

Table 1. Examples of lipids identified in negative ion mode from adult mouse brain tissue after aqueous washing. Lipids were identified by accurate mass using FT-ICR MS and by fragmentation patterns using a MALDI ion trap instrument. † - Lipids identified at same nominal mass. No.- lipid species, annotated by number, correlating to numbers in Supplemental Figure 2.

No.	Classification		<i>m/z</i> (ppm accuracy)	Fatty acid chains	Assignment
1	PI	18:0	599.3203 (-0.1)	18:0	LPI 18:0
2	CerP	C18:0	644.5021 (0.5)	18:0	CerP (d18:1/18:0)
3	PS	26:1	648.3891 (-1.7)	12:0	PS (12:0/14:1)
3†	PC	26:0	648.4619 (-3.2)	16:0	PC (10:0/16:0)
4	PS	26:0	650.40398(-0.2)	16:0	PS (16:0/10:0)
5	PA	34:1	673.4818 (0.5)	16:0, 18:1	PA (16:0/18:1)
6	PA	36:2	699.4963 (0.8)	18:1	PA (18:1/18:1)
7	PA	38:1	715.5678 (-4.3)	18:1 (major) 18:0 (minor)	PA (O-20:0/18:1)
8	PE	36:1	744.5552 (-0.4)	18:0, 18:1 (major), 16:0 (minor)	PE (18:0/18:1)
9	PEp	38:6	746.5136 (-0.8)	22:6	PE (P-16:0/22:6)
10	PA	40:6	747.4970 (-0.8)	18:0, 22:6	PA (18:0/22:6)
11	PEp	38:6	748.5275 (1.5)	22:6 (major), 18:0 (major), 16:0 (minor)	PE (O-16:0/22:6)
12	PEp	38:4	750.5448 (-0.7)	20:4	PE(P-18:0/20:4)
13	PS	34:1	760.5136 (-0.2)	16:0, 18:0	PS (16:0/18:1)
14	PS	34:0	762.5285 (0.6)	16:0, 18:0	PS (16:0/18:0)
14†	PE	38:6	762.5076 (-0.4)	16:0, 22:6	PE (16:0/22:6)
15	PE	38:4	766.5395 (-0.4)	18:0, 20:4	PE (18:0/20:4)
16	PE	38:2	772.5860 (-0.2)	16:0	PE (16:0/22:1)
17	PEp	40:6	774.5445 (-0.3)	22:6	PE (P-18:0/22:6)
18	PI	30:0	781.4901 (3.6)	14:0, 16:0	PI (14:0/16:0)
19	PS	36:2	786.5290 (-0.1)	18:1	PS (18:1/18:1)
20	PS	36:1	788.5449 (-0.2)	18:0, 18:1	PS (18:0/18:1)
21	PE	40:6	790.5405 (1.0)	18:0, 22:6(major)	PE (18:0/22:6)
22	PI	32:0	795.5372 (3.9)	16:0	PI (O-16:0/16:0)
23	PS	38:4	810.5296 (0)	18:0	PS (18:0/20:4)
24	PS	38:3	812.5452 (-0.6)	18:0	PS (18:0/20:3)
25	PS	38:1	816.5767 (-0.9)	18:0	PS (18:0/20:1)
26	PI	34:1	821.5568(-2.2)	18:1	PI (O-16:0/18:1)
27	PS	40:7	832.5133 (0.1)	18:1, 22:6	PS (18:1/22:6)
28	PS	40:6	834.5290 (0)	18:0, 22:6	PS (18:0/22:6)
29	PS	40:4	838.5609 (-0.7)	18:0, 22:4	PS (18:0/22:4)
30	PI	36:4	857.5196 (-0.2)	16:0, 20:4	PI (16:0/20:4)
31	PI	38:6	881.5178 (0.8)	16:0, 22:6	PI (16:0/22:6)
32	PI	38:5	883.5344 (-0.2)	18:1, 20:4	PI (18:1/20:4)
33	PI	38:4	885.5500 (-0.2)	18:0, 20:4	PI (18:0/20:4)
34	PI	40:6	909.5503 (-0.6)	18:0, 22:6	PI (18:0/22:6)
35	PIP	38:4	965.5158 (-0.4)	18:0, 20:4	PIP (18:0/20:4)
36	PIP2	38:4	1045.4819 (0.6)	18:0, 20:4	PIP2 (18:0/20:4)
37	GM1		1542.8673 (1.0)	d18:1/18:1	
38	GM1a		1544.8881 (0.7)	d18:1/18:0	

	<b>Sulfatides</b>	<b>m/z (ppm accuracy)</b>	<b>Ceramide</b>
S1	C16	778.5145 (-0.1)	d18:1/16:0
S2	C18:1	804.5296 (0.6)	d18:1/18:1
S3	C18	806.5456 (0.1)	d18:1/18:0
S4	C18-OH	822.5406 (0)	d18:0/2-OH-18:0
S5	C20-OH	850.5721 (-0.1)	d18:0/2-OH-20:0
S6	C22:1	860.5932 (-0.6)	d18:1/22:1
S7	C22	862.6097 (-1.2)	d18:1/22:0
S8	C23:1	874.6092 (-0.9)	d18:1/23:1
S9	C23	876.6234 (0.7)	d18:1/C23
S10	C22	878.6032 (-0.3)	d18:0/2-OH-22:0
S11	C24:1	888.6233 (0.7)	d18:1/24:1
S12	C24	890.6396 (0.6)	d18:1/24:0
S13	C25:1	902.6417 (-2.3)	d18:1/25:1
S14	C24:1-OH	904.6190 (0.08)	d18:0/2-OH-24:1
S15	C24-OH	906.6345 (0.1)	d18:1/2-OH-24:0
S16	C26:1	916.6554 (-0.1)	d18:1/N26:1