

**Table S4.** The relative quantitative of different degree of unsaturation of Lyso-GPLs in mice serum (mean  $\pm$  SD, n = 8).

RDB	C group	M group	K <sub>L</sub> group	K <sub>M</sub> group	K <sub>H</sub> group
<b>LysoPA</b>					
0	1.39 $\pm$ 0.13** 21.78%	0.62 $\pm$ 0.036 18.23%	0.50 $\pm$ 0.12 16.11%	0.47 $\pm$ 0.094* 13.51%	0.52 $\pm$ 0.093 12.1%
1	0.32 $\pm$ 0.079 4.97%	0.31 $\pm$ 0.069 9.22%	0.27 $\pm$ 0.052 8.8%	0.27 $\pm$ 0.049 7.79%	0.30 $\pm$ 0.052 7.04%
2	3.15 $\pm$ 0.36** 49.33%	1.68 $\pm$ 0.23 49.08%	1.41 $\pm$ 0.13 45.33%	1.74 $\pm$ 0.19 49.87%	2.24 $\pm$ 0.40** 52.47%
3	0.16 $\pm$ 0.025** 2.43%	0.096 $\pm$ 0.023 2.81%	0.15 $\pm$ 0.035* 4.76%	0.17 $\pm$ 0.024** 4.79%	0.18 $\pm$ 0.029** 4.25%
4	0.75 $\pm$ 0.054** 11.74%	0.42 $\pm$ 0.072 12.29%	0.48 $\pm$ 0.98 15.43%	0.50 $\pm$ 0.076 14.42%	0.60 $\pm$ 0.15* 14.01%
6	0.62 $\pm$ 0.092** 9.75%	0.29 $\pm$ 0.024 8.37%	0.30 $\pm$ 0.054 9.57%	0.34 $\pm$ 0.087 9.61%	0.43 $\pm$ 0.041** 10.11%
<b>LysoPI</b>					
0	0.15 $\pm$ 0.032 3.30%	0.14 $\pm$ 0.040 4.00%	0.13 $\pm$ 0.018 3.81%	0.14 $\pm$ 0.026 3.72%	0.14 $\pm$ 0.022 3.20%
1	0.078 $\pm$ 0.019** 1.75%	0.20 $\pm$ 0.050 5.94%	0.14 $\pm$ 0.023** 4.06%	0.14 $\pm$ 0.023** 3.53%	0.15 $\pm$ 0.023* 3.44%
2	0.53 $\pm$ 0.13** 11.96%	0.32 $\pm$ 0.054 9.36%	0.36 $\pm$ 0.057 10.60%	0.50 $\pm$ 0.11* 12.72%	0.51 $\pm$ 0.10** 12.12%
3	0.30 $\pm$ 0.073* 6.78%	0.19 $\pm$ 0.025 5.51%	0.35 $\pm$ 0.073** 10.48%	0.38 $\pm$ 0.087** 9.73%	0.43 $\pm$ 0.09** 10.20%
4	3.20 $\pm$ 0.80 72.00%	2.47 $\pm$ 0.61 72.87%	2.25 $\pm$ 0.12 66.41%	2.55 $\pm$ 0.33 65.56%	2.80 $\pm$ 0.45 65.94%
5	0.052 $\pm$ 0.0085**	0.021 $\pm$ 0.0026	0.031 $\pm$ 0.0079**	0.045 $\pm$ 0.0048**	0.054 $\pm$ 0.012**

