2.8)	46.84-2.8 (2.95-2.8)
<i>R</i> <sub>merge</sub> (%)	8.9 (60.5)	10.8 (62.9)	6.7(36.9)
<i>I</i> / $\sigma$	13.6 (2.4)	14.1(2.5)	20.8(4.3)
Completeness (%)	99.9 (99.8)	99.9(99.8)	99.6(99.4)
Redundancy	6.3 (6.4)	6.4(5.9)	6.2(6.1)
<b>Refinement</b>			
Resolution (Å)	47.14–2.44		
No. unique reflections	41769		
<i>R</i> <sub>work</sub> / <i>R</i> <sub>free</sub> (%)	21.02/25.56		
No. atoms			
Protein	7143		
Water	212		
Ligand	138		
Average B (Å <sup>2</sup> )			
Protein	50.79		
Water	45.54		
Ligand	53.59		
R.m.s deviations			
Bond lengths (Å)	0.003		
Bond angles (°)	0.846		

Numbers in parenthesis refer to values in highest resolution bin.



Type of file: figure

Label: ED Table2

Filename: ED Table2.pdf

<b>[M-H]<sup>-</sup></b>	<b>lipid species</b>
660	PE 14:0/16:1
662	PE 14:0/16:0
686	PE 16:1/16:1
<b>688</b>	<b>PE 16:0/16:1</b>
691	PG 14:0/16:1
693	PG 16:0/14:0
702	PE 16:0/cy17:0
714	PE 18:1/16:1 PE cy17:0/cy17:0
<b>716</b>	<b>PE 16:0/18:1</b>
<b>719</b>	<b>PG 16:0/16:1</b> <b>PG 14:0/18:1</b>
728	PE 18:1/cy17:0
730	PE 16:0/cy19:0 PE 18:0/cy17:0 PE 17:0/18:1
733	PG 16:0/cy17:0
742	PE 18:1/18:1 PE cy19:0/cy17:0
<b>745</b>	<b>PG 18:1/16:1</b>
<b>747</b>	<b>PG 16:0/18:1</b>
759	PG 18:1/cy17:0
<b>773</b>	<b>PG 18:1/18:1</b>

Type of file: figure

Label: ED Table3

Filename: ED Table3.pdf

	ng/4μg of protein					
	Cer	PC	PE	PG	PI	PS
Mean	1.71	145.97	44.68	0.3	15.64	4.92
SD	0.02	3.3	0	0.01	4.39	0.24