

# Analytical and Bioanalytical Chemistry

## Electronic Supplementary Material

### Complementary precursor ion and neutral loss scan mode tandem mass spectrometry for the analysis of glycerophosphatidylethanolamine lipids from whole rat retina

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**Supplementary Table 1.** Summary of glycerophosphatidylethanolamine (GPEtn) lipids identified from a whole rat retina crude lipid extract by complementary neutral loss and precursor ion scan mode tandem mass spectrometry. Fatty acyl species were determined by negative ion mode product ion CID-MS/MS or by PI scans of  $m/z$  of specific fatty acids. Lipid nomenclature used is outlined in [26].

Lipid Species	Precursor Ion ( $m/z$ )			
	$[M+H]^+$ <sup>a</sup>	$[M+Na]^+$ <sup>b</sup>	$[M-H]^-$ <sup>c</sup>	$[M+Cl]^-$ <sup>d</sup>
GPEtn <sub>(16:0/18:1)</sub>	718	740	716	752
GPEtn <sub>(16:0/18:0)</sub>	720	742	718	754
GPEtn <sub>(<i>p</i>-16:0/20:4)</sub> <sup>e</sup>	-	746	722	758
GPEtn <sub>(<i>p</i>-36:3)</sub> <sup>e,f</sup>	-	748	-	-
GPEtn <sub>(<i>p</i>-36:1)</sub> <sup>e,f</sup>	-	752	-	-
GPEtn <sub>(16:0/20:4)</sub>	740	762	738	774
GPEtn <sub>(18:1/18:1)</sub>	744	766	-	778
GPEtn <sub>(18:0/18:1)</sub>	746	768	744	780

GPEtn <sub>(p-16:0/22:6)</sub> <sup>e</sup>	-	770	746	782
GPEtn <sub>(p-16:0/22:5)</sub> <sup>e</sup>	750	772	748	784
GPEtn <sub>(p-18:0/20:4)</sub> <sup>e</sup>	752	774	750	786
GPEtn <sub>(16:0/22:6)</sub>	764	786	762	798
GPEtn <sub>(18:1/20:4)</sub>	766	788	764	800
GPEtn <sub>(18:0/20:4)</sub>	768	790	766	802
GPEtn <sub>(p-18:1/22:6)</sub> <sup>e</sup>	774	796	772	808
GPEtn <sub>(p-18:0/22:6)</sub> <sup>e</sup>	776	798	774	810
GPEtn <sub>(p-18:1/22:5)</sub> <sup>e</sup>	778	800	776	812
GPEtn <sub>(p-18:0/22:6)</sub> <sup>e</sup>	778	800	776	812
GPEtn <sub>(p-20:0/20:4)</sub> <sup>e</sup>	-	802	778	814
GPEtn <sub>(18:2/22:6)</sub>	788	810	786	-
GPEtn <sub>(18:1/22:6)</sub>	790	812	788	824
GPEtn <sub>(18:0/22:6)</sub>	792	814	790	826
GPEtn <sub>(20:0/20:4)</sub>	796	818	794	830
GPEtn <sub>(20:4/22:6)</sub>	812	834	810	846
GPEtn <sub>(22:6/22:6)</sub>	836	858	834	870
GPEtn <sub>(22:4/22:6)</sub>	840	862	838	-

<sup>a</sup> Ions were detected by performing NL m/z 141.

<sup>b</sup> Ions were detected by performing NL m/z 43 or by PI m/z 164 in the presence of 500 μM NaCl.

<sup>c</sup> Ions detected by performing PI m/z 196.

<sup>d</sup> Ions detected by performing NL m/z 36.

<sup>e</sup> GPEtn lipids with a subscript  $p$  preceding a fatty acid designation refer to plasmeryl (alkenyl ether) subspecies. Plasmeryl ether linkages were confirmed by acid hydrolysis as described in the main text.

<sup>f</sup> Indicates a lipid for which precursor ions were not observed in negative ion mode, thereby preventing unambiguous assignment of the composition of the individual fatty acyl or alkyl chains. In these cases, the identities of these species are presented as GPEtn<sub>(total carbons : total double bonds)</sub>.