	1.17%	0.61%	0.90%	1.16%	1.28%
6	0.14±0.053** 3.04%	0.058±0.010 1.70%	0.13±0.030* 3.74%	0.14±0.025** 3.58%	0.16±0.058** 3.82%
<b>LysoPG</b>					
0	0.024±0.0059 14.60%	0.024±0.0037 24.61%	0.026±0.0043 8.91%	0.026±0.0042 8.18%	0.025±0.0045 7.44%
1	0.054±0.013 32.43%	0.040±0.011 40.68%	0.12±0.027** 40.10%	0.12±0.029** 38.70%	0.13±0.026** 39.34%
2	0.088±0.019* 52.97%	0.034±0.0092 34.71%	0.15±0.033** 50.99%	0.17±0.056** 53.13%	0.18±0.036** 53.22%
<b>LysoPS</b>					
0	0.011±0.0020 57.41%	0.0091±0.0021 64.63%	0.0093±0.0012 63.47%	0.0095±0.0028 55.66%	0.0086±0.0023 53.22%
2	0.0034±0.00091** 18.29%	0.0017±0.00033 12.18%	0.0026±0.00064 17.45%	0.0034±0.00095** 20.18%	0.0036±0.00097** 22.55%
4	0.0046±0.00095 24.30%	0.0033±0.0013 23.19%	0.0028±0.0012 19.08%	0.0041±0.0010 24.16%	0.0039±0.00097 24.24%
<b>LysoPE</b>					
0	7.54±1.22 66.52%	5.63±0.59 70.93%	8.30±1.46** 43.73%	8.94±2.11** 41.86%	9.39±1.08** 39.89%
1	0.64±0.14 5.71%	0.73±0.21 9.13%	2.37±0.55** 12.48%	2.47±0.86** 11.41%	2.53±0.77** 10.74%
2	1.66±0.40 14.65%	0.79±0.42 9.88%	2.85±1.16* 15.02%	4.10±1.70** 19.17%	4.46±1.71** 18.92%
3	0.24±0.060 2.14%	0.14±0.045 1.76%	1.26±0.33** 6.62%	1.35±0.42** 6.31%	1.64±0.36** 6.96%
4	0.81±0.19 7.18%	0.50±0.11 6.33%	2.95±0.66** 15.54%	3.19±0.61** 14.94%	3.99±0.58** 16.97%

5	0.051±0.0079 0.45%	0.018±0.0067 0.22%	0.068±0.023** 0.36%	0.082±0.013** 0.39%	0.098±0.050** 0.41%
6	0.38±0.074 3.36%	0.14±0.037 1.74%	1.19±0.32** 6.25%	1.27±0.33** 5.93%	1.44±0.23** 6.11%
<b>LysoPC</b>					
0	16.14±2.399 54.53%	15.93±1.95 55.24%	23.56±2.66** 49.31%	25.29±3.25** 48.22%	27.33±3.01** 47.73%
1	4.68±0.67 15.8%	4.85±1.10 16.82%	10.55±2.04** 22.08%	12.17±1.91** 23.20%	13.10±1.90** 22.88%
2	2.69±0.65 9.07%	3.50±0.48 12.13%	4.90±0.80* 10.25%	5.20±1.28** 9.92%	5.63±0.86** 9.84%
3	1.32±0.31 4.49%	1.65±0.52 5.72%	3.37±0.31** 7.04%	3.58±0.52** 6.83%	3.90±0.77** 6.81%
4	1.54±0.32 5.21%	1.53±0.34 5.31%	2.2±0.63* 4.59%	2.47±0.41** 4.71%	2.67±0.30** 4.66%
5	2.44±0.59** 8.23%	0.99±0.16 3.42%	2.61±0.42** 5.46%	3.09±0.48** 5.89%	3.83±0.40** 6.69%
6	0.63±0.19** 2.14%	0.32±0.066 1.12%	0.46±0.096 0.95%	0.48±0.088 0.92%	0.59±0.13** 1.03%
7	0.16±0.0088** 0.54%	0.072±0.022 0.25%	0.15±0.046** 0.31%	0.16±0.014** 0.30%	0.21±0.031** 0.36%

\* $P < 0.01$ , \*\* $P < 0.05$  significantly different from group **M**.

Abbreviation: **C**, normal control; **M**, model; **K<sub>L</sub>**, low dose; **K<sub>M</sub>**, medium dose; **K<sub>H</sub>**, high dose; **RDB**, Ring Double Bond Equivalents.